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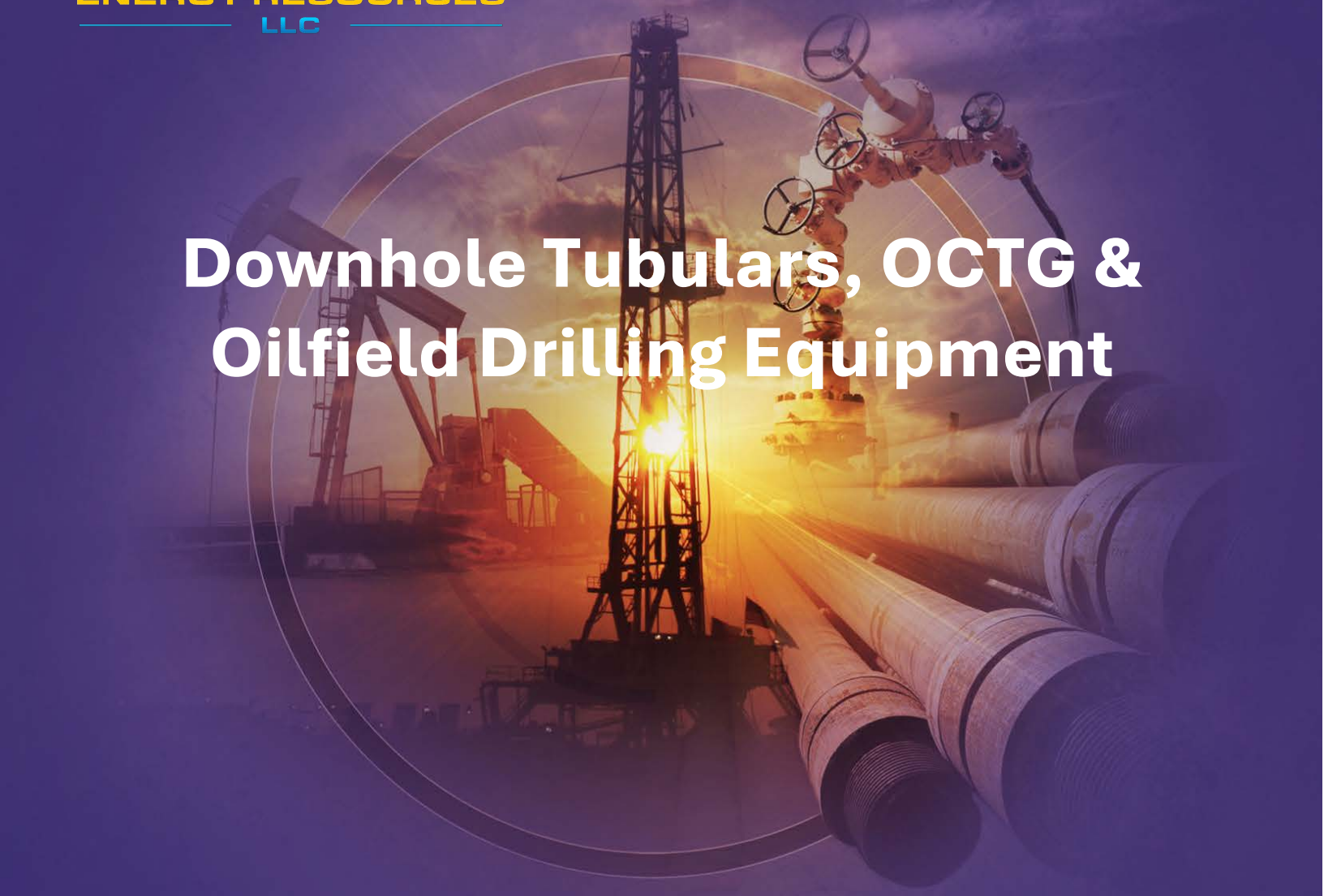
Drilling Equipment Sales Catalog 2024 - 2025



Downhole Tubulars, OCTG & Oilfield Drilling Equipment

Transforming Drilling Operations, by Elevating Efficiency with Cutting-Edge Downhole Tubulars & Drilling Equipment Solutions™

1-866-375-7473 ● sales@globalenergyusa.com ● www.globalenergyusa.com

Global Headquarters ● Oklahoma City, Oklahoma USA

API Spec Q1 Registered

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TABLE of CONTENTS

TABLE OF CONTENTS

Please see the following Sections inside our Drilling Equipment Sales Catalog for 2024 – 2025…

GLOBAL™ ENERGY RESOURCES LLC

Landing String *API Spec Rp-7g & 5DP, Q1® (latest edition)*

HDD (Horizontal Directional Drilling) *API Spec Rp-7g & 5DP, Q1® (latest edition)*

Geothermal Double-Walled Drill Pipe *API Spec Rp-7g & 5DP, Q1® (latest edition)*

Used/Surplus Drill Pipe

Drill Pipe Manufacturing Flow Chart *API Spec Rp-7g & 5DP, Q1® (latest edition)*

Drill Pipe & Tool Joint Data Tables†

Tool Joint Dimensional & Values Data Tables†

Drill Pipe Care & Handling

Heavy Weight Drill Pipe *API Spec 7-1, Q1® (2nd edition)*

Heavy Weight Drill Pipe (HWDP) Manufacturing Flow Chart (Welded Construction) *API Spec 7-1, Q1® (2nd edition)*

Drill Collars *API Spec 7-1, Q1® (2nd edition)*

Drill Collar Manufacturing Flow Chart *API Spec 7-1, Q1® (2nd edition)*

Rotary-Shoulder Connections *API Spec 7-2, Q1® (latest edition)*

Hardbanding Solutions

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Downhole Drill Stem Accessories *API Spec 7-1, Q1® (2nd edition)*

Handling Tools *API Spec 7K & 8C, Q1® (latest edition)*

Drilling Equipment *API Spec 6A, 7K, 16A & 16D, Q1® (latest edition)*

Downhole Tubulars & Equipment Rental *API Spec Q2®, ISO 9001, ISO 1400*

PH6™ PH4™ CS® Specialty Tubing *API Spec 5CT, Q1® (6th edition)*

Tubing & Casing OCTG (Oil Country Tubular Goods) *API Spec 5CT, Q1® (6th edition)*

Used Premium EMI Inspected Tubing & Casing

Geothermal (VIT) Vacuum Insulated Tubing *API Spec 5CT, Q1® (6th edition)*

Geothermal Double-Walled Insulated Casing *API Spec 5CT, Q1® (6th edition)*

Tubing & Casing Couplings *API Spec 5CT, Q1® (6th edition)*

Rope, Soap & Dope… Rig Supplies

General Drilling Rig Supplies:

Global Energy's In-Field Services

Global Energy & Tejas Tubular Exclusive JV Partnership

Global Energy Trade Associations

Service & Support

Appendix… Miscellaneous API® Reference Documents

Oilfield Glossary… Oilfield Terms & Definitions

Index… Oilfield Equipment Index

Miscellaneous Information

Notes

Global Energy... We Manufacture, Refurbish and Re-Certify Equipment to API® Specifications for Land & Offshore Drilling Rigs.

API Spec Q2 Registered ™ QMS REGISTERED ISO 9001:2015

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EXPLORE the WORLD of GLOBAL ENERGY RESOURCES

EXPLORE the WORLD of GLOBAL ENERGY RESOURCES

Explore The World of Global Energy Resources… Welcome!

Global Energy Resources, LLC is a leading provider of rental and sales of downhole tubulars, drilling equipment, and OCTG tubing & casing. We are a privately held company with over 40 years of experience in the oil and gas industry. We are committed to providing our customers with the highest quality products and services at competitive prices.

OUR CUSTOMERS

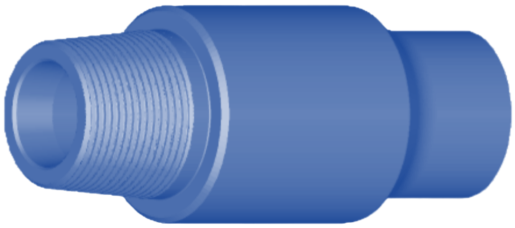
We serve a wide range of customers, including oil and gas producers, Inland & Offshore drilling contractors, and service companies. We are proud to have a long history of providing our customers with the products and services they need to succeed in the oil and gas industry.

WHY CHOOSE GLOBAL ENERGY RESOURCES

There are many reasons to choose Global Energy Resources as your provider of downhole tubulars, drilling equipment, and OCTG tubing & casing. Here are just a few:

- We are a privately held company with over 40 years of experience in the oil and gas industry.
- We are committed to providing our customers with the highest quality products and services.
- We have a large inventory of products in stock, and we can ship products to any location in the world.
- We are a one-stop shop for all of your downhole tubulars, drilling equipment, and OCTG tubing & casing.
- We have a long history of providing our customers with the products and services they need to succeed in the oil and gas industry.

At Global Energy Resources, we don't just offer competitive prices – we refuse to be undersold. We're so confident in the value of our high-quality products and exceptional services that we guarantee you'll find the best price right here. If you find a lower advertised price for the same product elsewhere, simply bring it to our attention and we'll beat it. No questions asked.



GLOBAL ENERGY PRODUCTS

We offer a wide range of products to meet the needs of our customers, from the Rig Floor to the BHA. Our products include:

- **Drill Pipe:** 2-7/8" to 6-5/8", Range 2 and 3… Premium DS-1 CAT-5 Inspected Drill Pipe also available.
- **Landing Strings:** 5-1/2" to 6-5/8", Range 2 and 3… Premium DS-1 CAT-5 Inspected Drill Pipe also available.
- **Heavy Weight:** 2-7/8" to 6-5/8", Welded or Integral… Premium DS-1 CAT-3 thru 5 Inspected HWDP also available.
- **Drill Collars:** 2-7/8" to 14", Slick or Spiral… Premium DS-1 CAT-3 thru 5 Inspected Drill Collars also available.
- **API, Premium and High-Performance Connections:** See Rotary-Shoulder Connections Section and/or Ask your Global Energy representative for more information.
- **Hardbanding:** Global Energy offers Armacor®, Arnco®, Duraband® & Postalloy® OEM Genuine Hardbanding Products.
- **Steel Grades:** API, Sour Service, High-Strength and Non-Mag Material Grades.
- **Downhole Drill Stem Accessories:** Square or Hexagonal Kellys, Kelly Valves, Drop-In Check Valves, IBOPs, Pup Joints, Crossovers, Subs.
- **Handling Tools:** New & API Refurbished Handling Tools.
- **Drilling Equipment:** New & API Refurbished Drilling Equipment, including Mud Pumps, Rotary Tables, Top-Drives, AC and/or DC Drawworks, VFD and/or SCR Drive Houses, Mud Pit Systems, AC and/or DC Traction-Motors, and Complete API Certified BOP's, Etc.
- **PH-6™ Tubing:** 2-3/8" to 4"… Premium EMI 4-Point Inspected PH-6™ also available.
- **Tubing:** 2-3/8" thru 4-1/2"… Premium EMI 4-Point Inspected Tubing also available.
- **Casing:** 4-1/2"thru 13-5/8"… Premium EMI 4-Point Inspected Casing also available.

NOTE: *We offer not only the standard API connection, but also all of the Premium Drill Pipe & Casing Connections that are prevalent in today's marketplace.*

GLOBAL ENERGY SERVICES

We offer a wide range of services to meet the needs of our customers. Our services include:

- Rental of Downhole Tubulars, including Drill Pipe, HWDP, PH-6™ Tubing, and Select Drilling Equipment.
- Sale of New and Used Downhole Tubulars, including Drill Pipe, HWDP, PH-6™ Tubing, Drilling Equipment, Handling Tools and OCTG Tubing & Casing.
- NDT 3rd Party Inspection Services, Provided by ASNT Level 2 & Level 3 Inspectors.
- NDT Inspection Services of Downhole Tubulars, Handling Tools, and Drilling Equipment.
- In-Field Refacing Tools for Premium & Hi-Torque Double-Shouldered Tool Joint Connections.
- In-Field Hardbanding Services, offering Armacor®, Arnco®, Duraband® & Postalloy® OEM Genuine Products.
- Transportation of Downhole Tubulars, plus Tubing & Casing, to and from well sites.

We are a one-stop shop for all of your Downhole Tubular and Tubing & Casing needs. We have a large inventory of products in stock, and we can ship products to any location in the world.

Finding the best deal shouldn't feel like a scavenger hunt. That's why Global Energy Resources is dedicated to providing the highest quality products and services at prices that can't be beat. We value your hard-earned money and believe you deserve the most competitive offers available. So, shop with confidence knowing you're getting the best possible value every time.

Contact us today to learn more about our Products and Services. Please see our webpage at sales@globalenergyusa.com for additional information, we look forward to hearing from you!

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FINANCING...
IN-HOUSE EQUIPMENT FINANCING

FINANCING… IN-HOUSE EQUIMENT FINANCING

Financing Options for Equipment Acquisition

Streamline Your Budget: Effortless Financing Options for Downhole Tubulars, Drilling & Production Equipment:

Purchase the equipment that empowers your success without breaking the bank. At Global Energy USA, we understand the importance of flexible financing solutions. That's why we offer convenient in-house financing options tailored to your specific needs.

Downhole Tubulars, OCTG Tubing & Casing, and Drilling Equipment are now within reach with:

- Low down payment of 25% – Get started quickly and efficiently with minimal upfront investment.
- Net 30 Days after delivery – Enjoy peace of mind and manage your cash flow with convenient payment terms.
- Extendable options of 60 & 90 Days – Choose the payment schedule that best aligns with your project timelines and budget.

Our in-house financing eliminates the need for third-party lenders and complex paperwork. We believe in making the acquisition process as smooth and streamlined as possible, so you can focus on what matters most – achieving your operational goals.

Talk to our dedicated financing team today to discuss your options and unlock the potential of your next project.

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DRILL PIPE

API Spec Rp-7g & 5DP

DRILL PIPE
API Spec Rp-7g & 5DP

DRILL PIPE

API Spec Rp-7g & 5DP, Q1® (latest edition)

Global Energy offers Superior Drill Pipe Solutions:

For the Oil and Gas Industry, choosing the right drill Pipe is paramount. At Global Energy Resources, LLC, we stand as a leading distributor and service provider in the industry. We partner with the world's top manufacturers, leveraging our close collaboration with engineering experts to deliver consistently superior products to our customers.

But our reach extends beyond mere distribution. Global Energy boasts the capabilities of a fully integrated service company, offering comprehensive technical and field support alongside a suite of valuable extras. Training, Inspection, Hardbanding, Tool Joint Break-In, In-Field Tool Joint Refacing of (Double-Shoulder) Premium Connections, and access to a global repair and accessory network all come standard with our commitment to your success. At Global Energy, we empower your drilling operations with every turn of the pipe.

DRILL PIPE DESIGN & MANUFACTURING

Extending Drill Pipe Life: Precision Design Combats Fatigue

Drill pipe longevity hinges on minimizing the stress buildup that leads to fatigue cracks and catastrophic "washouts." During rotation, bending forces create alternating tensile and compressive stresses, particularly concentrating on the internal upset area (the thicker section near the tool joint). Here, sharp geometric changes act as stress magnifiers, while smooth transitions effectively diffuse the load.

Global Energy Drill Pipe: Optimized for Resilience

Recognizing this, Global Energy prioritizes meticulous design in all their drill pipe they sale. The upset design incorporates key features to create the optimal stress-reducing geometry:

- **Counterbored:** This creates a smooth transition between the pipe body and the tool joint, eliminating abrupt changes that concentrate stress.
- **Extended internal upset length:** This spreads the load over a larger area, further reducing stress concentration.

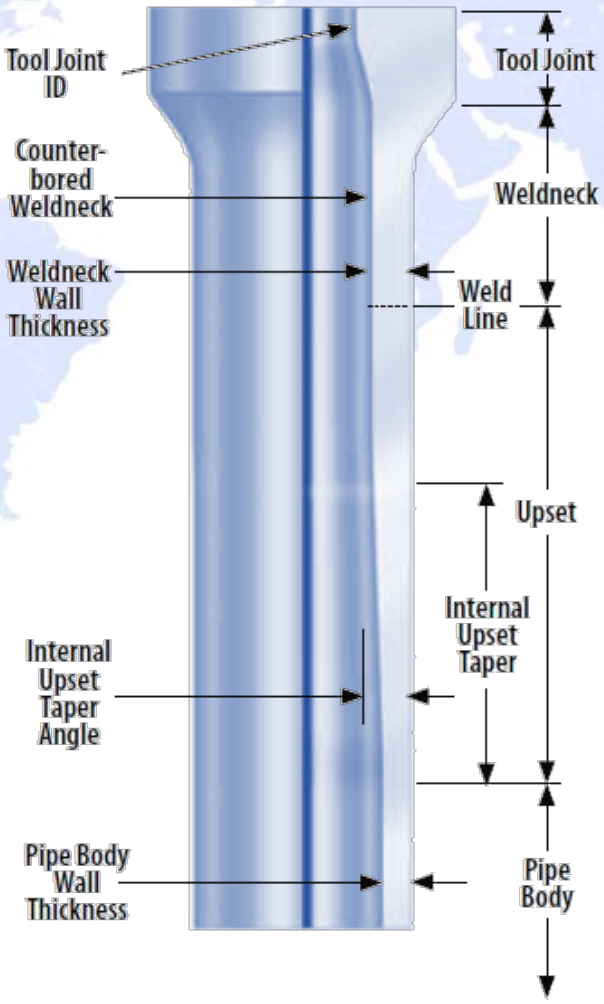
- **Shallow internal taper angle:** This gradual transition smoothly distributes the forces from the tool joint to the pipe body.

- **Generous radius:** Smooth, rounded corners further minimize stress concentrations at critical points.

The result? Global Energy drill pipe boasts superior fatigue resistance, extending their lifespan and minimizing the risk of catastrophic failures. This innovative design translates to improved drilling efficiency, reduced downtime, and ultimately, greater profitability for your operations.

Invest in drill pipe built to endure. Choose Global Energy Resources, LLC and experience the difference.

GLOBAL ENERGY UPSET DESIGN



Figures in SI (USC) Units

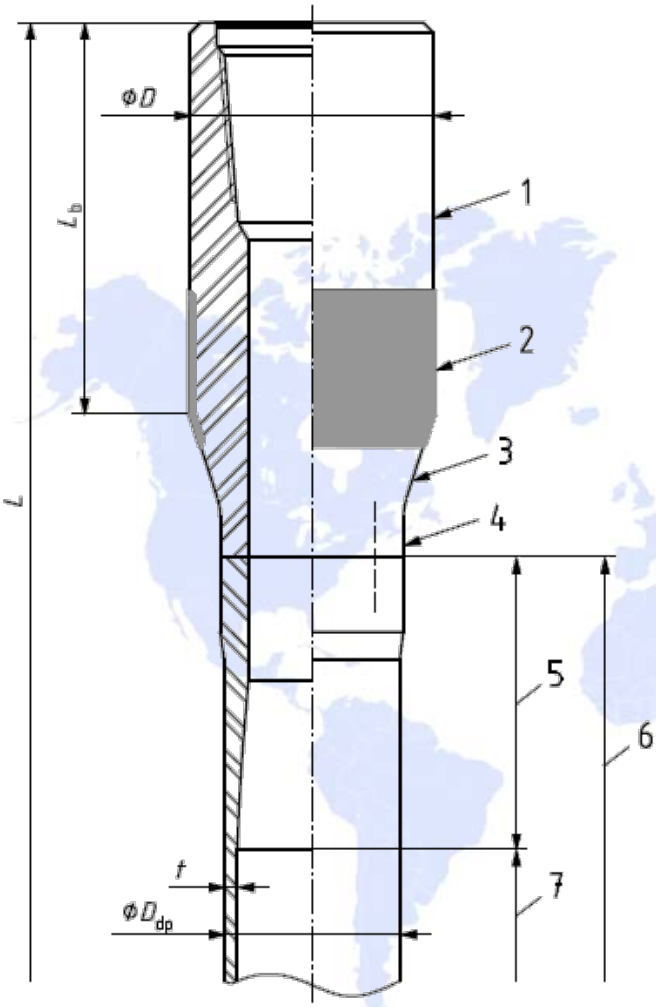


Figure (A)

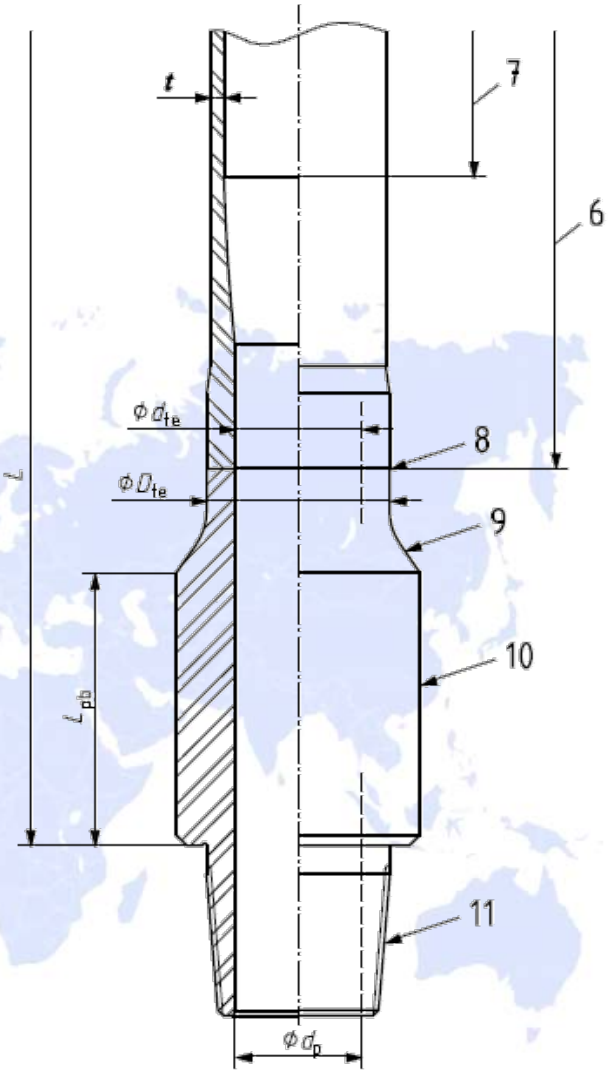


Figure (B)

Key

1. Tool-Joint Box
2. Hard Banding (optional)
3. Tapered Elevator Shoulder
4. Drill-Pipe Weld Neck
5. Drill-Pipe-Body Upset
6. Drill-Pipe-Body
7. Pipe Body
8. Friction Weld
9. PIN Taper
10. Tool-Joint PIN
11. Rotary-Shoulder Connection

DRILL PIPE BODY CHEMICAL COMPOSITION†

(wt%)

Item	Grade	Brand No.	C	Si	Mn	Cr	Mo	P	S	V	Cu	Ni
1	E75	33Mn2V	0.30～0.35	0.20～0.35	1.20～1.50	-	-	≤0.015	≤0.008	0.1～0.15	≤0.20	≤0.25
2	X95 G105	30CrMo	0.27～0.33	0.20～0.35	0.45～0.70	0.90～1.10	0.15～0.25	≤0.015	≤0.008	-	≤0.20	≤0.25
	G105	26 CrMo4S/2	0.25～0.30	0.20～0.35	1.00～1.20	0.80～1.05	0.15～0.25	≤0.015	≤0.008	-	≤0.20	≤0.25
	S135	27CrMo4 4S/1	0.25～0.30	0.17～0.35	0.80～1.05	0.90～1.05	0.40～0.45	≤0.015	≤0.008	-	≤0.20	≤0.25

DRILL PIPE BODY MECHANICAL PROPERTIES… GRADE TABLE†

1	2	3	4		5		6	
Item	Grade	Total elongation of gauge (%)	Yield strength				Minimum Tensile strength	
			Mini		Max			
			Ib/in²	MPa	Ib/in²	MPa	Ib/in²	MPa
1	E-75	0.5	75000	517	105000	724	100000	689
3	X-95	0.5	95000	655	125000	862	105000	724
	G-105	0.6	105000	724	135000	931	115000	793
	S-135	0.7	135000	931	165000	1138	145000	1000

Note: Special High Strength and NS-1 Spec Drill Pipe is available upon request.

JOINT CHEMICAL COMPOSITION†

(wt%)

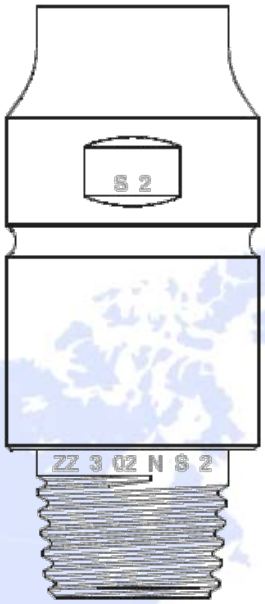
C	Si	Mn	Cr	Mo	Ni	P	S	Cu	Ca
0.35-0.38	0.15-0.35	0.85-1.00	0.90-1.20	0.28-0.33	≤ 0.25	≤ 0.015	≤ 0.008	≤ 0.25	≤ 0.006

JOINT MECHANICAL PROPERTIES†

Tensile strength (MPa)	Yield strength (MPa)	Elongation (%)	Impact energy (J)	Hardness (HB)
⩾965	827~1138	⩾13	⩾80(Average) ⩾65(Single)	285~341

DRILL STRING MARKING & IDENTIFICATION

Manufactures Characterizations & Identification Markings*



Sample markings at base of pin[1,2]

1	2	3	4	5	6
ZZ	3	02	N	S	2

1 Tool Joint Manufacturer's Symbol:
ZZ Company (fictional for example only)

2 Month Welded:
3 – March

3 Year Welded
02 – 2002

4 Pipe Manufacturer's Symbol:
N – United States Steel Company

5 Drill Pipe Grade
S – Grade S135 drill pipe

6 Drill Pipe Weight Code[2]

Notes:

1. Tool Joint manufacturer's symbol, month welded, year welded, pipe manufacturer and drill pipe grade symbol shall be stenciled at the base of the pin as shown above. Pipe manufacturer symbol and drill pipe grade symbol applied shall be as represented by manufacturer. Supplier, owner, or user shall be indicated on documents such as mill certification papers or purchase orders.
2. Stamping the drill pipe weight code on the pin base and milled slot is recommended, in addition to the marking requirements of API Specification 7.

TOOL JOINT MANUFACTURER'S SYMBOL

Refer to the current edition of the IADC Drilling Manual* for a list of Tool Joint Manufacturer's symbols.

*Available from: International Association of Drilling Contractors (IADC) P.O. Box 4287, Houston, TX 77210.

Month and Year Welded

Month	Year
1 through 12	Last two digits of year

Drill Pipe Grade

Grade	Symbol
E75	E
X95	X
G105	G
S135	S

The "manufacturer" may be either a pipe mill or processor. See API Specification 5D, *Specification for Drill Pipe.*

These symbols are provided for pipe manufacturer identification and have been assigned at pipe manufacturer's requests. Manufacturers included in this list may not be current API Specification 5D licensed pipe manufacturers. A list of current licensed pipe manufacturers is available in the *Composite List of Manufacturers. (Licensed for Use of the API Monogram).*

Pipe mills may upset and heat treat their own drill pipe, or they may have this done according to their own specifications. In either case, the mill's assigned symbol should be used on each drill string assembly since they are the pipe manufacturer.

Pipe processors may buy "green" tubes and upset and heat treat these according to their own specifications. In this case, the processor's assigned symbol should be used on each drill string assembly since they are the pipe manufacturer.

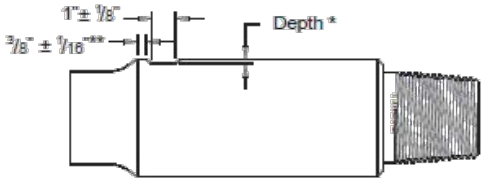
Pipe Manufacturers (Pipe Mills or Processors)

Active		Inactive	
Mill	Symbol	Mill	Symbol
Algoma	X	Armco	A
British Steel		American Seamless	AI
Seamless Tubes LTD	B	B&W	W
Dalmine	D	CF&I	C
Kawasaki	H	J&L	J
Nippon	I	Lone Star	L
NKK	K	Ohio	O
Mannesmann	M	Republic	R
Reynolds Aluminum	RA	TI	Z
Sumitomo	S	Tubemuse	TU
Siderca	SD	Voest	VA
Tamsa	T	Wheeling Pittsburgh	P
US Steel	N	Youngstown	Y
Vallourec	V		
Used	U		

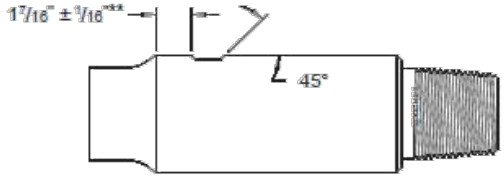
Processor	Symbol
Grant TFW	TFW
Omsco	OMS
Prideco	PI
Texas Steel Conversion	TSC

MILL SLOT & GROOVE METHOD of DRILL STRING IDENTIICATION

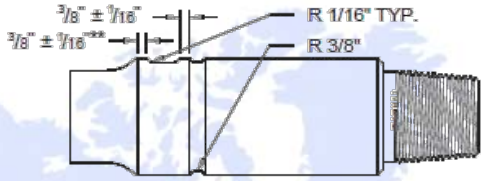
Recommended Practice for Mill Slot and Groove Method of Drill String Identification*



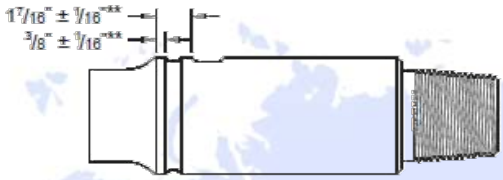
Standard weight grade E75 drill pipe



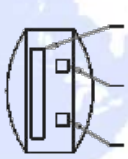
Heavy weight grade E75 drill pipe



Standard weight high strength drill pipe



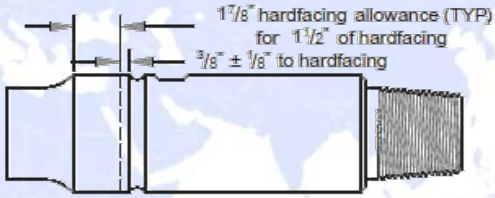
Heavy weight high strength drill pipe



* Groove and milled slot to be 1/4" deep on 5 1/4" O.D. and larger tool joints, 3/16" deep on 5" O.D. and smaller tool joints.

Stencil milled slot with 1/4" high characters so marking may be read with drill pipe hanging in elevators.

Stamping the drill pipe weight code on the pin base and milled slot is recommended, in addition to the marking requirements of API Specification 7.



Heavy weight high strength drill pipe with hardfacing allowance

** When pin hardfacing is required, increase these dimensions by the length of the hardfacing allowance. See example above.

Drill Pipe Weight Code

(1) Size OD inches	(2) Nominal Weight lb per ft	(3) Wall Thickness inches	(4) Weight Code Number
2 3/8	4.85	.190	1
	6.65*	.280	2
2 7/8	6.85	.217	1
	10.40*	.362	2
3 1/2	9.50	.254	1
	13.30*	.368	2
	15.50	.449	3
4	11.85	.262	1
	14.00*	.330	2
	15.70	.380	3
4 1/2	13.75	.271	1
	16.60*	.337	2

(1) Size OD inches	(2) Nominal Weight lb per ft	(3) Wall Thickness inches	(4) Weight Code Number
4 1/2	20.00	.430	3
	22.82	.500	4
	24.66	.550	5
	25.50	.575	6
5	16.25	.296	1
	19.50*	.362	2
	25.60	.500	3
5 1/2	19.20	.304	1
	21.90*	.361	2
	24.70	.415	3
6 5/8	25.20*	.330	2
	27.70	.362	3

*Designates standard weight for drill pipe size.

1-866-375-7473 ● sales@globalenergyusa.com ● www.globalenergyusa.com
Global Headquarters ● Oklahoma City, Oklahoma USA

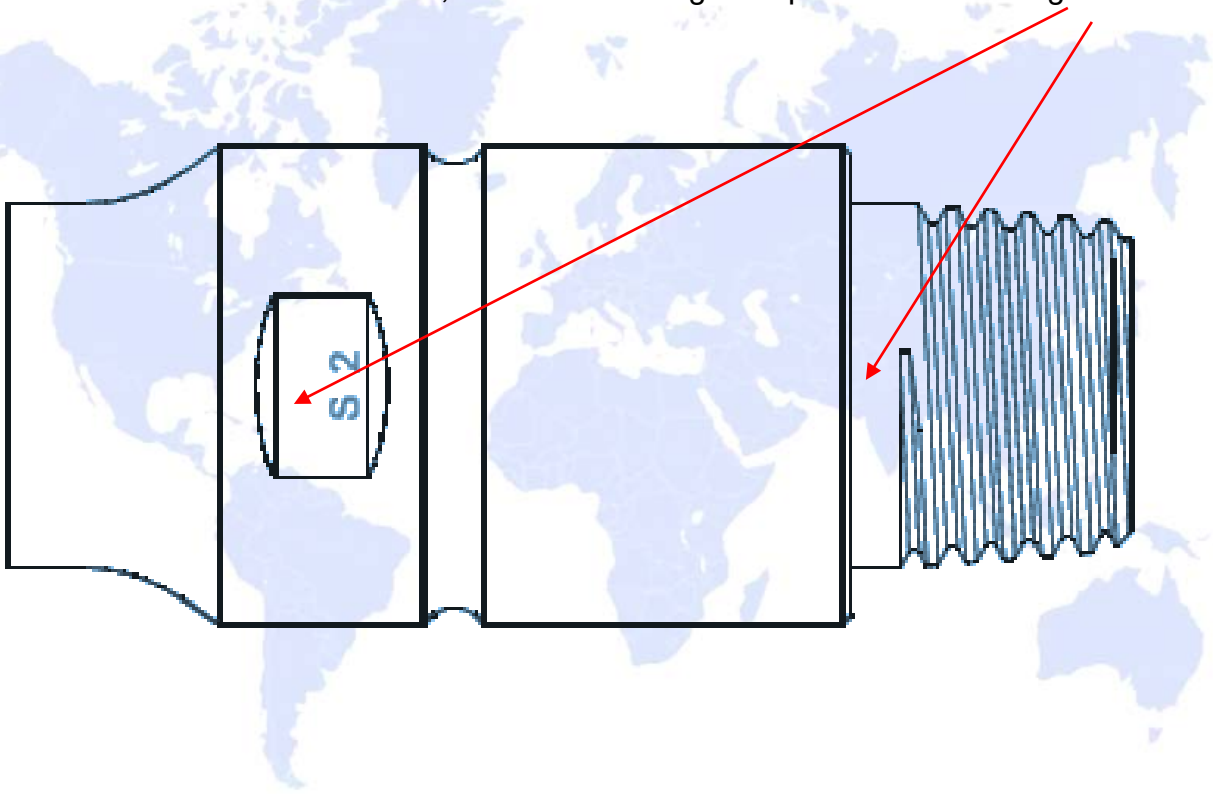
DRILL STRING "SPECIAL" MARKINGS

Special Customer Characterizations & Identification Markings*

Now you have the ability, at no additional charge, to Personalize Your Drill Pipe with your unique Characterization's Markings.

Characterizations Markings can be added to all new drill pipe orders… please see examples below.

a. You can add any Characterizations Markings to your New Drill Pipe ordered, i.e., Stamped Serial Numbers on the PIN Land, or on the 35°-degree taper of the PIN Tong area?



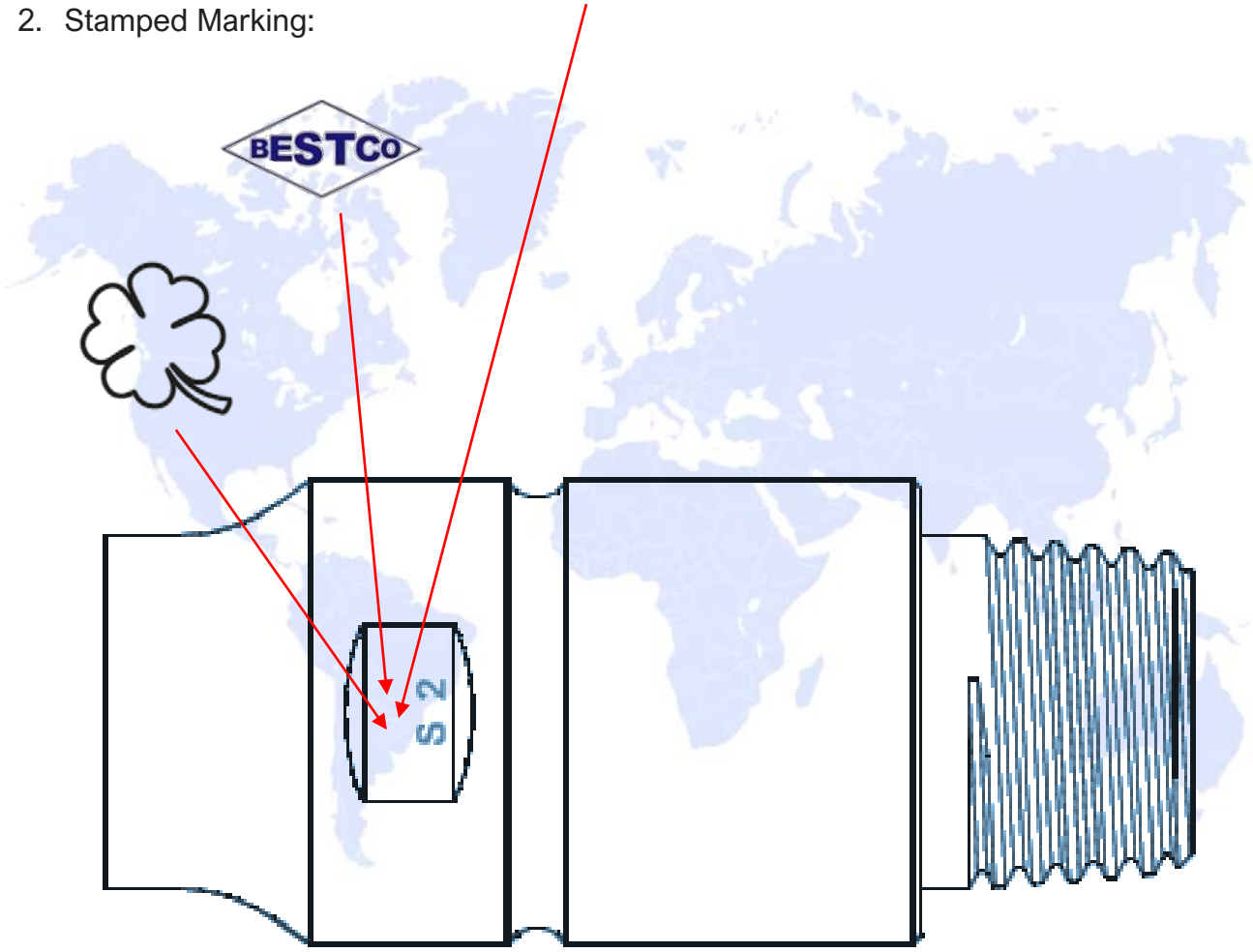
NOTE: *If you choosing to add Characterizations Markings to your order, please provide detailed documentation and drawings, showing exact placement of all Characterizations marking requirements for each Size and Weight of Drill Pipe ordered, i.e., Starting Serial Number for Drill Pipe and exact placement/location. May use a combination of both Letters & Numbers, running in consecutive order… No more than eight digits long for PIN Land and/or PIN Tong area.*

b. Would you like to add any Characterizations markings to your NEW Drill Pipe, i.e., Stamped Name and/or Stamped Marking inside the Mill Slot of the PIN end?

Examples:

1. Stamped Letters & Numbers: ***A1B2C3***

2. Stamped Marking:



NOTE: *If you choosing to add Characterizations Markings to your order, please provide detailed documentation and drawings, showing exact placement of all Characterizations marking requirements for each Size and Weight of Drill Pipe ordered, i.e., Show exact placement/location inside Mill Slot. May use a combination of both Letters & Numbers, and/or Stamped Marking… No more than six digits long for Mill Slot area.*

c. Would you like to add any Characterizations markings to your NEW Drill Pipe, i.e., Inkjet/Paint Stencil on the Tube of the Drill Pipe for Traceability or Inventory Control?

Example:

1. Inkjet/Paint Stencil:

Bestco Drilling
Rig# 001
Work Order No. 00000001
5-7/8" 41.05# R2 S-135 XT-57 ~ 01-01-2024

NOTE: *If you choosing to add Characterizations Markings to your order, please provide detailed documentation and drawings, showing exact placement of all Characterizations marking requirements for each Size and Weight of Drill Pipe ordered, i.e., Show exact placement/location of Inkjet/Paint Stencil Wording to be placed on the Tube of the Drill Pipe. May use a combination of Letters, Numbers, and/or Symbols … Make sure to specify Character Height: ½", 1". 1½", 2", 2½" & 3".*

XT-57 eXtreme Torque™ (XT®) is a reg. Trademark of NOV Grant Prideco™ USA.

Global Energy Drill Pipe: Where Industry Standards Become Stepping-Stones

At Global Energy, we believe in pushing the boundaries of what's possible in drill pipe performance. We don't settle for simply meeting industry standards; we surpass them at every turn. Our unwavering commitment to quality and performance shines through in every joint of pipe we process, delivering downhole tubulars that are built to exceed.

Engineered for exceptional strength, durability, and fatigue resistance, our drill pipe can handle the toughest drilling conditions with ease. We focus on going beyond industry benchmarks, offering:

- **Superior strength**: Withstand greater torsional loads and pressures, minimizing downtime and maximizing efficiency.
- **Unmatched durability**: Built to last longer, reducing replacement costs and ensuring project success.
- **Exceptional fatigue resistance**: Minimize downtime and maximize productivity with unparalleled resistance to wear and tear.

But it's not just about technical specifications. We understand that your success depends on exceeding expectations. That's why every joint of drill pipe is manufactured with the goal of going above and beyond your needs. We listen to our customers and continually strive to deliver downhole solutions that not only meet but exceed their expectations.

Choose Global Energy and experience the difference:

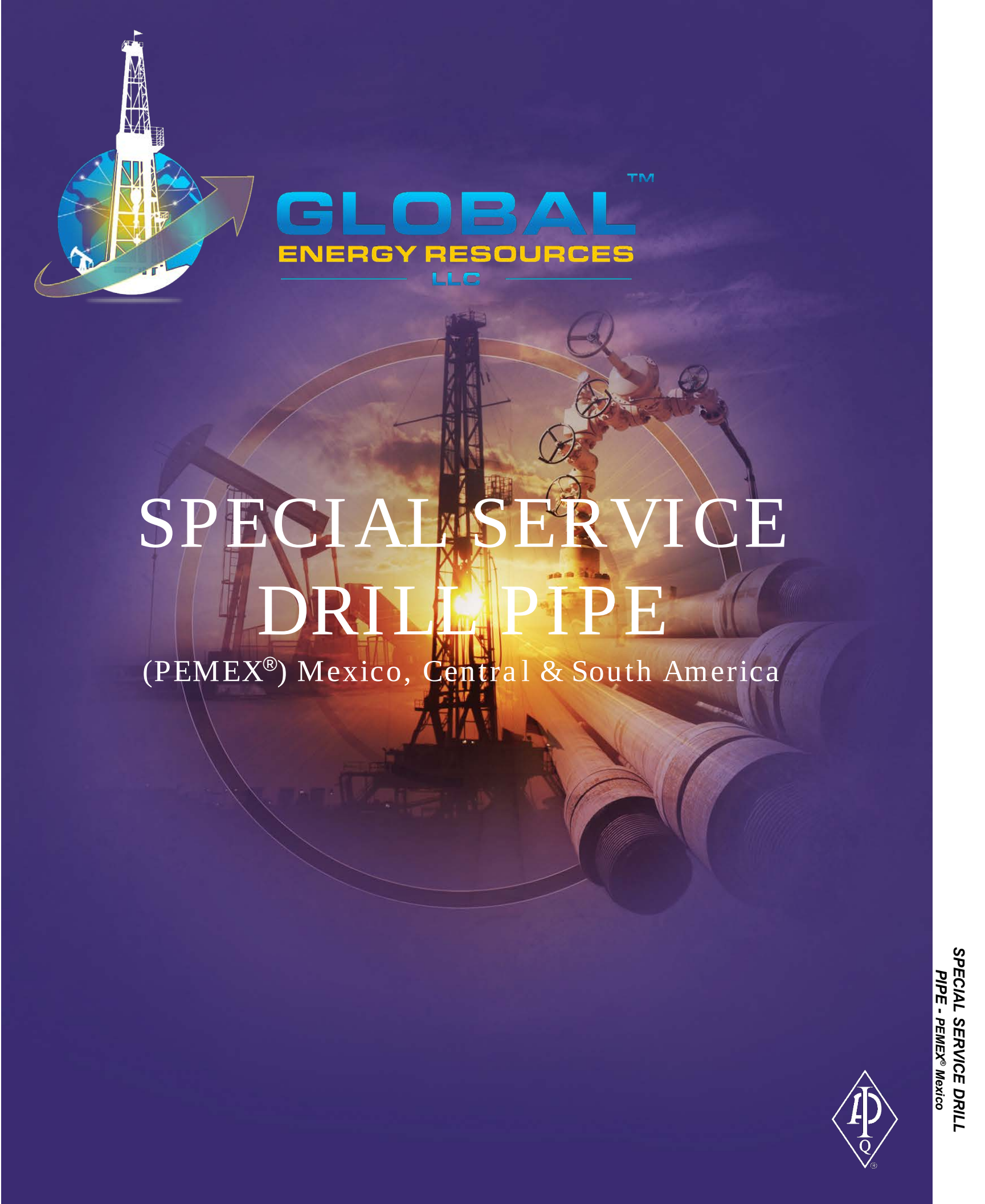
- Drill pipe engineered to surpass industry standards.
- Performance you can count on, even in the most demanding environments.
- A commitment to exceeding your expectations, every step of the way

All Global Energy drill pipe is manufactured, processed and API Monogramed in accordance to API Spec Rp-7g & 5DP, Q1® latest editions.

At Global Energy, we don't just meet industry standards, we surpass them. Our commitment to quality and performance shines through in every joint of drill pipe we process, delivering downhole tubulars that boasts superior strength, durability, and fatigue resistance, and consistently exceed our customers' expectations.

Contact your Global Energy Sales Representative today to receive more information and/or visit our website sales@globalenergyusa.com to learn more.

GLOBAL™
ENERGY RESOURCES
LLC



SPECIAL SERVICE DRILL PIPE

(PEMEX®) Mexico, Central & South America

SPECIAL SERVICE DRILL PIPE

API Spec Rp-7g & 5DP, Q1® (latest edition)

Special Service Drill Pipe (PEMEX® Mexico & Latin America Market)

Global Energy: Your Exclusive Gateway to Premium XT38™ & XT57™ Drill Pipe for Mexico & Latin America…

Attention Operators in Mexico & Latin America: Secure the most sought-after drill pipe in the region with unmatched pricing and delivery through Global Energy. We're your exclusive partner for 3-1/2" 15.50# S-135 R2 XT-38™, 5-7/8" 34.21# S-135 R2 XT-57™, and 5-7/8" 41.05# S-135 R2 XT-57™ Drill Pipe, exceeding industry standards and propelling your operations forward.

Why Choose Global Energy?

Unbeatable Access: We leverage strategic partnerships to offer exclusive pricing and delivery times you won't find anywhere else. Drill deeper, faster, and more efficiently with immediate access to 3-1/2" XT38™ and/or 5-7/8" XT57™ API 5DP Special Service Drill Pipe.

Guaranteed Superiority: Our Special Service Drill Pipe exceeds industry standards, boasting enhanced reliability, durability, and performance in even the most demanding environments.

Complete Downhole Solutions: We go beyond just the 3-1/2" XT38 and/or 5-7/8" XT57 Drill Pipe. We provide all the additional downhole components you may need, including… HWDP, Pup Joints, Subs, Top-Drive & Dart Valves, Handling Tools, etc. for a seamless and optimized downhole tubular package.

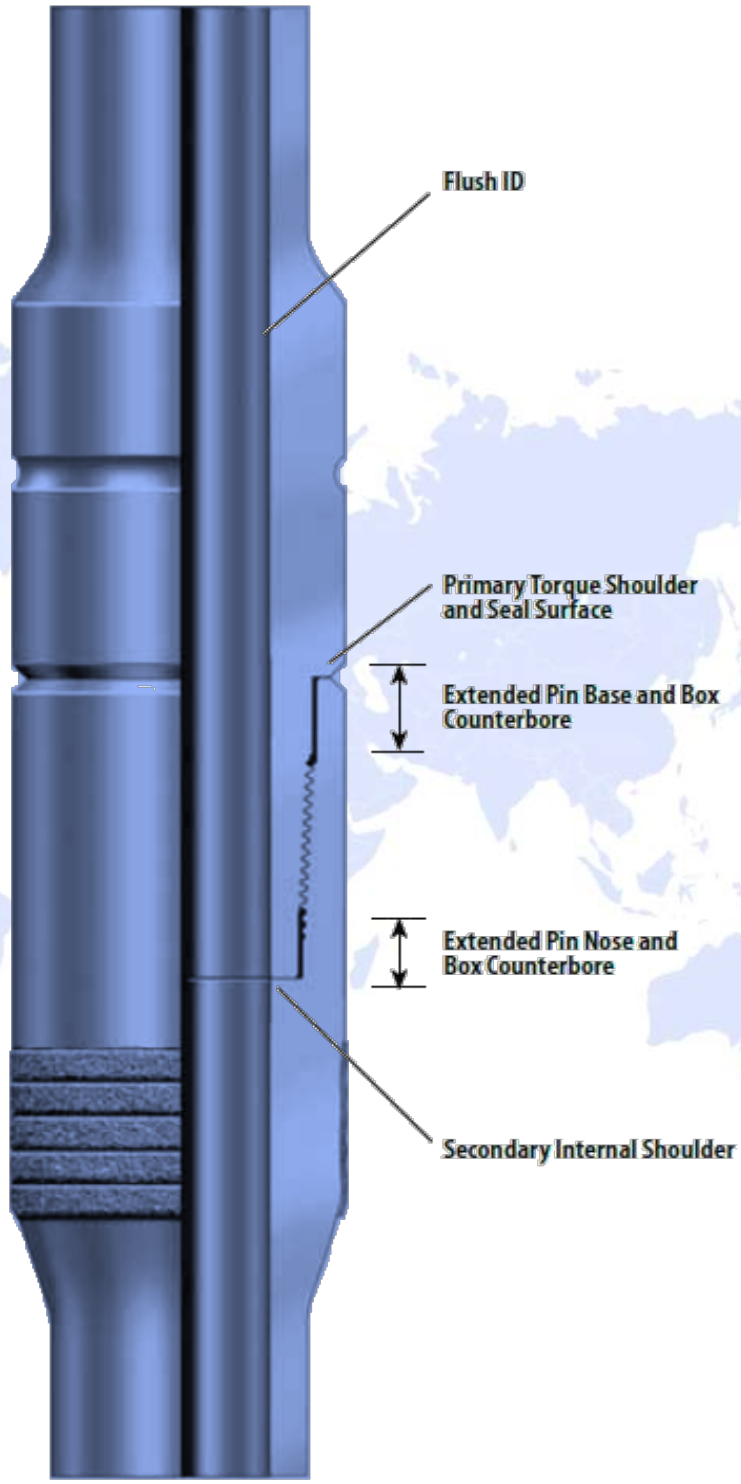
Expert Support: Our dedicated team of drilling specialists is always available to offer expert advice and support throughout your entire project, ensuring smooth execution and optimal results.

Elevate Your Operations with Confidence

Partnering with Global Energy means drilling with confidence. We equip you with the **best-in-class drill pipe**, and comprehensive support. Our exclusive pricing and efficient delivery minimize downtime and optimize your project budgets.

Contact Global Energy today and unlock the full potential of your next drilling project with our exclusive drill pipe solutions.

1-866-375-7473 ● sales@globalenergyusa.com ● www.globalenergyusa.com
Global Headquarters ● Oklahoma City, Oklahoma USA



eXtreme™ Torque (XT™) Connection
with Arnco 350-XT®

Special Service Drill Pipe Data Table† (Mexico & Latin America Market)

Drill Pipe OD	Wall	(Lbs.) Per Nominal	Grade	Adjusted Weight	Length	Joint Weight	Static Load Weight (Lbs.)	Drill Pipe Tensile (Lbs.)
3.500	0.449	15.50	S-135	16.86	31.65	533.62	16,889.04	581,000
5.875	0.625	34.21	S-135	41.16	31.65	1,302.71	41,230.90	1,391,600
5.875	0.750	41.05	S-135	48.18	31.65	1,524.90	48,262.99	1,630,191
5.875	0.813	43.95	S-135	51.66	31.65	1,635.04	51,748.98	1,643,980

Connection Size	Tool Joint OD	Tool Joint ID	Tool Joint Torsional	Make Up Torque	Tool Joint Tensile
XT-38	4-3/4"	2-7/16"	34,200	20,500	658,500
XT-57	7.0"	4-1/4"	94,300	56,600	1,208,700
XT-57	7.0"	4-1/4"	105,111	63,100	1,625,823
XT-57	7-1/4"	4-1/4"	106,600	69,800	1,748,400

Global Energy Resources, LLC

• Additional Product Specifications

Size Range (O.D. of external Drill Pipe):
Normally 6-5/8", 7-5/8"… Special Sizes 8-5/8", 9-1/2" & 10" can be quickly Designed & Engineered for your specific project.

Additional Steel Grade:
Z-140, V-150, U-165.

Special Service Drill Pipe Performance Data Sheet

3-1/2" 15.50# 0.449" S-135 R2 XT™ 38

Pipe Body Specification		
Pipe Body OD	in	3.5
Pipe Body Wall Thickness - Nominal Weight		0.449 in - 15.5 lb/ft
Pipe Body Grade		S135
Drill Pipe Length		Range 2
- Max	ft	32.0
- Min	ft	30.0
Type of Upset		EU
Max Upset OD	in	3.875
Tong Length includes hardbanding if applicable		

Pipe Body Performance		Nominal	API Premium 80% Inspection Class
Burst Pressure *	psi	30,310	27,700
Collapse Pressure *	psi	30,190	26,050
Slip Crushing Capacity *	lbs	499,700	391,200
- Assumed Slip Length	in		16.5
- Assumed Transverse Load Factor (K)			2.6
Adjusted Weight **	lbs/ft		17.6
Fluid Displacement **	US gal/ft		0.27
	Bbls/ft		0.0064
Fluid Capacity **	US gal/ft		0.26
	Bbls/ft		0.0062

* With no bending or axial load in the string as applicable

** Best estimate with coating

Note: Oil field barrel equivalent to 42 US gal

Note: Nominal burst calculated at 87.5% RBW per API

The Technical information contained herein, including the product performance sheet and other attached documents, is for reference only and should not be consider as a recommendation.

Tool Joint Specification		
Connection Type and Size		XT™ 38
Benchmark		GPmark™
SmoothEdge™ Height per side	in	0.09375
Tool Joint SMYS	psi	120,000
Connection OD	in	4.75
Connection ID	in	2.438
Pin Tong Length	in	10.0
Box Tong Length	in	15.0
Thread Compound Friction Factor (FF)		1.0

Tool Joint Performance		
Max Make-Up Torque (Recommended)	ft-lbs	**20,500**
Min Make-Up Torque	ft-lbs	**17,100**
Min TJ OD (API Premium)	in	4.478
Min TJ OD for Counterbore	in	4.478
Drift Size	in	2.313

The maximum make-up torque should be applied when possible.
To maximize connection operational tensile, a MUT (T4) = 17,100 should be applied.

Advisories and Warnings

Advisories: N/A

Warnings: N/A

Special Service Drill Pipe Performance Data Sheet
3-1/2" 15.50# 0.449" S-135 R2 XT™ 38

Special Service Drill Pipe Performance Data Sheet

3-1/2" 15.50# 0.449" S-135 R2 XT™ 38

Combined Loading for Drill Pipe

Connection: XT™ 38 4.75" x 2.438" (120 KSI SMYS) Friction Factor: 1.0
Pipe: 3.5" OD 0.449" Wall Thickness S135 80% Inspection Class

At Max MUT (20500 ft-lbs)		At Min MUT (17100 ft-lbs)	
Operational Torque(ft-lbs)	Assembly Max Tension(lbs)	Operational Torque(ft-lbs)	Assembly Max Tension(lbs)
0	451100	0	451100
900	450900	700	451000
1800	450200	1400	450600
2800	449000	2200	449800
3700	447400	2900	448900
4600	445400	3600	447600
5500	443000	4300	446200
6400	440000	5100	444100
7400	436200	5800	442000
8300	432300	6500	439700
9200	427900	7200	437100
10100	423000	8000	433700
11000	417600	8700	430400
12000	410900	9400	426900
12900	404200	10100	423000
13800	397000	10900	418200
14700	389200	11600	413600
15700	379600	12300	408700
16600	370300	13000	403500
17500	360200	13800	397000

Connection Wear Table

Connection: XT™ 38 4.75" x 2.438" (120 KSI SMYS) Friction Factor: 1.0

Tool Joint OD (in)	Max MUT(ft-lbs)	Min MUT(ft-lbs)
4.75	20500	17100
4.725	20100	16700
4.701	19600	16400
4.676	19200	16000
4.651	18800	15600
4.626	18300	15300
4.602	17900	14900
4.577	17500	14600
4.552	17000	14200
4.527	16600	13900
4.503	16200	13500
4.478	15800	13200

Elevator Capacity

Elevator Bore Diameter: 3.96875" Elevator SMYS: 110,100 psi Box Taper Angle: 18 deg
Connection: XT™ 38 3.5" 0.449" wall EU S135

Tool Joint OD (in.)	Elevator Hoist Capacity (lbs)	
	No Wear	1/32" Wear Factor
4.9375	746100	724500
4.896	710800	689300
4.854	675400	653800
4.812	640300	618700
4.77	605500	583900
4.729	571800	550300
4.687	537600	516100
4.645	503700	482200
4.603	470100	448600
4.562	437600	416100
4.52	404600	383100
4.478	372000	350400

Special Service Drill Pipe Performance Data Sheet
3-1/2" 15.50# 0.449" S-135 R2 XT™ 38

Special Service Drill Pipe Performance Data Sheet

3-1/2" 15.50# 0.449" S-135 R2 XT™ 38

Slip Crush Capacity Table at 80% Inspection Class					
		Slip Length			
		13.75 in.	**16 in.**	**16.5 in.**	**22 in.**
K Factor	2.1	393000.0 lbs	401000.0 lbs	402500.0 lbs	414700.0 lbs
	2.6	379600.0 lbs	389300.0 lbs	391200.0 lbs	406000.0 lbs
	4.0	344400.0 lbs	358100.0 lbs	360700.0 lbs	382200.0 lbs
	4.2	339600.0 lbs	353800.0 lbs	356500.0 lbs	378900.0 lbs

Improved Elevator Capacity Table						
Elevator Bore Diameter: 3.96875" Elevator SMYS: 110,100 psi Box Taper Angle: 18 deg Connection: XT™ 38 3.5" 0.449" wall EU S135						
Tool Joint OD (in.)	**Elevator Hoist Capacity (lbs)**					
	No Wear	**Custom 0.03125 in.**	**1/16 in.**	**1/8 in.**	**3/16 in.**	**1/4 in.**
4.478	372000	350400	328700	284800	240200	195000
4.52	404600	383100	361400	317500	272900	227600
4.562	437600	416100	394400	350500	305900	260600
4.603	470100	448600	426900	383000	338400	293100
4.645	503700	482200	460500	416600	372000	326700
4.687	537600	516100	494400	450400	405900	360600
4.729	571800	550300	528600	484600	440100	394800
4.77	605500	583900	562200	518300	473700	428500
4.812	640300	618700	597000	553100	508500	463300
4.854	675400	653800	632100	588200	543600	498400
4.896	710800	689300	667600	623600	579100	533800
4.9375	746100	724500	702800	658900	614300	569100

Special Service Drill Pipe Performance Data Sheet
3-1/2" 15.50# 0.449" S-135 R2 XT™ 38

Special Service Drill Pipe Performance Data Sheet

5-7/8" 34.21# 0.625" S-135 R2 XT™ 57

Pipe Body Specification		
Pipe Body OD	in	5.875
Pipe Body Wall Thickness - Nominal Weight		0.625 in - 34.21 lb/ft
Pipe Body Grade		S135
Drill Pipe Length		Range 2
- Max	ft	32.0
- Min	ft	30.0
Type of Upset		IEU
Max Upset OD	in	6.0
Tong Length includes hardbanding if applicable		

Pipe Body Performance		Nominal	90% Inspection Class
Burst Pressure *	psi	25,130	25,900
Collapse Pressure *	psi	25,670	23,830
Slip Crushing Capacity *	lbs	1,074,600	961,000
- Assumed Slip Length	in		16.5
- Assumed Transverse Load Factor (K)			2.6
Adjusted Weight **	lbs/ft		41.16
Fluid Displacement **	US gal/ft		0.63
	Bbls/ft		0.015
Fluid Capacity **	US gal/ft		0.81
	Bbls/ft		0.0194

* With no bending or axial load in the string as applicable
** Best estimate with coating
Note: Oil fiel barrel equivalent to 42 US gal
Note: Nominal burst calculated at 87.5% RBW per API

The Technical information contained herein, including the product performance sheet and other attached documents, is for reference only and should not be consider as a recommendation.

Tool Joint Specification		
Connection Type and Size		XT™ 57
Benchmark		GPmark™
SmoothEdge™ Height per side	in	0.09375
Tool Joint SMYS	psi	120,000
Connection OD	in	7.0
Connection ID	in	4.0
Pin Tong Length	in	10.0
Box Tong Length	in	15.0
Thread Compound Friction Factor (FF)		1.0

Tool Joint Performance		
Recommended Make-Up Torque (T4)	ft-lbs	**54,600**
Min Make-Up Torque	ft-lbs	**53,100**
Min TJ OD (API Premium)	in	6.879
Min TJ OD for Counterbore	in	6.563
Drift Size	in	3.875

The maximum make-up torque should be applied when possible.
To maximize connection operational tensile, a MUT (T4) = 54,600 should be applied.

Advisories and Warnings

Advisories: N/A

Warnings: N/A

Drill Pipe Rating lbs	961000

Note: Rating based on a 90% inspection class pipebody, TJ tensile, elevator OD, and no applied drilling torque

Special Service Drill Pipe Performance Data Sheet
5-7/8" 34.21# 0.625" S-135 R2 XT™ 57

1

Special Service Drill Pipe Performance Data Sheet

5-7/8" 34.21# 0.625" S-135 R2 XT™ 57

Combined Loading for Drill Pipe

Connection: XT™ 57 7.0" x 4.0" (120 KSI SMYS) Friction Factor: 1.0
Pipe: 5.875" OD 0.625" Wall Thickness S135 90% Inspection Class

At T4 MUT (54600 ft-lbs)		At Min MUT (53100 ft-lbs)	
Operational Torque(ft-lbs)	Assembly Max Tension(lbs)	Operational Torque(ft-lbs)	Assembly Max Tension(lbs)
0	1237600	0	1237600
2000	1237400	1900	1237400
4000	1237100	3800	1237100
6000	1236400	5800	1236500
8000	1235600	7700	1235700
10000	1234400	9600	1234700
12000	1233100	11500	1233400
14100	1231300	13500	1231900
16100	1229400	15400	1230100
18100	1227300	17300	1228200
20100	1224900	19200	1226000
22100	1222200	21200	1223500
24100	1219300	23100	1220800
26100	1216100	25000	1217900
28100	1212700	26900	1214800
30100	1209000	28900	1211200
32100	1205000	30800	1207600
34100	1200800	32700	1203800
36100	1196200	34600	1199700
38200	1191200	36600	1195100

Connection Wear Table

Connection: XT™ 57 7.0" x 4.0" (120 KSI SMYS)

Tool Joint OD (in)	T4 MUT(ft-lbs)	Min MUT(ft-lbs)
7.0	54600	53100
6.96	54600	51800
6.921	54600	50600
6.881	54600	49300
6.841	54600	48100
6.801	54600	46900
6.762	54600	45700
6.722	54600	44500
6.682	54600	43300
6.642	54600	42100
6.603	54600	40900
6.563	54600	39700

Elevator Capacity

Elevator Bore Diameter: 6.125" Elevator SMYS: 110,100 psi Box Taper Angle: 18 deg
Connection: XT™ 57 5.875" 0.625" wall IEU S135

Tool Joint OD (in.)	Elevator Hoist Capacity (lbs)	
	No Wear	1/32" Wear Factor
7.1875	1223100	1189900
7.131	1153200	1120000
7.074	1083100	1050000
7.017	1013700	980500
6.96	944800	911600
6.904	877700	844500
6.847	809900	776700
6.79	742700	709500
6.733	676000	642800
6.677	611100	577900
6.62	545500	512300
6.563	480600	447400

Special Service Drill Pipe Performance Data Sheet
5-7/8" 34.21# 0.625" S-135 R2 XT™ 57

Special Service Drill Pipe Performance Data Sheet

5-7/8" 34.21# 0.625" S-135 R2 XT™ 57

Slip Crush Capacity Table at 90% Inspection Class					
		Slip Length			
		13.75 in.	**16 in.**	**16.5 in.**	**22 in.**
K Factor	2.1	968800.0 lbs	1003900.0 lbs	1010500.0 lbs	1065200.0 lbs
	2.6	912500.0 lbs	953200.0 lbs	961000.0 lbs	1025900.0 lbs
	4.0	777100.0 lbs	827700.0 lbs	837700.0 lbs	923500.0 lbs
	4.2	760300.0 lbs	811800.0 lbs	821900.0 lbs	909800.0 lbs

Improved Elevator Capacity Table						
Elevator Bore Diameter: 6.125" Elevator SMYS: 110,100 psi Box Taper Angle: 18 deg Connection: XT™ 57 5.875" 0.625" wall IEU S135						
Tool Joint OD (in.)	**Elevator Hoist Capacity (lbs)**					
	No Wear	**Custom 0.03125 in.**	**1/16 in.**	**1/8 in.**	**3/16 in.**	**1/4 in.**
6.563	480600	447400	414000	346800	278900	210300
6.62	545500	512300	479000	411800	343900	275300
6.677	611100	577900	544500	477300	409400	340800
6.733	676000	642800	609500	542200	474400	405800
6.79	742700	709500	676100	608900	541000	472400
6.847	809900	776700	743300	676100	608200	539700
6.904	877700	844500	811100	743900	676000	607400
6.96	944800	911600	878300	811000	743100	674600
7.017	1013700	980500	947100	879900	812000	743500
7.074	1083100	1050000	1016600	949400	881500	812900
7.131	1153200	1120000	1086600	1019400	951500	882900
7.1875	1223100	1189900	1156600	1089300	1021500	952900

Special Service Drill Pipe Performance Data Sheet
5-7/8" 34.21# 0.625" S-135 R2 XT™ 57

Special Service Drill Pipe Performance Data Sheet

5-7/8" 41.05# 0.750" S-135 R2 XT™ 57

Pipe Body Specification

Pipe Body OD	in	5.875
Pipe Body Wall Thickness - Nominal Weight		0.750 in - 41.05 lb/ft
Pipe Body Grade		S135
Drill Pipe Length		Range 2
- Max	ft	32.0
- Min	ft	30.0
Type of Upset		IEU
Max Upset OD	in	6.0

Tong Length includes hardbanding if applicable

Pipe Body Performance

		Nominal	90% Inspection Class
Burst Pressure *	psi	30,160	31,000
Collapse Pressure *	psi	30,070	28,080
Slip Crushing Capacity *	lbs	1,258,800	1,123,900
- Assumed Slip Length	in		16.5
- Assumed Transverse Load Factor (K)			2.6
Adjusted Weight **	lbs/ft		48.18
Fluid Displacement **	US gal/ft		0.74
	Bbls/ft		0.0175
Fluid Capacity **	US gal/ft		0.72
	Bbls/ft		0.0171

* With no bending or axial load in the string as applicable

** Best estimate with coating

Note: Oil field barrel equivalent to 42 US gal

Note: Nominal burst calculated at 87.5% RBW per API

Tool Joint Specification

Connection Type and Size		XT™ 57
Benchmark		GPmark™
SmoothEdge™ Height per side	in	0.09375
Tool Joint SMYS	psi	120,000
Connection OD	in	7.25
Connection ID	in	3.625
Pin Tong Length	in	10.0
Box Tong Length	in	15.0
Thread Compound Friction Factor (FF)		1.0

Tool Joint Performance

Recommended Make-Up Torque (T4)	ft-lbs	**66,600**
Min Make-Up Torque	ft-lbs	**66,400**
Min TJ OD (API Premium)	in	6.895
Min TJ OD for Counterbore	in	6.563
Drift Size	in	3.5

The maximum make-up torque should be applied when possible.
To maximize connection operational tensile, a MUT (T4) = 66,600 should be applied.

Advisories and Warnings

Advisories: N/A

Warnings: N/A

Drill Pipe Rating lbs	1123900

Note: Rating based on a 90% inspection class pipebody, TJ tensile, elevator OD, and no applied drilling torque

Special Service Drill Pipe Performance Data Sheet
5-7/8" 41.05# 0.750" S-135 R2 XT™ 57

Special Service Drill Pipe Performance Data Sheet

5-7/8" 41.05# 0.750" S-135 R2 XT™ 57

Combined Loading for Drill Pipe

Connection: XT™ 57 7.25" x 3.625" (120 KSI SMYS) Friction Factor: 1.0
Pipe: 5.875" OD 0.750" Wall Thickness S135 90% Inspection Class

At T4 MUT (66600 ft-lbs)		At Min MUT (66400 ft-lbs)	
Operational Torque(ft-lbs)	Assembly Max Tension(lbs)	Operational Torque(ft-lbs)	Assembly Max Tension(lbs)
0	1445700	0	1445700
2400	1445500	2400	1445500
4900	1445000	4800	1445000
7300	1444200	7300	1444200
9700	1443000	9700	1443000
12200	1441400	12100	1441400
14600	1439500	14500	1439600
17100	1437200	17000	1437300
19500	1434600	19400	1434700
21900	1431700	21800	1431800
24400	1428300	24200	1428600
26800	1424600	26700	1424800
29200	1420700	29100	1420800
31700	1416200	31500	1416500
34100	1411500	33900	1411900
36600	1406200	36400	1406600
39000	1400700	38800	1401200
41400	1394900	41200	1395400
43900	1388500	43600	1389300
46300	1381900	46000	1382700

Connection Wear Table

Connection: XT™ 57 7.25" x 3.625" (120 KSI SMYS)

Tool Joint OD (in)	T4 MUT(ft-lbs)	Min MUT(ft-lbs)
7.25	66600	66400
7.188	66600	64300
7.125	66600	62200
7.063	66600	60200
7.0	66600	58200
6.938	66600	56200
6.875	66600	54200
6.813	66600	52300
6.75	66600	50400
6.688	66600	48500
6.625	66600	46600
6.563	66600	44800

Elevator Capacity

Elevator Bore Diameter: 6.125" Elevator SMYS: 110,100 psi Box Taper Angle: 18 deg
Connection: XT™ 57 5.875" 0.750" wall IEU S135

Tool Joint OD (in.)	Elevator Hoist Capacity (lbs)	
	No Wear	1/32" Wear Factor
7.4375	1539300	1506100
7.358	1437600	1404400
7.279	1337600	1304400
7.199	1237400	1204200
7.12	1139600	1106400
7.04	1041600	1008500
6.961	946000	912800
6.881	850200	817100
6.802	756800	723600
6.722	663200	630000
6.643	571900	538700
6.563	480600	447400

Special Service Drill Pipe Performance Data Sheet
5-7/8" 41.05# 0.750" S-135 R2 XT™ 57

Special Service Drill Pipe Performance Data Sheet

5-7/8" 41.05# 0.750" S-135 R2 XT™ 57

Slip Crush Capacity Table at 90% Inspection Class					
		Slip Length			
		13.75 in.	**16 in.**	**16.5 in.**	**22 in.**
K Factor	2.1	1132900.0 lbs	1173800.0 lbs	1181600.0 lbs	1245200.0 lbs
	2.6	1067500.0 lbs	1114900.0 lbs	1123900.0 lbs	1199500.0 lbs
	4.0	909600.0 lbs	968600.0 lbs	980200.0 lbs	1080200.0 lbs
	4.2	890000.0 lbs	950000.0 lbs	961800.0 lbs	1064300.0 lbs

Improved Elevator Capacity Table						
Elevator Bore Diameter: 6.125" Elevator SMYS: 110,100 psi Box Taper Angle: 18 deg Connection: XT™ 57 5.875" 0.750" wall IEU S135						
Tool Joint OD (in.)	**Elevator Hoist Capacity (lbs)**					
	No Wear	**Custom 0.03125 in.**	**1/16 in.**	**1/8 in.**	**3/16 in.**	**1/4 in.**
6.563	480600	447400	414000	346800	278900	210300
6.643	571900	538700	505400	438200	370300	301700
6.722	663200	630000	596700	529500	461600	393000
6.802	756800	723600	690200	623000	555100	486500
6.881	850200	817100	783700	716500	648600	580000
6.961	946000	912800	879500	812200	744300	675800
7.04	1041600	1008500	975100	907900	840000	771400
7.12	1139600	1106400	1073100	1005800	937900	869400
7.199	1237400	1204200	1170900	1103700	1035800	967200
7.279	1337600	1304400	1271000	1203800	1135900	1067300
7.358	1437600	1404400	1371000	1303800	1235900	1167300
7.4375	1539300	1506100	1472700	1405500	1337600	1269000

Special Service Drill Pipe Performance Data Sheet
5-7/8" 41.05# 0.750" S-135 R2 XT™ 57

Special Service Drill Pipe Performance Data Sheet

5-7/8" 43.95# 0.813" S-135 R2 XT™ 57

Pipe Body Specification		
Pipe Body OD	in	5.875
Pipe Body Wall Thickness - Nominal Weight		0.813 in - 43.95 lb/ft
Pipe Body Grade		S135
Drill Pipe Length		Range 2
- Max	ft	32.0
- Min	ft	30.0
Type of Upset		IEU
Max Upset OD	in	6.0
Tong Length includes hardbanding if applicable		

Pipe Body Performance		Nominal	95% Inspection Class
Burst Pressure *	psi		35,470
Collapse Pressure *	psi		31,180
Slip Crushing Capacity *	lbs		1,643,980
- Assumed Slip Length	in		16.5
- Assumed Transverse Load Factor (K)			2.6
Adjusted Weight **	lbs/ft		51.66
Fluid Displacement **	US gal/ft		0.79
	Bbls/ft		0.0188
Fluid Capacity **	US gal/ft		0.68
	Bbls/ft		0.0162

* With no bending or axial load in the string as applicable

** Best estimate with coating

Note: Oil field barrel equivalent to 42 US gal

Note: Nominal burst calculated at 87.5% RBW per API

Tool Joint Specification		
Connection Type and Size		XT™ 57
Benchmark		GPmark™
SmoothEdge™ Height per side	in	0.09375
Tool Joint SMYS	psi	120,000
Connection OD	in	7.25
Connection ID	in	3.500
Pin Tong Length	in	12.0
Box Tong Length	in	17.0
Thread Compound Friction Factor (FF)		1.0

Tool Joint Performance		
Recommended Make-Up Torque (T4)	ft-lbs	**69,800**
Min Make-Up Torque	ft-lbs	**67,900**
Min TJ OD (API Premium)	in	6.895
Min TJ OD for Counterbore	in	6.563
Drift Size	in	3.375

The maximum make-up torque should be applied when possible.
To maximize connection operational tensile, a MUT (T4) = 69,900 should be applied.

Advisories and Warnings

Advisories: N/A

Warnings: N/A

Drill Pipe Rating lbs	1643980

Note: Rating based on a 90% inspection class pipebody, TJ tensile, elevator OD, and no applied drilling torque

Special Service Drill Pipe Performance Data Sheet
5-7/8" 43.95# 0.813" S-135 R2 XT™ 57

Special Service Drill Pipe Performance Data Sheet (1.0 FF)

5-7/8" 43.95# 0.813" S-135 R2 XT™ 57

Combined Loading for Drill Pipe

Connection: XT™ 57 7.25" x 3.5" (120 KSI SMYS) Friction Factor: 1.0
Pipe: 5.875" OD 0.813" Wall Thickness S135 95% Inspection Class

At Max MUT (69900 ft-lbs)		At Min MUT (67900 ft-lbs)	
Operational Torque(ft-lbs)	Assembly Max Tension(lbs)	Operational Torque(ft-lbs)	Assembly Max Tension(lbs)
0	1644800	0	1644800
2500	1644700	2400	1644700
4900	1644200	4700	1644200
7400	1643400	7100	1643500
9800	1642300	9400	1642500
12300	1640800	11800	1641100
14800	1639000	14100	1639500
17200	1637000	16500	1637600
19700	1634500	18800	1635400
22100	1631800	21200	1632900
24600	1628700	23500	1630100
27100	1625200	25900	1626900
29500	1621600	28200	1623600
32000	1617500	30600	1619800
34400	1613200	32900	1615900
36900	1608300	35300	1611500
39400	1603200	37600	1606900
41800	1597800	40000	1601900
44300	1592000	42300	1596700
46700	1586000	44700	1591000

Connection Wear Table

Connection: XT™ 57 7.25" x 3.5" (120 KSI SMYS) Friction Factor: 1.0

Tool Joint OD (in)	Max MUT(ft-lbs)	Min MUT(ft-lbs)
7.25	69900	67900
7.188	67800	65800
7.125	65800	63800
7.063	63700	61700
7.0	63100	59700
6.938	62800	57700
6.875	62600	55700
6.813	62400	53800
6.75	62100	51900
6.688	60000	50000
6.625	57800	48200
6.563	55600	46300

Elevator Capacity

Elevator Bore Diameter: 6.125" Elevator SMYS: 110,100 psi Box Taper Angle: 18 deg
Connection: XT™ 57 5.875" 0.813" wall IEU S135

Tool Joint OD (in.)	Elevator Hoist Capacity (lbs)	
	No Wear	1/32" Wear Factor
7.25	1301100	1268000
7.188	1223700	1190500
7.125	1145800	1112600
7.063	1069700	1036500
7.0	993100	959900
6.938	918400	885200
6.875	843100	809900
6.813	769700	736500
6.75	695800	662600
6.688	623800	590600
6.625	551300	518100
6.563	480600	447400

Special Service Drill Pipe Performance Data Sheet
5-7/8" 43.95# 0.813" S-135 R2 XT™ 57

Special Service Drill Pipe Performance Data Sheet (1.15 FF)

5-7/8" 43.95# 0.813" S-135 R2 XT™ 57

Combined Loading for Drill Pipe

Connection: XT™ 57 7.25" x 3.5" (120 KSI SMYS) Friction Factor: 1.15
Pipe: 5.875" OD 0.813" Wall Thickness S135 95% Inspection Class

At Max MUT (80100 ft-lbs)		At Min MUT (78100 ft-lbs)	
Operational Torque(ft-lbs)	Assembly Max Tension(lbs)	Operational Torque(ft-lbs)	Assembly Max Tension(lbs)
0	1644800	0	1644800
2800	1644600	2700	1644600
5700	1644000	5400	1644000
8500	1642900	8200	1643000
11300	1641400	10900	1641700
14200	1639500	13600	1639900
17000	1637100	16300	1637800
19800	1634400	19000	1635200
22600	1631200	21800	1632200
25500	1627500	24500	1628800
28300	1623500	27200	1625100
31100	1619000	29900	1621000
34000	1613900	32600	1616400
36800	1608500	35400	1611300
39600	1602700	38100	1605900
42500	1596200	40800	1600100
45300	1589500	43500	1593900
48100	1582300	46200	1587300
50900	1574700	49000	1579900
53800	1566200	51700	1572400

Connection Wear Table

Connection: XT™ 57 7.25" x 3.5" (120 KSI SMYS) Friction Factor: 1.15

Tool Joint OD (in)	Max MUT(ft-lbs)	Min MUT(ft-lbs)
7.25	80100	78100
7.188	77700	75700
7.125	75300	73300
7.063	73000	71000
7.0	72500	68700
6.938	72300	66400
6.875	72000	64100
6.813	71700	61900
6.75	71400	59700
6.688	69000	57500
6.625	66500	55400
6.563	63900	53300

Elevator Capacity

Elevator Bore Diameter: 6.125" Elevator SMYS: 110,100 psi Box Taper Angle: 18 deg
Connection: XT™ 57 5.875" 0.813" wall IEU S135

Tool Joint OD (in.)	Elevator Hoist Capacity (lbs)	
	No Wear	1/32" Wear Factor
7.25	1301100	1268000
7.188	1223700	1190500
7.125	1145800	1112600
7.063	1069700	1036500
7.0	993100	959900
6.938	918400	885200
6.875	843100	809900
6.813	769700	736500
6.75	695800	662600
6.688	623800	590600
6.625	551300	518100
6.563	480600	447400

Special Service Drill Pipe Performance Data Sheet
5-7/8" 43.95# 0.813" S-135 R2 XT™ 57

GLOBAL ENERGY RESOURCES LLC ™

Special Service Drill Pipe Performance Data Sheet (T4, 1.0 FF)

5-7/8" 43.95# 0.813" S-135 R2 XT™ 57

Combined Loading for Drill Pipe

Connection: XT™ 57 7.25" x 3.5" (120 KSI SMYS)
Pipe: 5.875" OD 0.813" Wall Thickness S135 95% Inspection Class

At T4 MUT (69800 ft-lbs)		At Min MUT (67900 ft-lbs)	
Operational Torque(ft-lbs)	Assembly Max Tension(lbs)	Operational Torque(ft-lbs)	Assembly Max Tension(lbs)
0	1644800	0	1644800
2500	1644700	2400	1644700
4900	1644200	4700	1644200
7400	1643400	7100	1643500
9800	1642300	9400	1642500
12300	1640800	11800	1641100
14700	1639100	14100	1639500
17200	1637000	16500	1637600
19600	1634600	18800	1635400
22100	1631800	21200	1632900
24600	1628700	23500	1630100
27000	1625400	25900	1626900
29500	1621600	28200	1623600
31900	1617600	30600	1619800
34400	1613200	32900	1615900
36800	1608500	35300	1611500
39300	1603400	37600	1606900
41700	1598100	40000	1601900
44200	1592200	42300	1596700
46700	1586000	44700	1591000

Connection Wear Table

Connection: XT™ 57 7.25" x 3.5" (120 KSI SMYS)

Tool Joint OD (in)	T4 MUT(ft-lbs)	Min MUT(ft-lbs)
7.25	69800	67900
7.188	69800	65800
7.125	69800	63800
7.063	69800	61700
7.0	69800	59700
6.938	69800	57700
6.875	69800	55700
6.813	69800	53800
6.75	69800	51900
6.688	69800	50000
6.625	69800	48200
6.563	69800	46300

Elevator Capacity

Elevator Bore Diameter: 6.125" Elevator SMYS: 110,100 psi Box Taper Angle: 18 deg
Connection: XT™ 57 5.875" 0.813" wall IEU S135

Tool Joint OD (in.)	Elevator Hoist Capacity (lbs)	
	No Wear	1/32" Wear Factor
7.25	1301100	1268000
7.188	1223700	1190500
7.125	1145800	1112600
7.063	1069700	1036500
7.0	993100	959900
6.938	918400	885200
6.875	843100	809900
6.813	769700	736500
6.75	695800	662600
6.688	623800	590600
6.625	551300	518100
6.563	480600	447400

Special Service Drill Pipe Performance Data Sheet
5-7/8" 43.95# 0.813" S-135 R2 XT™ 57

GLOBAL ENERGY RESOURCES LLC ™

Special Service Drill Pipe Performance Data Sheet (T4, 1.15 FF)

5-7/8" 43.95# 0.813" S-135 R2 XT™ 57

Combined Loading for Drill Pipe

Connection: XT™ 57 7.25" x 3.5" (120 KSI SMYS)
Pipe: 5.875" OD 0.813" Wall Thickness S135 95% Inspection Class

At T4 MUT (80300 ft-lbs)		At Min MUT (78100 ft-lbs)	
Operational Torque(ft-lbs)	Assembly Max Tension(lbs)	Operational Torque(ft-lbs)	Assembly Max Tension(lbs)
0	1644800	0	1644800
2800	1644600	2700	1644600
5700	1644000	5400	1644000
8500	1642900	8200	1643000
11400	1641400	10900	1641700
14200	1639500	13600	1639900
17100	1637100	16300	1637800
19900	1634300	19000	1635200
22700	1631100	21800	1632200
25600	1627400	24500	1628800
28400	1623300	27200	1625100
31300	1618700	29900	1621000
34100	1613700	32600	1616400
36900	1608300	35400	1611300
39800	1602300	38100	1605900
42600	1596000	40800	1600100
45500	1589000	43500	1593900
48300	1581800	46200	1587300
51200	1573800	49000	1579900
54000	1565600	51700	1572400

Connection Wear Table

Connection: XT™ 57 7.25" x 3.5" (120 KSI SMYS)

Tool Joint OD (in)	T4 MUT(ft-lbs)	Min MUT(ft-lbs)
7.25	80300	78100
7.188	80300	75700
7.125	80300	73300
7.063	80300	71000
7.0	80300	68700
6.938	80300	66400
6.875	80300	64100
6.813	80300	61900
6.75	80300	59700
6.688	80300	57500
6.625	80300	55400
6.563	80300	53300

Elevator Capacity

Elevator Bore Diameter: 6.125" Elevator SMYS: 110,100 psi Box Taper Angle: 18 deg
Connection: XT™ 57 5.875" 0.813" wall IEU S135

Tool Joint OD (in.)	Elevator Hoist Capacity (lbs)	
	No Wear	1/32" Wear Factor
7.25	1301100	1268000
7.188	1223700	1190500
7.125	1145800	1112600
7.063	1069700	1036500
7.0	993100	959900
6.938	918400	885200
6.875	843100	809900
6.813	769700	736500
6.75	695800	662600
6.688	623800	590600
6.625	551300	518100
6.563	480600	447400

Special Service Drill Pipe Performance Data Sheet
5-7/8" 43.95# 0.813" S-135 R2 XT™ 57

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SOUR SERVICE DRILL PIPE

NACE® MR-0175-2021/ ISO

SOUR SERVICE DRILL PIPE
NACE MR-0175-2021/ISO

SOUR SERVICE DRILL PIPE

NACE MR-0175-2021/ISO

Taming the Sour Beast: How Specialized Drill Pipes Conquer H_2S.

Forget standard steel, when H_2S lurks below, specialized drill pipes rise to the challenge! These aren't your average drilling workhorses – they're meticulously crafted to withstand the corrosive bite of hydrogen sulfide, a potent threat in the oil and gas world.

Traditional drill pipes made from standard API grades can be vulnerable to a phenomenon called Sulfide Stress Cracking (SSC) when exposed to environments containing Hydrogen Sulfide (H_2S). This cracking can lead to catastrophic failures and pose significant safety hazards.

That's where specially designed drill pipes come in. These pipes are tailored to provide the necessary H_2S resistance within the steel, ensuring safe and reliable operation in sour service environments.

Here are some key features of these specially designed drill pipes:

- **Material Composition:** They often use specific alloys like Nickel and Molybdenum, which enhance resistance to SSC. Optimized chemical compositions minimize susceptibility to hydrogen embrittlement and promote sulfide film formation, further bolstering protection.
- **Manufacturing Processes:** These pipes undergo controlled thermo-mechanical processing and heat treatment, optimizing grain structure and strength characteristics for improved SSC resistance. Advanced welding techniques like Friction Welds contribute to a robust and corrosion-resistant connection between pipe body and tool joints.
- **Performance Testing:** They are rigorously tested according to industry standards like NACE MR0175 and TM0177 to ensure they meet the required SSC resistance properties for specific H_2S concentrations and temperatures.

The benefits of using specially designed drill pipes in sour service environments are significant:

- **Enhanced Safety:** Improved resistance to SSC minimizes the risk of catastrophic failures due to cracking, safeguarding personnel and equipment.

- **Operational Reliability:** Reduced downtime and maintenance costs associated with premature pipe failures caused by H_2S exposure.

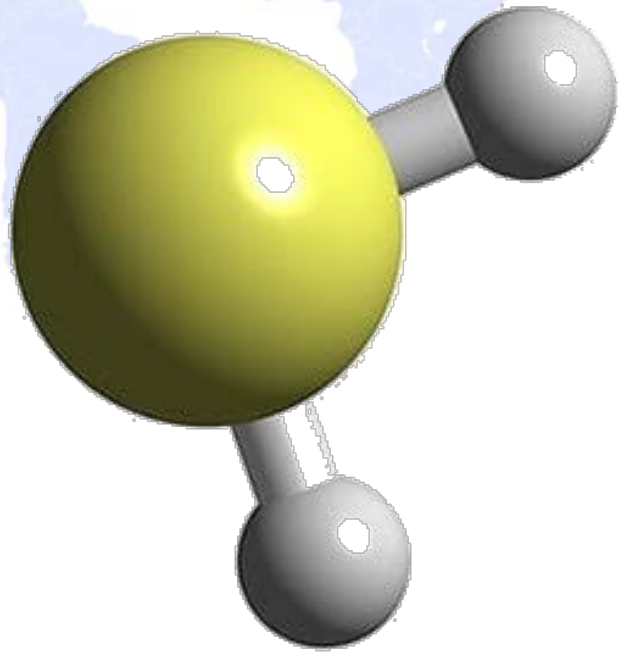
- **Extended Well Life:** The robust nature of these pipes allows for longer well lifespans in sour environments, optimizing well productivity and maximizing return on investment.

SOUR SERVICE HWDP: Friction Welded or Integral Machined Bar Solutions

Our Sour Service HWDP is compliant with API specifications and offers superior resistant to H_2S than standard grade HWDP. Global Energy's Sour Service Drill Pipe stands strong against H_2S, where others will fail.

Overall, specially designed drill pipes play a crucial role in ensuring safe and efficient drilling operations in H_2S-rich environments. Their superior resistance to SSC provides peace of mind, operational confidence, and ultimately contributes to the success of hydrocarbon exploration and production activities.

Contact your Global Energy Sales Representative today to receive more information and/or visit our website sales@globalenergyusa.com to learn more.



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ALUMINUM ALLOY DRILL PIPE

ISO 15546:2011

ALUMINUM DRILL PIPE
ISO 15546:2011

ALUMINUM ALLOY DRILL PIPE

ISO 15546:2011

Aluminum Alloy Drill Pipe…

Global Energy's Aluminum Alloy Drill Pipe features low specific weight, high flexibility, good corrosion resistance, that's more suitable for extra deep wells i.e., horizontal wells, high corrosive medium depth wells, directional wells, and any other type wells with complicated conditions.

Product advantage

Aluminum alloy drill pipe is 35% the density of the standard steel drill pipe, it delivers higher strength to weight ratio than standard steel drill pipe, reduces the total weight of the drill string, lowers the overall load on the rig, decreases rotary table torque and increases capacity of the drilling rig significantly.

Aluminum alloy drill pipe offers a small elasticity molecule, so when in the curve section of a horizontal well, the frictions between the drill string and open hole and/or inside the casing, the friction is reduced. Aluminum alloy drill pipe provides a good loading property together with bending resistance, which enables better drilling of the directional/horizontal well.

Aluminum alloy drill pipe provides excellent acid resistance in wells with moderate hydrogen sulfide H_2S, allowing safe operations and minimizing risk inside this corrosive environment.

Aluminum alloy drill pipe is non-magnetic, enabling it to be used with LWD tools.

Product specifications

A. Internal upset of aluminum alloy drill pipe with steel tool joints, including all specifications with OD90 – 168mm from ISO15546.

B. External upset of aluminum alloy drill pipe with steel tool joints, include all specifications with OD64 – 170mm from ISO15546.

C. Aluminum alloy drill pipe with protector in the middle with steel tool joints, include all specifications with OD129 – 170mm from ISO15546.

D. Aluminum alloy drill pipe with aluminum tool joints, include two specifications Φ128mm *11mm and Φ146mm *11mm.

E. aluminum alloy heavy-weight drill pipe (HWDP) with steel tool joints, include two specifications Φ146mm* 33mm and Φ180mm *44mm.

Production performance

Mechanical Properties of Aluminum Alloy Drill Pipe

Item	Tensile Strength Min – (MPa)	Yield Strength Min – (MPa)	Elongation Min (%)	Operational Temperature Max – (°C)
ISO15546 (Al-Cu-Mg)	460	325	12	160
ISO15546 (Al-Zn-Mg)	530	480	7	120
HXADPAZM	550	500	10	120
HXADPAZMG	650	600	10	160

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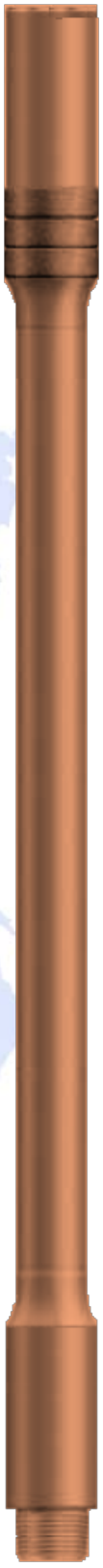
LANDING STRINGS

API Spec Rp-7g & 5DP

LANDING STRINGS
API Spec Rp-7g & 5DP

LANDING STRING - DRILL PIPE

API Spec Rp-7g & 5DP, Q1® (latest edition)



Simplify Well Completion Challenges with Landing String Drill Pipe

Global Energy's Precision Tech® Landing String Drill Pipe (LSDP) isn't just another pipe – it's your ace in the hole for flawless well completion. In the high-pressure world of drilling, reliability and precision are everything. That's where LSDP steps up, delivering unmatched strength, handling, and efficiency to make your final act a smooth success.

Unwavering Strength: Unlike standard pipes, Precision Tech® LSDP boasts increased wall thickness and robust tool joints. This translates to superior load-bearing capacity, effortlessly handling the massive weight of wellhead equipment and casing strings. Deepwater? High pressure? No problem. LSDP minimizes buckling risk and costly failures, keeping your operation on track and budget.

Precision Performance: Say goodbye to time-consuming adjustments and frustrating misalignments. Precision Tech® LSDP's optimized taper and precision-machined connections allow for seamless running and pinpoint wellbore alignment. This reduces rig time and operational costs, leaving you with more time and money for what matters most.

Built to Last: Precision Tech® LSDP isn't a one-off wonder. Its enhanced fatigue resistance and sour service compatibility translate to longer lifespan and minimal maintenance. This maximizes your return on investment, making LSDP a strategic choice for the bottom line.

Choose Global Energy's Precision Tech® LSDP and:

- Conquer completion challenges with confidence.
- Optimize well construction efficiency.
- Experience superior strength and handling.
- Minimize downtime and maximize ROI.

Don't settle for standard when you can have the best. Upgrade your well completion game with Global Energy's Precision Tech® Landing String Drill Pipe. Contact your Global Energy Sales Representative and/or visit our website www.globalenergyusa.com today to learn more.

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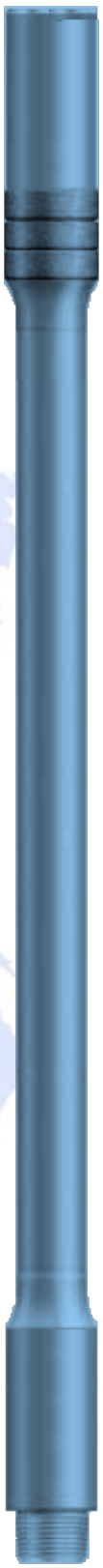
HDD
(Horizontal Directional Drilling)
DRILL PIPE

API Spec Rp-7g & 5DP

HDD DRILL PIPE
API Spec Rp-7g & 5DP

HDD (Horizontal Directional Drilling)
LARGE SIZE DRILL PIPE

API Spec Rp-7g & 5DP, Q1® (latest edition)



Conquer Demanding HDD Projects with Global Energy's Drill Pipe

As horizontal directional drilling (HDD) ventures tackle increasingly complex challenges, traditional drill pipe often falls short. Insufficient rigidity and buckling strength lead to issues like whipping and fracture failure, while tool joint misalignment creates troublesome galling. Global Energy steps up to meet these demands with its next-generation Precision Tech® HDD drill pipe.

Engineered for **large-diameter applications**, our drill pipe boasts **enhanced rigidity and thrust** to handle demanding drilling conditions. The innovative design incorporates a **special thread design** and **integrated guide section** within the pin thread. This **dual approach** effectively **prevents galling** and **boosts fatigue capacity**, ensuring smooth operation and extended service life. By addressing these critical pain points, Global Energy's HDD drill pipe empowers you to confidently navigate even the most challenging projects.

• Product Advantage

Conquer Tough Drilling with Global Energy's HDD Drill Pipe:

- **Uncompromising Strength:** Our large-diameter, thick-walled pipe body crafted from high-grade steel delivers exceptional rigidity and buckling resistance, minimizing whipping and fracture risk.
- **Galling Eliminated:** Forget frustrating tool joint alignment issues! Our special connection design featuring large thread root radius and integrated guide section prevents galling, ensuring smooth operation and enhanced fatigue capacity for extended service life.
- **Stress-Busting Upset Technology:** We minimize stress concentrations in the crucial upset vanishing area through unique external upset techniques, further reducing fatigue failure risk and maximizing performance.

- **Strategic Reinforcement:** For unparalleled rigidity, add strategically placed sections of thick-walled drill pipe behind the over-sizing bit. This simple yet effective tactic significantly reduces whipping tendencies and bolsters overall drilling confidence.

• Product Specifications

Size Range (O.D. of external Drill Pipe):
Normally 5-1/2”, 5-7/8”, 6-5/8", 7-5/8"… Special Sizes 8-5/8", 10", 10-3/4”, 12-3/4” & 13-3/8” can be quickly Designed & Engineered for your specific project.

Steel Grade:
G-105, S-135, Z-140, V-150, U-165.

Conquer Challenging HDD Projects with Global Energy's Large-Size Drill Pipe

When your HDD projects demand **strength, precision, and efficiency**, choose Global Energy's **large-size drill pipe**. Engineered for the most demanding applications, our pipe boasts **superior rigidity and buckling resistance thanks to its thick-walled construction and high-grade steel**. Whether tackling **extreme temperatures, protecting sensitive reservoirs, or navigating complex directional wells**, our **in-house design and engineering expertise** ensures you have the perfect HDD Drill Pipe for the job.

Experience the Global Energy difference:

- **Unwavering Commitment:** We understand your time is valuable. That's why we offer rapid turnaround times and efficient manufacturing processes, ensuring you receive your high-quality drill pipe quickly and within budget.
- **Unbeatable Value:** Get the most out of your investment with our competitive pricing. We prioritize delivering exceptional value without compromising on the quality and performance you deserve.

Don't settle for average. Choose Global Energy's large-size HDD drill pipe and experience the difference that expertise, innovation, and commitment can make on your next HDD project.

Contact your Global Energy Sales Representative and/or visit our website www.globalenergyusa.com today to learn more.

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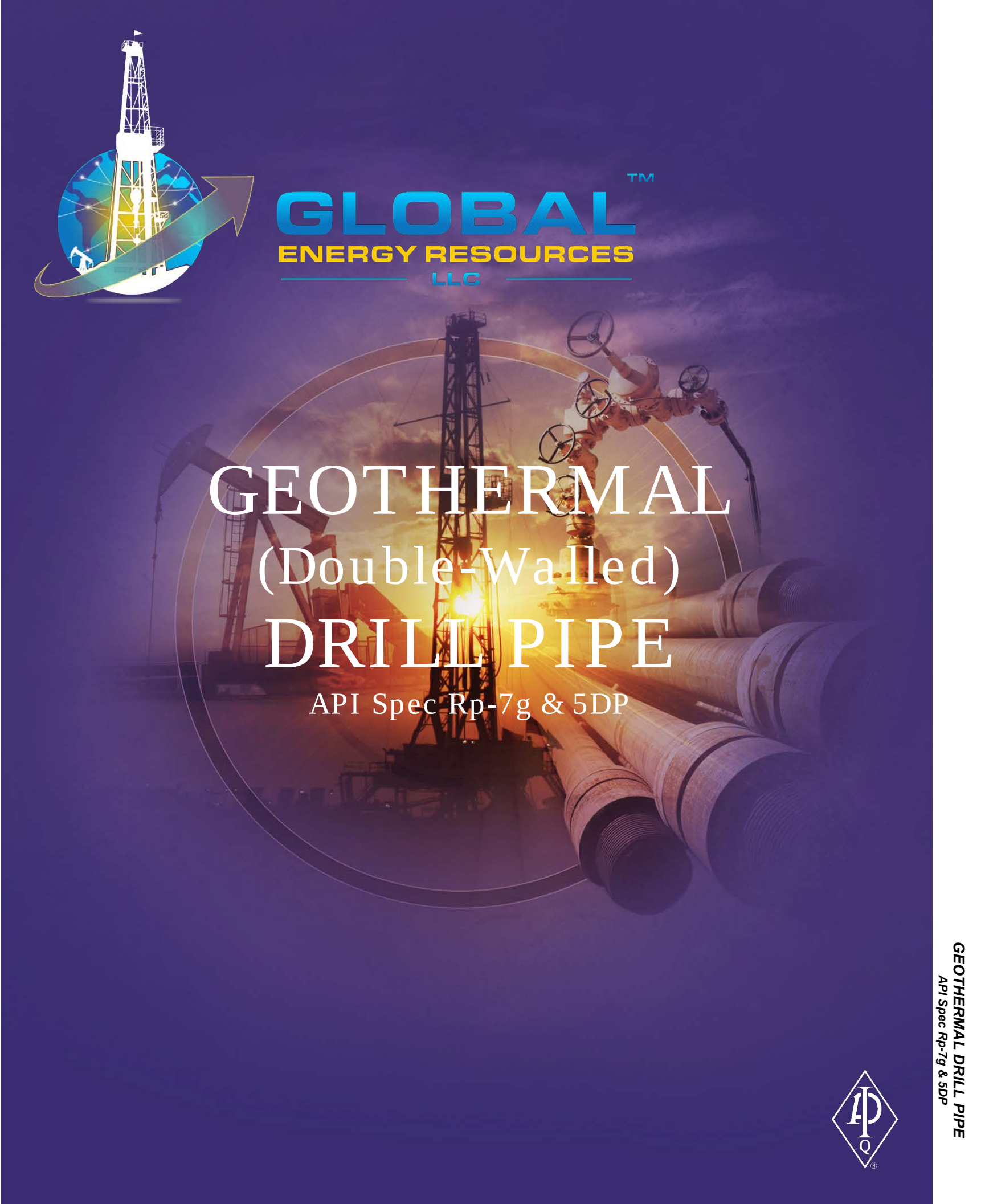


GEOTHERMAL
(Double-Walled)
DRILL PIPE

API Spec Rp-7g & 5DP

GEOTHERMAL DRILL PIPE
API Spec Rp-7g & 5DP

GEOTHERMAL DOUBLE-WALLED DRILL PIPE

API Spec Rp-7g & 5DP, Q1® (latest edition)

Global Energy's geothermal double-walled Precision Tech® drill pipe is composed of two layers of pipe. It is mainly used in reverse circulation drilling technique. The outer drill pipe is the transmission medium of torque and pressure, the space between outer and inner pipes is a channel for pumping circulating medium to well bottom, the inside channel of inner drill pipe returns the circulating medium and rock chips to the outside from the well bore.

• Product Advantage

Master Extreme Drilling with Global Energy's Drill Pipe:

- **Built for Heat:** Conquer scorching environments with our drill pipe designed for continuous, high-temperature operation without compromising performance. Say goodbye to failures and embrace reliable drilling even in the most demanding conditions.
- **Reservoir-Friendly Performance:**** Eliminate well wall washout and protect sensitive reservoirs with our innovative design. Unlike traditional methods, our drill pipe doesn't suffer collapse in challenging formations, preventing loss and ensuring maximum efficiency.
- **Streamlined Efficiency:** Reduce your reliance on drilling fluids with our design that boasts smaller displacement and faster return speed. Enjoy a cleaner hole and experience significant time savings thanks to optimized operations.
- **Precision, Power, and Versatility:** Tackle directional wells, horizontal wells, and continuous sampling with confidence. Our unique technology delivers the precision and power you need for complex operations, while also excelling in large-hole drilling to maximize your drilling efficiency.

New Geothermal drilling techniques have been developed on the basis of double-walled drill pipe… Global Energy has designed its Precision Tech® Geo-Drill™ Drill Pipe to safely and efficiently, operate in deeps up to 35,000 ft. (10,668 Meters), well beyond the limits of the typical Geothermal drill pipe manufactured by our competitors.

Geothermal Double-Walled Drill Pipe Data Table†

Drill Pipe OD	Wall	Tube weight	(Lbs.) Per Nominal	Grade	Adjusted Weight	Length	Joint Weight	Static Load Weight (Lbs.)	Drill Pipe Tensile (Lbs.)
6.625	0.362	24.21	27.70	GEO Special Grade	32.64	31.80	1,037.95	1,142,400	961,556
6.625	0.522	34.02	34.01	GEO Special Grade	44.28	31.80	1,408.10	1,549,800	1,351,131
7.625	0.430	33.04	41.22	GEO Special Grade	43.35	31.80	1,378.53	1,517,250	1,312,147
7.625	0.500	38.05	44.60	GEO Special Grade	48.30	31.80	1,535.94	1,690,500	1,510,910

Connection Size	Tool Joint OD	Tool Joint ID	Tool Joint Torsional	Make Up Torque	Tool Joint Tensile
6-5/8 FHDS	8-1/2"	4-1/4"	108,220	77,300	1,940,600
6-5/8 FHDS	8-1/2"	5.0"	96,600	52,600	1,448,900
7-5/8 IFDS	9.0"	6.0"	148,300	89,000	1,932,100
7-5/8 IFDS	9.0"	6.0"			

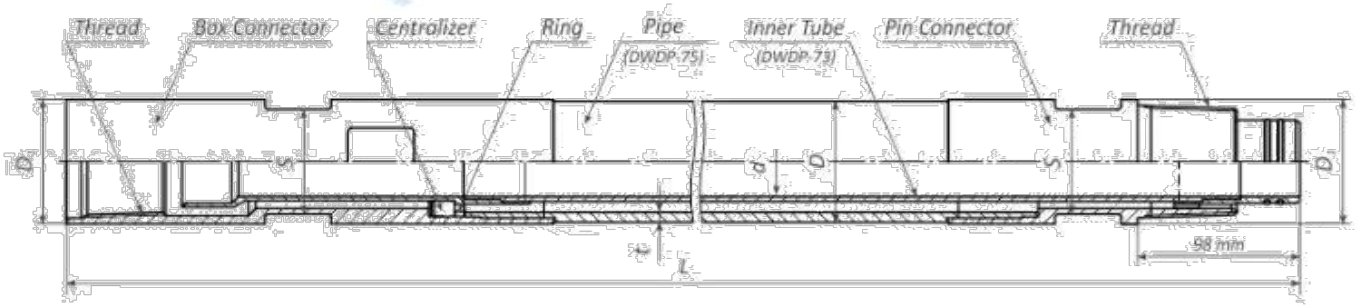
Drilling Depth Ft.
35,000

Drilling Depth Meters
10668

• Product Specifications

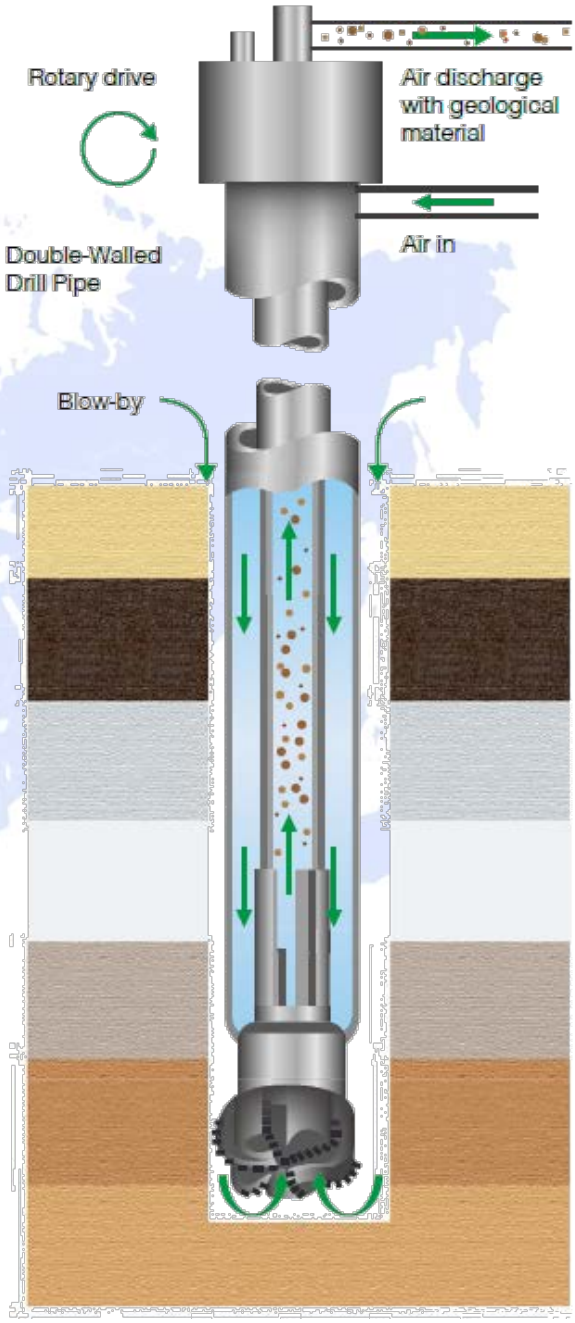
Size Range (O.D. of external Drill Pipe):
Normally 6-5/8", 7-5/8"… Special Sizes 8-5/8", 9-1/2" & 10" can be quickly Designed & Engineered for your specific project.

Steel Grade:
Z-140, V-150, U-165.



Global Energy is Your Trusted Source for Geothermal Double-Walled Drill Pipe

Demanding projects require superior tools, and at Global Energy, we understand the critical role of **reliable, high-performance geothermal double-walled drill pipe**… That's why we're your one-stop solution.



Experience the Global Energy Difference:

- **Unmatched Expertise**: Our dedicated team boasts in-house design and engineering capabilities, ensuring your drill pipe is custom-crafted to meet the specific demands of your geothermal project.
- **Uncompromising Quality**: We utilize state-of-the-art manufacturing processes and premium materials to deliver double-walled drill pipe that exceeds industry standards for durability and performance.
- **Unbeatable Turnaround Times**: We understand the urgency of your projects. That's why we prioritize efficient production and rapid delivery, keeping you on schedule and within budget.
- **Unmatched Value**: Get the most out of your investment with our competitive pricing, ensuring you receive exceptional value without compromising on quality.

Investing in Global Energy's geothermal double-walled drill pipe is an investment in your success. Contact us today to discuss your specific needs and experience the difference that expertise, quality, speed, and value can make in your next geothermal project.

Contact your Global Energy Sales Representative and/or visit our website www.globalenergyusa.com today to learn more.

1-866-375-7473 ● sales@globalenergyusa.com ● www.globalenergyusa.com
Global Headquarters ● Oklahoma City, Oklahoma USA

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USED/ SURPLUS DRILL PIPE

USED/SURPLUS DRILL PIPE

EMI "Premium" Inspected Drill Pipe (Downhole Tubular Goods)

Global Energy Resources: Your Partner for Used Premium DS-1 CAT-5 Inspected Drill Pipe *(DS-1 CAT-3 & CAT-4 Inspections also available at Customers request).*

Global Energy Resources is a leading provider of high-quality used premium EMI DS-1 CAT-5 inspected Drill Pipe**.** We have a large inventory of products on hand, ready to ship at a moment's notice. With over 40 years of experience in the industry, we are committed to meeting the needs of our customers and providing them with the best solutions. Our team of experts is dedicated to ensuring that our customers receive the highest level of service and support.

- **Variety of sizes and specifications:** Find the perfect Drill Pipe for your project.
- **Immediate availability:** Skip waiting times for new production.
- **Variety of used options:** Find boutique and/or hard to find sizes, weights, grades, and end finishes, rarely found new.
- **Expert support:** Our team can help you choose the right used tubing for your project.

Budget your project with confidence: Save up to 40% on reliable drill pipe solutions with Global Energy's 'Used Premium' EMI DS-1 CAT-5 Inspected (Double White Band) Drill Pipe. Meeting the strictest safety standards with H_2S and NORM-free materials, this option delivers exceptional performance without compromising your budget. Contact our sales team today for a free quote and discuss your project needs!

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PREMIUM CLASS - 1 PUNCH MARK
STANDARD WEIGHT E-75

PREMIUM CLASS
HEAVY WALL E-75

CLASS 2 - 2 PUNCH MARKS

CLASS 3 - 3 PUNCH MARKS

CLASS 4 - 4 PUNCH MARKS

X 95

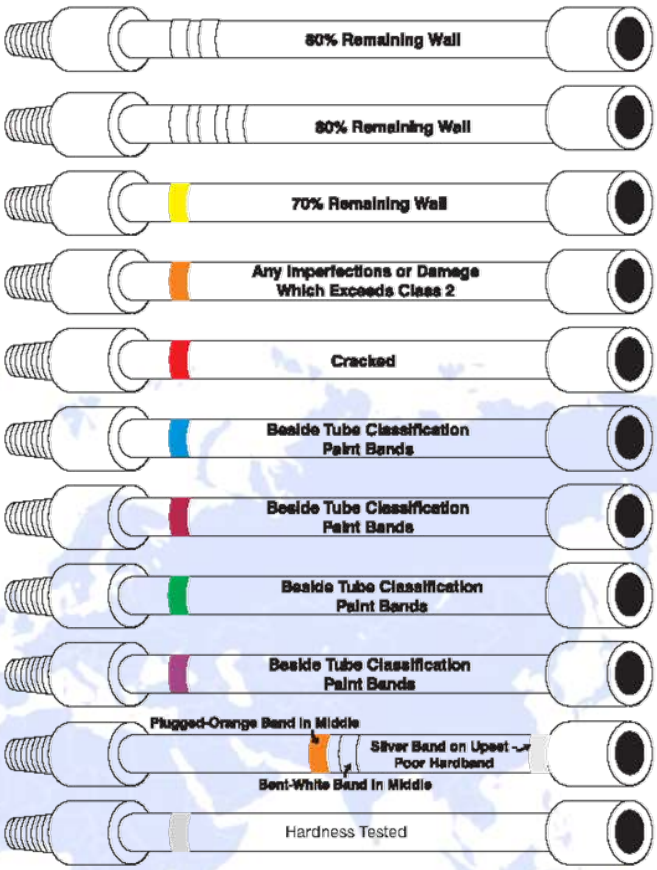
SS 95

G 105

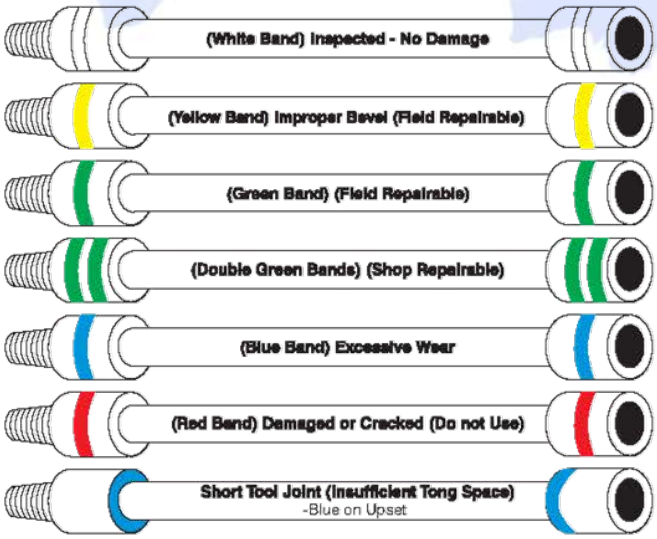
S 135

NOTE: HEAVY WALL DRILL PIPE IDENTIFIED WITH AN ADDITIONAL PAINT BAND OF THE SAME GRADE

DRILL PIPE CLASSIFICATION



TOOL JOINT & DRILL COLLAR CLASSIFICATION



Box Bore Back and Pin Stress Relief Connections on Hevi-wate and Drill Collars identified with an additional White Paint Band approximately ten inches (10") from End Area Classification Paint Bands.

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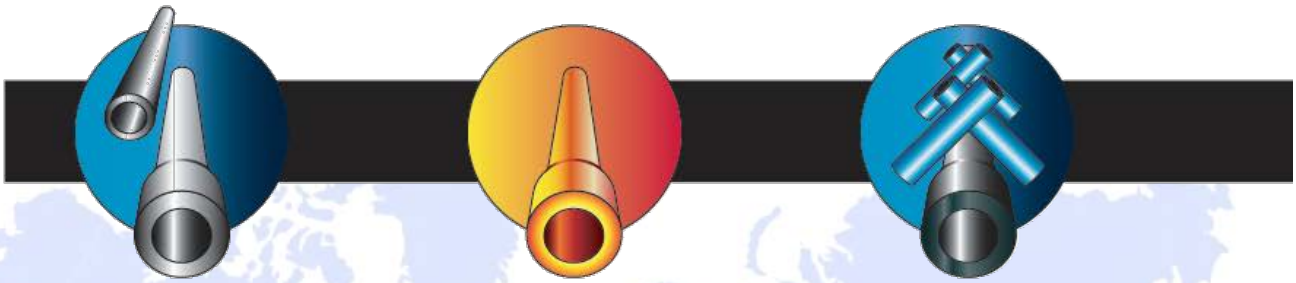
DRILL PIPE MANUFACTURING FLOW CHART

API Spec Rp-7g & 5DP

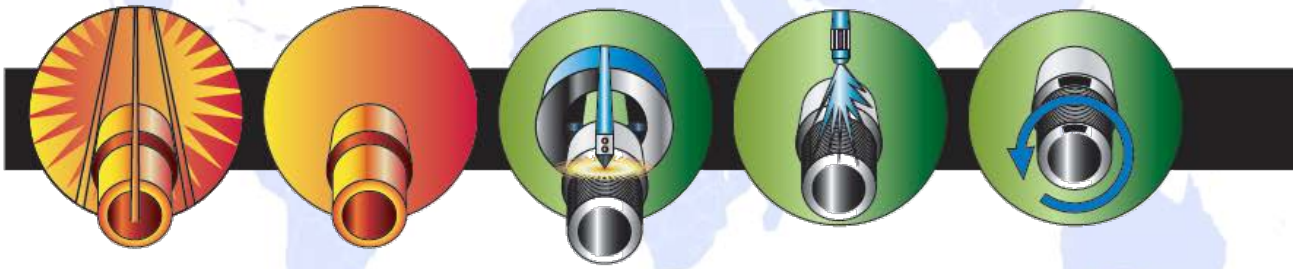
DRILL PIPE MANUFACTURING FLOW CHART

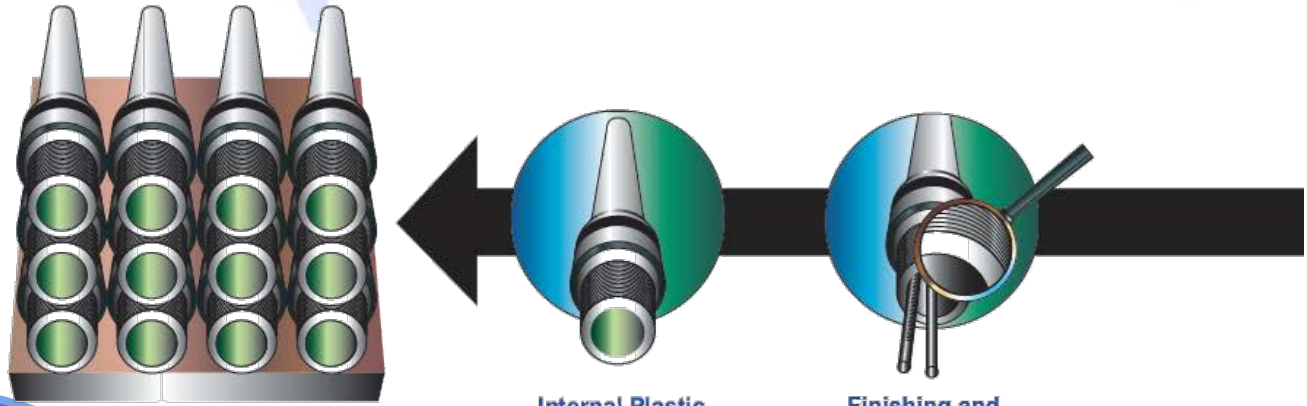
API Spec Rp-7g & 5DP, Q1® (latest edition)

Pipe Body

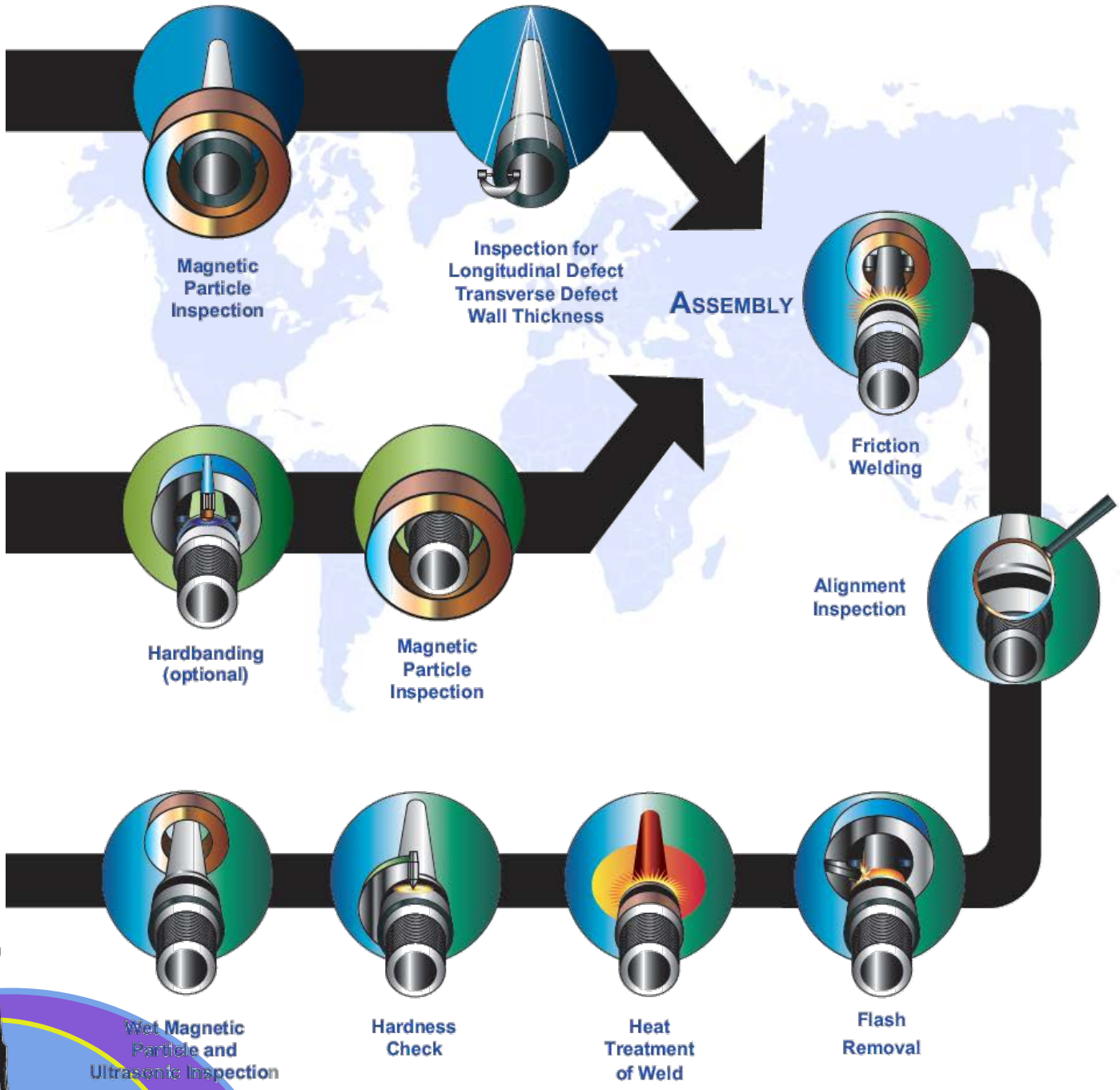


Tool Joint





Drill pipe is manufactured to customer requirements and, where applicable, to specifications such as API, ISO, NS1, DS1, IRP 1.8, etc. It is inspected 100% after completion.



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DRILL PIPE TOOL JOINT DATA TABLES†

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DRILL PIPE & TOOL JOINT DATA TABLES†

Pipe Data

Size OD in.	Nominal Weight lb/ft	Grade and Upset Type	Torsional Yield Strength ft-lb	Tensile Yield Strength lb	Wall Thickness in.	Nominal ID in.	Pipe Body Section Area sq in.	Pipe Body Section Modulus cu in.	Pipe Body Polar Section Modulus cu in.	Internal Pressure psi	Collapse Pressure psi
2 3/8	6.65	E-75 EU	6,300	138,200	0.280	1.815	1.843	0.867	1.733	15,474	15,599
	6.65	E-75 EU	6,300	138,200	0.280	1.815	1.843	0.867	1.733	15,474	15,599
	6.65	E-75 EU	6,300	138,200	0.280	1.815	1.843	0.867	1.733	15,474	15,599
2 3/8	6.65	X-95 EU	7,900	175,100	0.280	1.815	1.843	0.867	1.733	19,600	19,759
	6.65	X-95 EU	7,900	175,100	0.280	1.815	1.843	0.867	1.733	19,600	19,759
	6.65	X-95 EU	7,900	175,100	0.280	1.815	1.843	0.867	1.733	19,600	19,759
2 3/8	6.65	G-105 EU	8,800	193,500	0.280	1.815	1.843	0.867	1.733	21,663	21,839
	6.65	G-105 EU	8,800	193,500	0.280	1.815	1.843	0.867	1.733	21,663	21,839
	6.65	G-105 EU	8,800	193,500	0.280	1.815	1.843	0.867	1.733	21,663	21,839
2 3/8	6.65	S-135 EU	11,300	248,800	0.280	1.815	1.843	0.867	1.733	27,853	28,079
	6.65	S-135 EU	11,300	248,800	0.280	1.815	1.843	0.867	1.733	27,853	28,079
	6.65	S-135 EU	11,300	248,800	0.280	1.815	1.843	0.867	1.733	27,853	28,079
	6.65	S-135 EU	11,300	248,800	0.280	1.815	1.843	0.867	1.733	27,853	28,079
2 3/8	6.65	Z-140 EU	11,700	258,000	0.280	1.815	1.843	0.867	1.733	28,884	29,119
	6.65	Z-140 EU	11,700	258,000	0.280	1.815	1.843	0.867	1.733	28,884	29,119
	6.65	Z-140 EU	11,700	258,000	0.280	1.815	1.843	0.867	1.733	28,884	29,119
	6.65	Z-140 EU	11,700	258,000	0.280	1.815	1.843	0.867	1.733	28,884	29,119
2 3/8	6.65	V-150 EU	12,500	276,400	0.280	1.815	1.843	0.867	1.733	30,947	31,199
	6.65	V-150 EU	12,500	276,400	0.280	1.815	1.843	0.867	1.733	30,947	31,199
	6.65	V-150 EU	12,500	276,400	0.280	1.815	1.843	0.867	1.733	30,947	31,199
	6.65	V-150 EU	12,500	276,400	0.280	1.815	1.843	0.867	1.733	30,947	31,199
2 7/8	6.85	E-75 IU	8,100	135,900	0.217	2.441	1.812	1.121	2.241	9,907	10,467
	6.85	E-75 IU	8,100	135,900	0.217	2.441	1.812	1.121	2.241	9,907	10,467
	6.85	E-75 EU	8,100	135,900	0.217	2.441	1.812	1.121	2.241	9,907	10,467
	6.65	E-75 IU	8,100	135,900	0.217	2.441	1.812	1.121	2.241	9,907	10,467
	6.85	E-75 EU	8,100	135,900	0.217	2.441	1.812	1.121	2.241	9,907	10,467
	6.85	E-75 EU	8,100	135,900	0.217	2.441	1.812	1.121	2.241	9,907	10,467
2 7/8	6.85	X-95 IU	10,200	172,100	0.217	2.441	1.812	1.121	2.241	12,548	12,940
	6.85	X-95 IU	10,200	172,100	0.217	2.441	1.812	1.121	2.241	12,548	12,940
	6.85	X-95 EU	10,200	172,100	0.217	2.441	1.812	1.121	2.241	12,548	12,940
	6.65	X-95 IU	10,200	172,100	0.217	2.441	1.812	1.121	2.241	12,548	12,940
	6.85	X-95 EU	10,200	172,100	0.217	2.441	1.812	1.121	2.241	12,548	12,940
	6.85	X-95 EU	10,200	172,100	0.217	2.441	1.812	1.121	2.241	12,548	12,940
2 7/8	6.85	G-105 IU	11,300	190,300	0.217	2.441	1.812	1.121	2.241	13,869	14,020
	6.85	G-105 IU	11,300	190,300	0.217	2.441	1.812	1.121	2.241	13,869	14,020
	6.85	G-105 EU	11,300	190,300	0.217	2.441	1.812	1.121	2.241	13,869	14,020
	6.65	G-105 IU	11,300	190,300	0.217	2.441	1.812	1.121	2.241	13,869	14,020
	6.85	G-105 EU	11,300	190,300	0.217	2.441	1.812	1.121	2.241	13,869	14,020
	6.85	G-105 EU	11,300	190,300	0.217	2.441	1.812	1.121	2.241	13,869	14,020
2 7/8	6.85	S-135 IU	14,500	244,600	0.217	2.441	1.812	1.121	2.241	17,832	17,034
	6.85	S-135 IU	14,500	244,600	0.217	2.441	1.812	1.121	2.241	17,832	17,034
	6.85	S-135 EU	14,500	244,600	0.217	2.441	1.812	1.121	2.241	17,832	17,034
	6.65	S-135 IU	14,500	244,600	0.217	2.441	1.812	1.121	2.241	17,832	17,034
	6.85	S-135 EU	14,500	244,600	0.217	2.441	1.812	1.121	2.241	17,832	17,034
	6.85	S-135 EU	14,500	244,600	0.217	2.441	1.812	1.121	2.241	17,832	17,034

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Tool Joint Data									Assembly Data					
Connection Type	Outside Diameter in.	Inside Diameter in.	Torsional Yield Strength ft-lb	Tensile Yield Strength lb	Make-up Torque ft-lb	Torsional Ratio Tool Joint to Pipe	* Pin Tong Space in.	* Box Tong Space in.	Adjusted Weight lb/ft	Minimum Tool Joint OD for Prem. Class in.	Drift Diameter in.	Capacity US gal/ft	Displace-ment US gal/ft	Size OD in.
NC26	3 3/8	1 3/4	6,900	313,700	3,900	1.10	9	10	7.17	3 3/16	1 5/8	0.134	0.110	2 3/8
HT26	3 3/8	1 3/4	8,700	313,700	5,200	1.38	9	12	7.25	N/A	1 5/8	0.134	0.111	
SLH90	3 1/4	1 13/16	6,900	270,200	3,700	1.10	9	10	7.00	3 1/32	1 11/16	0.134	0.107	
NC26	3 3/8	1 3/4	6,900	313,700	3,900	0.87	9	10	7.17	3 1/4	1 5/8	0.134	0.110	2 3/8
HT26	3 3/8	1 3/4	8,700	313,700	5,200	1.10	9	12	7.25	N/A	1 5/8	0.134	0.111	
SLH90	3 1/4	1 13/16	6,900	270,200	3,700	0.87	9	10	7.00	3 3/32	1 11/16	0.134	0.107	
NC26	3 3/8	1 3/4	6,900	313,700	3,900	0.78	9	10	7.17	3 9/32	1 5/8	0.134	0.110	2 3/8
HT26	3 3/8	1 3/4	8,700	313,700	5,200	0.99	9	12	7.25	N/A	1 5/8	0.134	0.111	
SLH90	3 1/4	1 13/16	6,900	270,200	3,700	0.78	9	10	7.00	3 1/8	1 11/16	0.134	0.107	
NC26	3 5/8	1 1/2	9,000	390,300	4,900	0.80	9	10	7.62	3 13/32	1 3/8	0.132	0.117	2 3/8
HT26	3 3/8	1 5/8	9,500	353,400	5,700	0.84	9	12	7.35	N/A	1 1/2	0.133	0.112	
SLH90	3 1/4	1 11/16	7,700	311,500	4,200	0.68	9	10	7.10	3 7/32	1 9/16	0.133	0.109	
GPDS26	3 1/2	1 11/16	9,700	333,900	5,800	0.86	9	10	7.35	3 5/16	1 9/16	0.133	0.112	
XT24	3 1/8	1 1/2	9,500	261,500	5,700	0.81	10	15	7.32	2 15/16	1 3/8	0.131	0.112	2 3/8
XT26	3 3/8	1 5/8	12,600	330,600	7,600	1.08	10	15	7.52	3 1/32	1 1/2	0.132	0.115	
HT26	3 3/8	1 5/8	9,500	353,400	5,700	0.81	9	12	7.35	N/A	1 1/2	0.133	0.112	
GPDS26	3 1/2	1 5/8	10,500	353,400	6,300	0.90	9	10	7.39	3 5/16	1 1/2	0.133	0.113	
XT24	3 1/8	1 3/8	10,400	295,400	6,200	0.83	10	15	7.41	2 15/16	1 1/4	0.130	0.113	2 3/8
XT26	3 3/8	1 1/2	13,200	367,400	7,900	1.06	10	15	7.62	3	1 3/8	0.131	0.117	
HT26	3 3/8	1 1/2	10,100	390,300	6,100	0.81	9	12	7.45	N/A	1 3/8	0.131	0.114	
GPDS26	3 1/2	1 1/2	11,200	390,300	6,700	0.90	9	10	7.48	3 9/32	1 3/8	0.132	0.114	
NC26	3 3/8	1 3/4	6,900	313,700	3,900	0.85	9	10	7.19	3 9/32	1 5/8	0.236	0.110	2 7/8
HT26	3 3/8	1 3/4	8,700	313,700	5,200	1.07	9	12	7.27	N/A	1 5/8	0.235	0.111	
NC31	4 1/8	2 5/32	11,500	434,500	6,200	1.42	9	11	7.88	3 11/16	2 1/32	0.239	0.120	
XT26	3 3/8	1 3/4	11,500	290,900	6,900	1.42	10	15	7.43	2 29/32	1 5/8	0.234	0.114	
HT31	4	2 5/32	14,900	434,500	8,900	1.84	9	13	7.83	3 1/2	2 1/32	0.239	0.120	
XT31	4	2 3/8	13,200	309,100	7,900	1.63	10	15	7.75	3 13/32	2 1/4	0.242	0.118	
NC26	3 1/2	1 1/2	8,800	390,300	4,900	0.86	9	10	7.50	3 3/8	1 3/8	0.234	0.115	2 7/8
HT26	3 3/8	1 3/4	8,700	313,700	5,200	0.85	9	12	7.27	N/A	1 5/8	0.235	0.111	
NC31	4 1/8	2 5/32	11,500	434,500	6,200	1.13	9	11	7.88	3 3/4	2 1/32	0.239	0.120	
XT26	3 3/8	1 3/4	11,500	290,900	6,900	1.13	10	15	7.43	3 1/32	1 5/8	0.234	0.114	
HT31	4	2 5/32	14,900	434,500	8,900	1.46	9	13	7.83	3 19/32	2 1/32	0.239	0.120	
XT31	4	2 3/8	13,200	309,100	7,900	1.29	10	15	7.75	3 1/2	2 1/4	0.242	0.118	
NC26	3 5/8	1 3/4	7,200	313,700	3,900	0.64	9	10	7.46	3 13/32	1 5/8	0.236	0.114	2 7/8
HT26	3 3/8	1 3/4	8,700	313,700	5,200	0.77	9	12	7.27	N/A	1 5/8	0.235	0.111	
NC31	4 1/8	2 5/32	11,500	434,500	6,200	1.02	9	11	7.88	3 13/16	2 1/32	0.239	0.120	
XT26	3 3/8	1 3/4	11,500	290,900	6,900	1.02	10	15	7.43	3 1/16	1 5/8	0.234	0.114	
HT31	4	2 5/32	14,900	434,500	8,900	1.32	9	13	7.83	3 5/8	2 1/32	0.239	0.120	
XT31	4	2 3/8	13,200	309,100	7,900	1.17	10	15	7.75	3 17/32	2 1/4	0.242	0.118	
NC26	3 5/8	1 1/2	9,000	390,300	4,900	0.62	9	10	7.64	3 17/32	1 3/8	0.234	0.117	2 7/8
HT26	3 1/2	1 1/2	12,100	390,300	7,300	0.83	9	12	7.60	3 5/16	1 3/8	0.233	0.116	
NC31	4 1/8	2 1/8	11,900	447,100	6,400	0.82	9	11	7.91	3 29/32	2	0.239	0.121	
XT26	3 3/8	1 3/4	11,500	290,900	6,900	0.79	10	15	7.43	3 7/32	1 5/8	0.234	0.114	
HT31	4	2 5/32	14,900	434,500	8,900	1.03	9	13	7.83	3 23/32	2 1/32	0.239	0.120	
XT31	4	2 3/8	13,200	309,100	7,900	0.91	10	15	7.75	3 5/8	2 1/4	0.242	0.118	

*2" Longer than standard.

Pipe Data

Size OD in.	Nominal Weight lb/ft	Grade and Upset Type	Torsional Yield Strength ft-lb	Tensile Yield Strength lb	Wall Thickness in.	Nominal ID in.	Pipe Body Section Area sq in.	Pipe Body Section Modulus cu in.	Pipe Body Polar Section Modulus cu in.	Internal Pressure psi	Collapse Pressure psi
2 7/8	6.85	Z-140 IU	15,100	253,700	0.217	2.441	1.812	1.121	2.241	18,492	17,500
	6.65	Z-140 IU	15,100	253,700	0.217	2.441	1.812	1.121	2.241	18,492	17,500
	6.85	Z-140 EU	15,100	253,700	0.217	2.441	1.812	1.121	2.241	18,492	17,500
	6.85	Z-140 EU	15,100	253,700	0.217	2.441	1.812	1.121	2.241	18,492	17,500
2 7/8	6.85	V-150 IU	16,200	271,800	0.217	2.441	1.812	1.121	2.241	19,813	18,398
	6.65	V-150 IU	16,200	271,800	0.217	2.441	1.812	1.121	2.241	19,813	18,398
	6.85	V-150 EU	16,200	271,800	0.217	2.441	1.812	1.121	2.241	19,813	18,398
	6.85	V-150 EU	16,200	271,800	0.217	2.441	1.812	1.121	2.241	19,813	18,398
2 7/8	10.40	E-75 EU	11,600	214,300	0.362	2.151	2.858	1.602	3.204	16,526	16,509
	10.40	E-75 EU	11,600	214,300	0.362	2.151	2.858	1.602	3.204	16,526	16,509
	10.40	E-75 EU	11,600	214,300	0.362	2.151	2.858	1.602	3.204	16,526	16,509
	10.40	E-75 IU	11,600	214,300	0.362	2.151	2.858	1.602	3.204	16,526	16,509
	10.40	E-75 EU	11,600	214,300	0.362	2.151	2.858	1.602	3.204	16,526	16,509
	10.40	E-75 IU	11,600	214,300	0.362	2.151	2.858	1.602	3.204	16,526	16,509
	10.40	E-75 EU	11,600	214,300	0.362	2.151	2.858	1.602	3.204	16,526	16,509
2 7/8	10.40	X-95 EU	14,600	271,500	0.362	2.151	2.858	1.602	3.204	20,933	20,911
	10.40	X-95 IU	14,600	271,500	0.362	2.151	2.858	1.602	3.204	20,933	20,911
	10.40	X-95 EU	14,600	271,500	0.362	2.151	2.858	1.602	3.204	20,933	20,911
	10.40	X-95 IU	14,600	271,500	0.362	2.151	2.858	1.602	3.204	20,933	20,911
	10.40	X-95 EU	14,600	271,500	0.362	2.151	2.858	1.602	3.204	20,933	20,911
	10.40	X-95 IU	14,600	271,500	0.362	2.151	2.858	1.602	3.204	20,933	20,911
	10.40	X-95 EU	14,600	271,500	0.362	2.151	2.858	1.602	3.204	20,933	20,911
2 7/8	10.40	G-105 EU	16,200	300,100	0.362	2.151	2.858	1.602	3.204	23,137	23,112
	10.40	G-105 IU	16,200	300,100	0.362	2.151	2.858	1.602	3.204	23,137	23,112
	10.40	G-105 EU	16,200	300,100	0.362	2.151	2.858	1.602	3.204	23,137	23,112
	10.40	G-105 IU	16,200	300,100	0.362	2.151	2.858	1.602	3.204	23,137	23,112
	10.40	G-105 EU	16,200	300,100	0.362	2.151	2.858	1.602	3.204	23,137	23,112
	10.40	G-105 IU	16,200	300,100	0.362	2.151	2.858	1.602	3.204	23,137	23,112
	10.40	G-105 EU	16,200	300,100	0.362	2.151	2.858	1.602	3.204	23,137	23,112
2 7/8	10.40	S-135 EU	20,800	385,800	0.362	2.151	2.858	1.602	3.204	29,747	29,716
	10.40	S-135 IU	20,800	385,800	0.362	2.151	2.858	1.602	3.204	29,747	29,716
	10.40	S-135 EU	20,800	385,800	0.362	2.151	2.858	1.602	3.204	29,747	29,716
	10.40	S-135 IU	20,800	385,800	0.362	2.151	2.858	1.602	3.204	29,747	29,716
	10.40	S-135 EU	20,800	385,800	0.362	2.151	2.858	1.602	3.204	29,747	29,716
	10.40	S-135 IU	20,800	385,800	0.362	2.151	2.858	1.602	3.204	29,747	29,716
	10.40	S-135 EU	20,800	385,800	0.362	2.151	2.858	1.602	3.204	29,747	29,716
	10.40	S-135 EU	20,800	385,800	0.362	2.151	2.858	1.602	3.204	29,747	29,716
2 7/8	10.40	Z-140 IU	21,600	400,100	0.362	2.151	2.858	1.602	3.204	30,849	30,817
	10.40	Z-140 EU	21,600	400,100	0.362	2.151	2.858	1.602	3.204	30,849	30,817
	10.40	Z-140 IU	21,600	400,100	0.362	2.151	2.858	1.602	3.204	30,849	30,817
	10.40	Z-140 EU	21,600	400,100	0.362	2.151	2.858	1.602	3.204	30,849	30,817
	10.40	Z-140 EU	21,600	400,100	0.362	2.151	2.858	1.602	3.204	30,849	30,817
2 7/8	10.40	V-150 IU	23,100	428,700	0.362	2.151	2.858	1.602	3.204	33,052	33,018
	10.40	V-150 EU	23,100	428,700	0.362	2.151	2.858	1.602	3.204	33,052	33,018
	10.40	V-150 IU	23,100	428,700	0.362	2.151	2.858	1.602	3.204	33,052	33,018
	10.40	V-150 EU	23,100	428,700	0.362	2.151	2.858	1.602	3.204	33,052	33,018
	10.40	V-150 EU	23,100	428,700	0.362	2.151	2.858	1.602	3.204	33,052	33,018

GLOBAL™ ENERGY RESOURCES LLC

Tool Joint Data									Assembly Data					
Connection Type	Outside Diameter in.	Inside Diameter in.	Torsional Yield Strength ft-lb	Tensile Yield Strength lb	Make-up Torque ft-lb	Torsional Ratio Tool Joint to Pipe	* Pin Tong Space in.	* Box Tong Space in.	Adjusted Weight lb/ft	Minimum Tool Joint OD for Prem. Class in.	Drift Diameter in.	Capacity US gal/ft	Displace-ment US gal/ft	Size OD in.
HT26	3 1/2	1 1/2	12,100	390,300	7,300	0.80	9	12	7.60	3 11/32	1 3/8	0.233	0.116	2 7/8
XT26	3 3/8	1 3/4	11,500	290,900	6,900	0.76	10	15	7.43	3 1/4	1 5/8	0.234	0.114	
HT31	4	2 5/32	14,900	434,500	8,900	0.99	9	13	7.83	3 3/4	2 1/32	0.239	0.120	
XT31	4	2 3/8	13,200	309,100	7,900	0.87	10	15	7.75	3 21/32	2 1/4	0.242	0.118	
HT26	3 1/2	1 1/2	12,100	390,300	7,300	0.75	9	12	7.60	3 3/8	1 3/8	0.233	0.116	2 7/8
XT26	3 3/8	1 3/4	11,500	290,900	6,900	0.71	10	15	7.43	3 9/32	1 5/8	0.234	0.114	
HT31	4	2 5/32	14,900	434,500	8,900	0.92	9	13	7.83	3 25/32	2 1/32	0.239	0.120	
XT31	4	2 3/8	13,200	309,100	7,900	0.81	10	15	7.75	3 11/16	2 1/4	0.242	0.118	
NC31	4 1/8	2 1/8	11,500	447,100	6,400	1.03	9	11	11.14	3 13/16	2	0.188	0.170	2 7/8
NC26	3 1/2	1 1/2	8,800	390,300	4,900	0.76	9	10	10.79	3 13/32	1 3/8	0.183	0.165	
SLH90	3 7/8	2	13,100	444,000	6,900	1.13	9	11	10.95	3 19/32	1 7/8	0.187	0.168	
HT26	3 1/2	1 1/2	12,100	390,300	7,300	1.04	9	12	10.85	3 3/16	1 3/8	0.182	0.166	
HT31	4 1/8	2 1/8	16,600	447,100	10,000	1.43	9	13	11.26	3 19/32	2	0.188	0.172	
XT26	3 1/2	1 1/2	14,800	367,400	8,900	1.28	10	15	11.02	2 31/32	1 3/8	0.181	0.168	
XT31	3 7/8	2 1/8	16,600	415,100	10,000	1.43	10	15	11.06	3 3/8	2	0.188	0.169	
NC31	4 1/8	2	13,200	495,700	7,100	0.90	9	11	11.27	3 29/32	1 7/8	0.187	0.172	2 7/8
NC26	3 1/2	1 1/2	8,800	390,300	4,900	0.60	9	10	10.76	N/A	1 3/8	0.183	0.165	
SLH90	3 7/8	2	13,100	444,000	6,900	0.90	9	11	10.95	3 11/16	1 7/8	0.187	0.168	
HT26	3 1/2	1 1/2	12,100	390,300	7,300	0.83	9	12	10.85	3 5/16	1 3/8	0.182	0.166	
HT31	4 1/8	2 1/8	16,600	447,100	10,000	1.14	9	13	11.26	3 23/32	2	0.188	0.172	
XT26	3 1/2	1 1/2	14,800	367,400	8,900	1.01	10	15	11.02	3 3/32	1 3/8	0.181	0.168	
XT31	3 7/8	2 1/8	16,600	415,100	10,000	1.14	10	15	11.06	3 1/2	2	0.188	0.169	
NC31	4 1/8	2	13,200	495,700	7,100	0.81	9	11	11.27	3 15/16	1 7/8	0.187	0.173	2 7/8
NC26	3 1/2	1 1/2	8,800	390,300	4,900	0.54	9	10	10.76	N/A	1 3/8	0.183	0.165	
SLH90	3 7/8	2	13,100	444,000	6,900	0.81	9	11	10.95	3 23/32	1 7/8	0.187	0.168	
HT26	3 5/8	1 1/2	13,100	390,300	7,900	0.81	9	12	10.99	3 3/8	1 3/8	0.182	0.168	
HT31	4 1/8	2 1/8	16,600	447,100	10,000	1.02	9	13	11.26	3 3/4	2	0.188	0.172	
XT26	3 1/2	1 1/2	14,800	367,400	8,900	0.91	10	15	11.02	3 5/32	1 3/8	0.181	0.168	
XT31	3 7/8	2 1/8	16,600	415,100	10,000	1.02	10	15	11.06	3 17/32	2	0.188	0.169	
NC31	4 1/8	2	13,200	495,700	7,100	0.63	9	11	11.29	4 1/16	1 7/8	0.187	0.173	2 7/8
NC26	3 5/8	1 1/2	9,000	390,300	4,900	0.43	9	10	10.90	N/A	1 3/8	0.183	0.167	
SLH90	3 7/8	2	13,300	444,000	6,900	0.63	9	11	10.95	3 27/32	1 7/8	0.187	0.168	
HT26	3 5/8	1 1/2	13,100	390,300	7,900	0.63	9	12	10.99	3 9/16	1 3/8	0.182	0.168	
HT31	4 1/8	2	18,900	495,700	11,300	0.91	9	13	11.39	3 27/32	1 7/8	0.187	0.174	
XT26	3 1/2	1 3/8	15,900	401,300	9,500	0.76	10	15	11.11	3 5/16	1 1/4	0.180	0.170	
XT31	3 7/8	2 1/8	16,600	415,000	10,000	0.80	10	15	11.06	3 11/16	2	0.188	0.169	
GPDS31	4 1/8	2	17,200	495,700	10,300	0.83	9	11	11.27	3 15/16	1 7/8	0.187	0.172	
HT26	3 5/8	1 1/4	15,300	455,100	9,200	0.71	9	12	11.15	3 17/32	1 1/8	0.180	0.171	2 7/8
HT31	4 1/8	2	18,900	495,700	11,300	0.88	9	13	11.39	3 7/8	1 7/8	0.187	0.174	
XT26	3 1/2	1 1/4	16,400	432,200	9,800	0.76	10	15	11.19	3 5/16	1 1/8	0.179	0.171	
XT31	4	2	20,400	463,700	12,200	0.94	10	15	11.38	3 21/32	1 7/8	0.187	0.174	
GPDS31	4 1/8	2	17,200	495,700	10,300	0.80	9	11	11.27	3 15/16	1 7/8	0.187	0.172	
HT26	3 5/8	1 1/4	15,300	455,100	9,200	0.66	9	12	11.15	3 9/16	1 1/8	0.180	0.171	2 7/8
HT31	4 1/8	2	18,900	495,700	11,300	0.82	9	13	11.39	3 29/32	1 7/8	0.187	0.174	
XT26	3 1/2	1 1/4	16,400	432,200	9,800	0.71	10	15	11.19	3 3/8	1 1/8	0.179	0.171	
XT31	4	2	20,400	463,700	12,200	0.88	10	15	11.38	3 23/32	1 7/8	0.187	0.174	
GPDS31	4 1/8	2	17,200	495,700	10,300	0.74	9	11	11.27	4	1 7/8	0.187	0.172	

*2" Longer than standard.

GLOBAL™ ENERGY RESOURCES LLC

Pipe Data

Size OD in.	Nominal Weight lb/ft	Grade and Upset Type	Torsional Yield Strength ft-lb	Tensile Yield Strength lb	Wall Thickness in.	Nominal ID in.	Pipe Body Section Area sq in.	Pipe Body Section Modulus cu in.	Pipe Body Polar Section Modulus cu in.	Internal Pressure psi	Collapse Pressure psi
3 1/2	9.50	E-75 EU	14,100	194,300	0.254	2.992	2.590	1.961	3.923	9,525	10,001
	9.50	E-75 IU	14,100	194,300	0.254	2.992	2.590	1.961	3.923	9,525	10,001
	9.50	E-75 IU	14,100	194,300	0.254	2.992	2.590	1.961	3.923	9,525	10,001
	9.50	E-75 EU	14,100	194,300	0.254	2.992	2.590	1.961	3.923	9,525	10,001
	9.50	E-75 EU	14,100	194,300	0.254	2.992	2.590	1.961	3.923	9,525	10,001
	9.50	E-75 IU	14,100	194,300	0.254	2.992	2.590	1.961	3.923	9,525	10,001
	9.50	E-75 EU	14,100	194,300	0.254	2.992	2.590	1.961	3.923	9,525	10,001
3 1/2	9.50	X-95 EU	17,900	246,100	0.254	2.992	2.590	1.961	3.923	12,065	12,077
	9.50	X-95 IU	17,900	246,100	0.254	2.992	2.590	1.961	3.923	12,065	12,077
	9.50	X-95 IU	17,900	246,100	0.254	2.992	2.590	1.961	3.923	12,065	12,077
	9.50	X-95 EU	17,900	246,100	0.254	2.992	2.590	1.961	3.923	12,065	12,077
	9.50	X-95 EU	17,900	246,100	0.254	2.992	2.590	1.961	3.923	12,065	12,077
	9.50	X-95 IU	17,900	246,100	0.254	2.992	2.590	1.961	3.923	12,065	12,077
	9.50	X-95 EU	17,900	246,100	0.254	2.992	2.590	1.961	3.923	12,065	12,077
3 1/2	9.50	G-105 EU	19,800	272,000	0.254	2.992	2.590	1.961	3.923	13,335	13,055
	9.50	G-105 IU	19,800	272,000	0.254	2.992	2.590	1.961	3.923	13,335	13,055
	9.50	G-105 IU	19,800	272,000	0.254	2.992	2.590	1.961	3.923	13,335	13,055
	9.50	G-105 EU	19,800	272,000	0.254	2.992	2.590	1.961	3.923	13,335	13,055
	9.50	G-105 EU	19,800	272,000	0.254	2.992	2.590	1.961	3.923	13,335	13,055
	9.50	G-105 IU	19,800	272,000	0.254	2.992	2.590	1.961	3.923	13,335	13,055
	9.50	G-105 EU	19,800	272,000	0.254	2.992	2.590	1.961	3.923	13,335	13,055
3 1/2	9.50	S-135 EU	25,500	349,700	0.254	2.992	2.590	1.961	3.923	17,145	15,748
	9.50	S-135 IU	25,500	349,700	0.254	2.992	2.590	1.961	3.923	17,145	15,748
	9.50	S-135 IU	25,500	349,700	0.254	2.992	2.590	1.961	3.923	17,145	15,748
	9.50	S-135 EU	25,500	349,700	0.254	2.992	2.590	1.961	3.923	17,145	15,748
	9.50	S-135 EU	25,500	349,700	0.254	2.992	2.590	1.961	3.923	17,145	15,748
	9.50	S-135 IU	25,500	349,700	0.254	2.992	2.590	1.961	3.923	17,145	15,748
	9.50	S-135 EU	25,500	349,700	0.254	2.992	2.590	1.961	3.923	17,145	15,748
3 1/2	9.50	Z-140 IU	26,400	362,600	0.254	2.992	2.590	1.961	3.923	17,780	16,158
	9.50	Z-140 EU	26,400	362,600	0.254	2.992	2.590	1.961	3.923	17,780	16,158
	9.50	Z-140 IU	26,400	362,600	0.254	2.992	2.590	1.961	3.923	17,780	16,158
	9.50	Z-140 EU	26,400	362,600	0.254	2.992	2.590	1.961	3.923	17,780	16,158
3 1/2	9.50	V-150 IU	28,300	388,500	0.254	2.992	2.590	1.961	3.923	19,050	16,943
	9.50	V-150 EU	28,300	388,500	0.254	2.992	2.590	1.961	3.923	19,050	16,943
	9.50	V-150 IU	28,300	388,500	0.254	2.992	2.590	1.961	3.923	19,050	16,943
	9.50	V-150 EU	28,300	388,500	0.254	2.992	2.590	1.961	3.923	19,050	16,943
3 1/2	13.30	E-75 EU	18,600	271,600	0.368	2.764	3.621	2.572	5.144	13,800	14,113
	13.30	E-75 IU	18,600	271,600	0.368	2.764	3.621	2.572	5.144	13,800	14,113
	13.30	E-75 IU	18,600	271,600	0.368	2.764	3.621	2.572	5.144	13,800	14,113
	13.30	E-75 EU	18,600	271,600	0.368	2.764	3.621	2.572	5.144	13,800	14,113
	13.30	E-75 EU	18,600	271,600	0.368	2.764	3.621	2.572	5.144	13,800	14,113
	13.30	E-75 IU	18,600	271,600	0.368	2.764	3.621	2.572	5.144	13,800	14,113
	13.30	E-75 EU	18,600	271,600	0.368	2.764	3.621	2.572	5.144	13,800	14,113
3 1/2	13.30	X-95 EU	23,500	344,000	0.368	2.764	3.621	2.572	5.144	17,480	17,877
	13.30	X-95 IU	23,500	344,000	0.368	2.764	3.621	2.572	5.144	17,480	17,877
	13.30	X-95 IU	23,500	344,000	0.368	2.764	3.621	2.572	5.144	17,480	17,877
	13.30	X-95 EU	23,500	344,000	0.368	2.764	3.621	2.572	5.144	17,480	17,877
	13.30	X-95 EU	23,500	344,000	0.368	2.764	3.621	2.572	5.144	17,480	17,877
	13.30	X-95 IU	23,500	344,000	0.368	2.764	3.621	2.572	5.144	17,480	17,877
	13.30	X-95 EU	23,500	344,000	0.368	2.764	3.621	2.572	5.144	17,480	17,877

	Tool Joint Data								Assembly Data					
Connection Type	Outside Diameter in.	Inside Diameter in.	Torsional Yield Strength ft-lb	Tensile Yield Strength lb	Make-up Torque ft-lb	Torsional Ratio Tool Joint to Pipe	* Pin Tong Space in.	* Box Tong Space in.	Adjusted Weight lb/ft	Minimum Tool Joint OD for Prem. Class in.	Drift Diameter in.	Capacity US gal/ft	Displace-ment US gal/ft	Size OD in.
NC38	4 3/4	2 11/16	18,100	587,300	9,700	1.28	10	12.5	11.07	4 13/32	2 9/16	0.360	0.169	3 1/2
NC31	4 1/8	2 1/8	11,900	447,100	6,400	0.84	9	11	10.49	3 7/8	2	0.354	0.161	
HT31	4 1/8	2 1/8	16,600	447,100	10,000	1.18	9	13	10.62	3 11/16	2	0.353	0.162	
HT38	4 3/4	2 11/16	25,300	587,300	15,200	1.79	10	15.5	11.31	4 5/32	2 9/16	0.360	0.173	
SLH90	4 3/4	2 11/16	18,688	534,200	11,100	1.33	10	12.5	11.07	4 3/16	2 9/16	0.360	0.169	
XT31	4	2 1/8	18,600	415,100	11,200	1.32	10	15	10.61	3 1/2	2	0.352	0.162	
XT38	4 3/4	2 13/16	23,900	473,000	14,300	1.70	10	15	11.08	4	2 11/16	0.362	0.170	
NC38	4 3/4	2 11/16	18,100	587,300	9,700	1.01	10	12.5	11.07	4 15/32	2 9/16	0.360	0.169	3 1/2
NC31	4 1/8	2	13,200	495,700	7,100	0.74	9	11	10.61	4	1 7/8	0.352	0.162	
HT31	4 1/8	2 1/8	16,600	447,100	10,000	0.93	9	13	10.62	3 13/16	2	0.353	0.162	
HT38	4 3/4	2 11/16	25,300	587,300	15,200	1.41	10	15.5	11.31	4 1/4	2 9/16	0.360	0.173	
SLH90	4 3/4	2 11/16	18,700	534,200	11,100	1.04	10	12.5	11.07	4 9/32	2 9/16	0.360	0.169	
XT31	4	2 1/8	18,600	415,100	11,200	1.04	10	15	10.61	3 5/8	2	0.352	0.162	
XT38	4 3/4	2 13/16	23,900	473,000	14,300	1.34	10	15	11.08	4 3/32	2 11/16	0.362	0.170	
NC38	4 3/4	2 11/16	18,100	587,300	9,700	0.91	10	12.5	11.07	4 17/32	2 9/16	0.360	0.169	3 1/2
NC31	4 1/8	2	13,200	495,700	7,100	0.67	9	11	10.61	4 1/16	1 7/8	0.352	0.162	
HT31	4 1/8	2	18,900	495,700	11,300	0.95	9	13	10.74	3 27/32	1 7/8	0.351	0.164	
HT38	4 3/4	2 11/16	25,300	587,300	15,200	1.28	10	15.5	11.31	4 9/32	2 9/16	0.360	0.173	
SLH90	4 3/4	2 11/16	18,700	534,200	11,100	0.94	10	12.5	11.07	4 5/16	2 9/16	0.360	0.169	
XT31	4	2 1/8	18,600	415,100	11,200	0.94	10	15	10.61	3 11/16	2	0.352	0.162	
XT38	4 3/4	2 13/16	23,900	473,000	14,300	1.21	10	15	11.08	4 5/32	2 11/16	0.362	0.170	
NC38	4 7/8	2 9/16	20,200	649,200	10,700	0.79	10	12.5	11.45	4 21/32	2 7/16	0.358	0.175	3 1/2
NC31	4 1/8	2	13,200	495,700	7,100	0.52	9	11	10.61	N/A	1 7/8	0.352	0.162	
HT31	4 1/8	2	18,900	495,700	11,300	0.74	9	13	10.74	4	1 7/8	0.351	0.164	
HT38	4 3/4	2 11/16	25,300	587,300	15,200	0.99	10	15.5	11.31	4 7/16	2 9/16	0.360	0.173	
SLH90	4 3/4	2 9/16	20,900	596,100	12,400	0.82	10	12.5	11.24	4 7/16	2 7/16	0.358	0.172	
XT31	4	2	20,400	463,700	12,200	0.80	10	15	10.74	3 13/16	1 7/8	0.350	0.164	
XT38	4 3/4	2 13/16	23,900	473,000	14,300	0.94	10	15	11.08	4 9/32	2 11/16	0.362	0.170	
HT31	4 1/8	2	18,900	495,700	11,300	0.72	9	13	10.74	4 1/32	1 7/8	0.351	0.164	3 1/2
HT38	4 3/4	2 11/16	25,300	587,300	15,200	0.96	10	15.5	11.31	4 15/32	2 9/16	0.360	0.173	
XT31	4	2	20,400	463,700	12,200	0.76	10	15	10.74	3 27/32	1 7/8	0.350	0.164	
XT38	4 3/4	2 13/16	23,900	473,000	14,300	0.91	10	15	11.08	4 5/16	2 11/16	0.362	0.170	
HT31	4 1/4	1 3/4	23,400	584,100	14,000	0.83	9	13	11.14	4	1 5/8	0.348	0.170	3 1/2
HT38	4 3/4	2 11/16	25,300	587,300	15,200	0.89	10	15.5	11.31	4 1/2	2 9/16	0.360	0.173	
XT31	4	2	20,400	463,700	12,200	0.72	10	15	10.74	3 29/32	1 7/8	0.350	0.164	
XT38	4 3/4	2 13/16	23,900	473,000	14,300	0.84	10	15	11.08	4 11/32	2 11/16	0.362	0.170	
NC38	4 3/4	2 11/16	18,100	587,300	9,700	0.97	10	12.5	14.24	4 1/2	2 9/16	0.310	0.218	3 1/2
NC31	4 1/8	2	13,200	495,700	7,100	0.71	9	11	13.93	4 1/32	1 7/8	0.302	0.213	
HT31	4 1/8	2 1/8	16,600	447,100	10,000	0.89	9	13	13.91	3 27/32	2	0.303	0.213	
HT38	4 3/4	2 11/16	25,300	587,300	15,200	1.36	10	15.5	14.45	4 1/4	2 9/16	0.310	0.221	
SLH90	4 3/4	2 11/16	18,700	534,200	11,100	1.01	10	12.5	14.24	4 9/32	2 9/16	0.310	0.218	
XT31	4	2 1/8	18,600	415,100	11,200	1.00	10	15	13.87	3 5/8	2	0.302	0.212	
XT38	4 3/4	2 11/16	27,700	537,800	16,600	1.49	10	15	14.42	4 1/32	2 9/16	0.310	0.221	
NC38	5	2 9/16	20,300	649,200	10,700	0.86	10	12.5	14.84	4 19/32	2 7/16	0.308	0.227	3 1/2
NC31	4 1/8	2	13,200	495,700	7,100	0.56	9	11	13.93	N/A	1 7/8	0.302	0.213	
HT31	4 1/8	2	18,900	495,700	11,300	0.80	9	13	14.04	3 15/16	1 7/8	0.301	0.215	
HT38	4 3/4	2 11/16	25,300	587,300	15,200	1.08	10	15.5	14.45	4 3/8	2 9/16	0.310	0.221	
SLH90	4 3/4	2 11/16	18,700	534,200	11,100	0.80	10	12.5	14.24	4 3/8	2 9/16	0.310	0.218	
XT31	4	2 1/8	18,600	415,100	11,200	0.79	10	15	13.87	3 25/32	2	0.302	0.212	
XT38	4 3/4	2 11/16	27,700	537,800	16,600	1.18	10	15	14.42	4 5/32	2 9/16	0.310	0.221	

*2" Longer than standard.

Pipe Data

Size OD in.	Nominal Weight lb/ft	Grade and Upset Type	Torsional Yield Strength ft-lb	Tensile Yield Strength lb	Wall Thickness in.	Nominal ID in.	Pipe Body Section Area sq in.	Pipe Body Section Modulus cu in.	Pipe Body Polar Section Modulus cu in.	Internal Pressure psi	Collapse Pressure psi
3 1/2	13.30	G-105 EU	26,000	380,200	0.368	2.764	3.621	2.572	5.144	19,320	19,758
	13.30	G-105 IU	26,000	380,200	0.368	2.764	3.621	2.572	5.144	19,320	19,758
	13.30	G-105 IU	26,000	380,200	0.368	2.764	3.621	2.572	5.144	19,320	19,758
	13.30	G-105 EU	26,000	380,200	0.368	2.764	3.621	2.572	5.144	19,320	19,758
	13.30	G-105 EU	26,000	380,200	0.368	2.764	3.621	2.572	5.144	19,320	19,758
	13.30	G-105 IU	26,000	380,200	0.368	2.764	3.621	2.572	5.144	19,320	19,758
	13.30	G-105 EU	26,000	380,200	0.368	2.764	3.621	2.572	5.144	19,320	19,758
3 1/2	13.30	S-135 EU	33,400	488,800	0.368	2.764	3.621	2.572	5.144	24,840	25,404
	13.30	S-135 IU	33,400	488,800	0.368	2.764	3.621	2.572	5.144	24,840	25,404
	13.30	S-135 IU	33,400	488,800	0.368	2.764	3.621	2.572	5.144	24,840	25,404
	13.30	S-135 EU	33,400	488,800	0.368	2.764	3.621	2.572	5.144	24,840	25,404
	13.30	S-135 EU	33,400	488,800	0.368	2.764	3.621	2.572	5.144	24,840	25,404
	13.30	S-135 IU	33,400	488,800	0.368	2.764	3.621	2.572	5.144	24,840	25,404
	13.30	S-135 EU	33,400	488,800	0.368	2.764	3.621	2.572	5.144	24,840	25,404
	13.30	S-135 EU	33,400	488,800	0.368	2.764	3.621	2.572	5.144	24,840	25,404
3 1/2	13.30	Z-140 IU	34,600	506,900	0.368	2.764	3.621	2.572	5.144	25,760	26,345
	13.30	Z-140 EU	34,600	506,900	0.368	2.764	3.621	2.572	5.144	25,760	26,345
	13.30	Z-140 IU	34,600	506,900	0.368	2.764	3.621	2.572	5.144	25,760	26,345
	13.30	Z-140 EU	34,600	506,900	0.368	2.764	3.621	2.572	5.144	25,760	26,345
	13.30	Z-140 EU	34,600	506,900	0.368	2.764	3.621	2.572	5.144	25,760	26,345
3 1/2	13.30	V-150 IU	37,100	543,100	0.368	2.764	3.621	2.572	5.144	27,600	28,226
	13.30	V-150 EU	37,100	543,100	0.368	2.764	3.621	2.572	5.144	27,600	28,226
	13.30	V-150 IU	37,100	543,100	0.368	2.764	3.621	2.572	5.144	27,600	28,226
	13.30	V-150 EU	37,100	543,100	0.368	2.764	3.621	2.572	5.144	27,600	28,226
	13.30	V-150 EU	37,100	543,100	0.368	2.764	3.621	2.572	5.144	27,600	28,226
3 1/2	15.50	E-75 EU	21,100	322,800	0.449	2.602	4.304	2.923	5.847	16,838	16,774
	15.50	E-75 EU	21,100	322,800	0.449	2.602	4.304	2.923	5.847	16,838	16,774
	15.50	E-75 EU	21,100	322,800	0.449	2.602	4.304	2.923	5.847	16,838	16,774
3 1/2	15.50	X-95 EU	26,700	408,800	0.449	2.602	4.304	2.923	5.847	21,328	21,247
	15.50	X-95 EU	26,700	408,800	0.449	2.602	4.304	2.923	5.847	21,328	21,247
	15.50	X-95 EU	26,700	408,800	0.449	2.602	4.304	2.923	5.847	21,328	21,247
3 1/2	15.50	G-105 EU	29,500	451,900	0.449	2.602	4.304	2.923	5.847	23,573	23,484
	15.50	G-105 EU	29,500	451,900	0.449	2.602	4.304	2.923	5.847	23,573	23,484
	15.50	G-105 EU	29,500	451,900	0.449	2.602	4.304	2.923	5.847	23,573	23,484
	15.50	G-105 EU	29,500	451,900	0.449	2.602	4.304	2.923	5.847	23,573	23,484
3 1/2	15.50	S-135 EU	38,000	581,000	0.449	2.602	4.304	2.923	5.847	30,308	30,194
	15.50	S-135 EU	38,000	581,000	0.449	2.602	4.304	2.923	5.847	30,308	30,194
	15.50	S-135 EU	38,000	581,000	0.449	2.602	4.304	2.923	5.847	30,308	30,194
	15.50	S-135 EU	38,000	581,000	0.449	2.602	4.304	2.923	5.847	30,308	30,194
	15.50	S-135 EU	38,000	581,000	0.449	2.602	4.304	2.923	5.847	30,308	30,194
	15.50	S-135 EU	38,000	581,000	0.449	2.602	4.304	2.923	5.847	30,308	30,194
3 1/2	15.50	Z-140 EU	39,400	602,500	0.449	2.602	4.304	2.923	5.847	31,430	31,312
	15.50	Z-140 EU	39,400	602,500	0.449	2.602	4.304	2.923	5.847	31,430	31,312
	15.50	Z-140 EU	39,400	602,500	0.449	2.602	4.304	2.923	5.847	31,430	31,312
	15.50	Z-140 EU	39,400	602,500	0.449	2.602	4.304	2.923	5.847	31,430	31,312
3 1/2	15.50	V-150 EU	42,200	645,500	0.449	2.602	4.304	2.923	5.847	33,675	33,549
	15.50	V-150 EU	42,200	645,500	0.449	2.602	4.304	2.923	5.847	33,675	33,549
	15.50	V-150 EU	42,200	645,500	0.449	2.602	4.304	2.923	5.847	33,675	33,549
	15.50	V-150 EU	42,200	645,500	0.449	2.602	4.304	2.923	5.847	33,675	33,549
	16.60	S-135 EU	55,500	595,000	0.337	3.826	4.407	4.271	8.543	17,693	16,773

GLOBAL™ ENERGY RESOURCES LLC

Tool Joint Data									Assembly Data					
Connection Type	Outside Diameter in.	Inside Diameter in.	Torsional Yield Strength ft-lb	Tensile Yield Strength lb	Make-up Torque ft-lb	Torsional Ratio Tool Joint to Pipe	* Pin Tong Space in.	* Box Tong Space in.	Adjusted Weight lb/ft	Minimum Tool Joint OD for Prem. Class in.	Drift Diameter in.	Capacity US gal/ft	Displace-ment US gal/ft	Size OD in.
NC38	5	2 7/16	22,200	708,100	11,700	0.85	10	12.5	15.00	4 21/32	2 5/16	0.306	0.229	3 1/2
NC31	4 1/8	2	13,200	495,700	7,100	0.51	9	11	13.93	N/A	1 7/8	0.302	0.213	
HT31	4 1/8	2	18,900	495,700	11,300	0.73	9	13	14.04	4	1 7/8	0.301	0.215	
HT38	4 3/4	2 11/16	25,300	587,300	15,200	0.97	10	15.5	14.45	4 7/16	2 9/16	0.310	0.221	
SLH90	4 3/4	2 9/16	20,900	596,100	12,400	0.80	10	12.5	14.41	4 7/16	2 7/16	0.308	0.220	
XT31	4 1/8	2	21,100	463,700	12,700	0.81	10	15	14.21	3 13/16	1 7/8	0.300	0.217	
XT38	4 3/4	2 11/16	27,700	537,800	16,600	1.07	10	15	14.42	4 7/32	2 9/16	0.310	0.221	
NC38	5	2 1/8	26,500	842,400	14,000	0.79	10	12.5	15.37	4 13/16	2	0.302	0.235	3 1/2
NC31	4 1/8	2	13,200	495,700	7,100	0.40	9	11	13.93	N/A	1 7/8	0.302	0.213	
HT31	4 1/8	2	18,900	495,700	11,300	0.57	9	13	14.04	N/A	1 7/8	0.301	0.215	
HT38	4 3/4	2 9/16	26,900	649,200	16,100	0.81	10	15.5	14.63	4 9/16	2 7/16	0.308	0.224	
SLH90	4 3/4	2 9/16	20,900	596,100	12,400	0.63	10	12.5	14.41	4 19/32	2 7/16	0.308	0.220	
XT31	4 1/8	1 7/8	23,400	509,400	14,000	0.70	10	15	14.34	4 31/32	1 3/4	0.298	0.219	
XT38	4 3/4	2 11/16	27,700	537,800	16,600	0.83	10	15	14.42	4 13/32	2 9/16	0.310	0.221	
GPDS38	4 7/8	2 9/16	25,700	649,200	15,400	0.77	10	12.5	14.62	4 11/16	2 7/16	0.308	0.224	
HT31	4 1/8	1 7/8	19,900	541,400	11,900	0.58	9	13	14.17	N/A	1 3/4	0.300	0.217	3 1/2
HT38	4 3/4	2 9/16	26,900	649,200	16,100	0.78	10	15.5	14.63	4 9/16	2 7/16	0.308	0.224	
XT31	4 1/8	1 3/4	25,000	552,100	15,000	0.72	10	15	14.47	3 31/32	1 5/8	0.297	0.221	
XT38	4 3/4	2 9/16	31,300	599,600	18,800	0.90	10	15	14.59	4 3/8	2 7/16	0.308	0.223	
GPDS38	5	2 9/16	25,800	649,200	15,500	0.75	10	12.5	14.84	4 11/16	2 7/16	0.308	0.227	
HT31	4 1/4	1 3/4	23,400	584,100	14,000	0.63	9	13	14.47	4 1/4	1 5/8	0.298	0.221	3 1/2
HT38	4 3/4	2 9/16	26,900	649,200	16,100	0.73	10	15.5	14.63	4 5/8	2 7/16	0.308	0.224	
XT31	4 1/8	1 3/4	25,000	552,100	15,000	0.67	10	15	14.47	4 1/16	1 5/8	0.297	0.221	
XT38	4 3/4	2 9/16	31,300	599,600	18,800	0.84	10	15	14.59	4 7/16	2 7/16	0.308	0.223	
GPDS38	5	2 9/16	25,800	649,200	15,500	0.70	10	12.5	14.84	4 3/4	2 7/16	0.308	0.227	
NC38	5	2 9/16	20,300	649,200	10,700	0.96	10	12.5	16.94	4 17/32	2 7/16	0.276	0.259	3 1/2
HT38	4 3/4	2 9/16	26,900	649,200	16,100	1.27	10	15.5	16.71	4 1/4	2 7/16	0.276	0.256	
XT38	4 3/4	2 9/16	31,300	599,600	18,800	1.48	10	15	16.68	4 1/32	2 7/16	0.276	0.255	
NC38	5	2 7/16	22,200	708,100	11,700	0.83	10	12.5	17.11	4 21/32	2 5/16	0.274	0.262	3 1/2
HT38	4 3/4	2 9/16	26,900	649,200	16,100	1.01	10	15.5	16.71	4 3/8	2 7/16	0.276	0.256	
XT38	4 3/4	2 9/16	31,300	599,600	18,800	1.17	10	15	16.68	4 5/32	2 7/16	0.276	0.255	
NC38	5	2 1/8	26,500	842,400	14,000	0.90	10	12.5	17.50	4 23/32	2	0.269	0.268	3 1/2
HT38	4 3/4	2 9/16	26,900	649,200	16,100	0.91	10	15.5	16.71	4 7/16	2 7/16	0.276	0.256	
NC40	5 1/4	2 9/16	27,800	838,300	14,600	0.94	9	12	17.24	4 15/16	2 7/16	0.276	0.264	
XT38	4 3/4	2 9/16	31,300	599,600	18,800	1.06	10	15	16.68	4 1/4	2 7/16	0.276	0.255	
NC38	5	2 1/8	26,500	842,400	14,000	0.70	10	12.5	17.50	4 29/32	2	0.269	0.268	3 1/2
HT38	4 3/4	2 7/16	28,400	708,100	17,000	0.75	10	15.5	16.90	4 19/32	2 5/16	0.273	0.258	
NC40	5 1/2	2 1/4	32,900	980,000	17,100	0.87	10	12.5	18.31	5 3/32	2 1/8	0.271	0.280	
XT38	4 3/4	2 7/16	34,200	658,500	20,500	0.90	10	15	16.86	4 3/8	2 5/16	0.273	0.258	
XT39	4 7/8	2 7/16	38,500	788,600	22,100	1.01	10	15	17.09	4 3/8	2 5/16	0.273	0.261	
GPDS38	5	2 7/16	29,200	708,100	17,500	0.77	10	12.5	17.11	4 23/32	2 5/16	0.274	0.262	
HT38	4 3/4	2 7/16	28,400	708,100	17,000	0.72	10	15.5	16.90	4 5/8	2 5/16	0.273	0.258	3 1/2
XT38	4 3/4	2 7/16	34,200	658,500	20,500	0.87	10	15	16.86	4 13/32	2 5/16	0.273	0.258	
XT39	4 7/8	2 7/16	38,500	788,600	23,100	0.98	10	15	17.09	4 13/32	2 5/16	0.273	0.261	
GPDS38	5	2 7/16	29,200	708,100	17,500	0.74	10	12.5	17.11	4 3/4	2 5/16	0.274	0.262	
HT38	5	2 1/4	37,700	790,900	22,600	0.89	10	15.5	17.63	4 19/32	2 1/8	0.270	0.270	3 1/2
XT38	4 3/4	2 1/4	36,300	741,400	21,800	0.86	10	15	17.11	4 13/32	2 1/8	0.271	0.262	
XT39	4 7/8	2 1/4	40,700	871,400	24,400	0.96	10	15	17.35	4 3/8	2 1/8	0.270	0.265	
GPDS38	5	2 1/4	33,900	790,900	20,300	0.80	10	12.5	17.35	4 23/32	2 1/8	0.271	0.265	

*2" Longer than standard.

GLOBAL™
ENERGY RESOURCES
LLC

Pipe Data

Size OD in.	Nominal Weight lb/ft	Grade and Upset Type	Torsional Yield Strength ft-lb	Tensile Yield Strength lb	Wall Thickness in.	Nominal ID in.	Pipe Body Section Area sq in.	Pipe Body Section Modulus cu in.	Pipe Body Polar Section Modulus cu in.	Internal Pressure psi	Collapse Pressure psi
4	11.85	E-75 IU	19,500	230,800	0.262	3.476	3.077	2.700	5.400	8,597	8,381
	11.85	E-75 IU	19,500	230,800	0.262	3.476	3.077	2.700	5.400	8,597	8,381
	11.85	E-75 IU	19,500	230,800	0.262	3.476	3.077	2.700	5.400	8,597	8,381
	11.85	E-75 IU	19,500	230,800	0.262	3.476	3.077	2.700	5.400	8,597	8,381
	11.85	E-75 IU	19,500	230,800	0.262	3.476	3.077	2.700	5.400	8,597	8,381
4	11.85	X-95 IU	24,700	292,300	0.262	3.476	3.077	2.700	5.400	10,889	9,978
	11.85	X-95 IU	24,700	292,300	0.262	3.476	3.077	2.700	5.400	10,889	9,978
	11.85	X-95 IU	24,700	292,300	0.262	3.476	3.077	2.700	5.400	10,889	9,978
	11.85	X-95 IU	24,700	292,300	0.262	3.476	3.077	2.700	5.400	10,889	9,978
	11.85	X-95 IU	24,700	292,300	0.262	3.476	3.077	2.700	5.400	10,889	9,978
4	11.85	G-105 IU	27,300	323,100	0.262	3.476	3.077	2.700	5.400	12,036	10,708
	11.85	G-105 IU	27,300	323,100	0.262	3.476	3.077	2.700	5.400	12,036	10,708
	11.85	G-105 IU	27,300	323,100	0.262	3.476	3.077	2.700	5.400	12,036	10,708
	11.85	G-105 IU	27,300	323,100	0.262	3.476	3.077	2.700	5.400	12,036	10,708
	11.85	G-105 IU	27,300	323,100	0.262	3.476	3.077	2.700	5.400	12,036	10,708
4	11.85	S-135 IU	35,100	415,400	0.262	3.476	3.077	2.700	5.400	15,474	12,618
	11.85	S-135 IU	35,100	415,400	0.262	3.476	3.077	2.700	5.400	15,474	12,618
	11.85	S-135 IU	35,100	415,400	0.262	3.476	3.077	2.700	5.400	15,474	12,618
	11.85	S-135 IU	35,100	415,400	0.262	3.476	3.077	2.700	5.400	15,474	12,618
	11.85	S-135 IU	35,100	415,400	0.262	3.476	3.077	2.700	5.400	15,474	12,618
4	11.85	Z-140 IU	36,400	430,700	0.262	3.476	3.077	2.700	5.400	16,048	12,894
	11.85	Z-140 IU	36,400	430,700	0.262	3.476	3.077	2.700	5.400	16,048	12,894
	11.85	Z-140 IU	36,400	430,700	0.262	3.476	3.077	2.700	5.400	16,048	12,894
4	11.85	V-150 IU	38,900	461,500	0.262	3.476	3.077	2.700	5.400	17,194	13,404
	11.85	V-150 IU	38,900	461,500	0.262	3.476	3.077	2.700	5.400	17,194	13,404
	11.85	V-150 IU	38,900	461,500	0.262	3.476	3.077	2.700	5.400	17,194	13,404
4	14.00	E-75 IU	23,300	285,400	0.330	3.340	3.805	3.229	6.458	10,828	11,354
	14.00	E-75 IU	23,300	285,400	0.330	3.340	3.805	3.229	6.458	10,828	11,354
	14.00	E-75 IU	23,300	285,400	0.330	3.340	3.805	3.229	6.458	10,828	11,354
	14.00	E-75 IU	23,300	285,400	0.330	3.340	3.805	3.229	6.458	10,828	11,354
	14.00	E-75 EU	23,300	285,400	0.330	3.340	3.805	3.229	6.458	10,828	11,354
	14.00	E-75 IU	23,300	285,400	0.330	3.340	3.805	3.229	6.458	10,828	11,354
	14.00	E-75 IU	23,300	285,400	0.330	3.340	3.805	3.229	6.458	10,828	11,354
4	14.00	X-95 IU	29,500	361,500	0.330	3.340	3.805	3.229	6.458	13,716	14,382
	14.00	X-95 IU	29,500	361,500	0.330	3.340	3.805	3.229	6.458	13,716	14,382
	14.00	X-95 IU	29,500	361,500	0.330	3.340	3.805	3.229	6.458	13,716	14,382
	14.00	X-95 IU	29,500	361,500	0.330	3.340	3.805	3.229	6.458	13,716	14,382
	14.00	X-95 EU	29,500	361,500	0.330	3.340	3.805	3.229	6.458	13,716	14,382
	14.00	X-95 IU	29,500	361,500	0.330	3.340	3.805	3.229	6.458	13,716	14,382
	14.00	X-95 IU	29,500	361,500	0.330	3.340	3.805	3.229	6.458	13,716	14,382
4	14.00	G-105 IU	32,600	399,500	0.330	3.340	3.805	3.229	6.458	15,159	15,896
	14.00	G-105 IU	32,600	399,500	0.330	3.340	3.805	3.229	6.458	15,159	15,896
	14.00	G-105 IU	32,600	399,500	0.330	3.340	3.805	3.229	6.458	15,159	15,896
	14.00	G-105 IU	32,600	399,500	0.330	3.340	3.805	3.229	6.458	15,159	15,896
	14.00	G-105 EU	32,600	399,500	0.330	3.340	3.805	3.229	6.458	15,159	15,896
	14.00	G-105 IU	32,600	399,500	0.330	3.340	3.805	3.229	6.458	15,159	15,896
	14.00	G-105 IU	32,600	399,500	0.330	3.340	3.805	3.229	6.458	15,159	15,896

GLOBAL™ ENERGY RESOURCES LLC

Tool Joint Data									Assembly Data					
Connection Type	Outside Diameter in.	Inside Diameter in.	Torsional Yield Strength ft-lb	Tensile Yield Strength lb	Make-up Torque ft-lb	Torsional Ratio Tool Joint to Pipe	* Pin Tong Space in.	* Box Tong Space in.	Adjusted Weight lb/ft	Minimum Tool Joint OD for Prem. Class in.	Drift Diameter in.	Capacity US gal/ft	Displace-ment US gal/ft	Size OD in.
NC40	5 1/4	2 13/16	23,500	711,600	12,400	1.21	9	12	13.41	4 3/4	2 11/16	0.481	0.205	4
SH	4 3/4	2 9/16	15,300	512,000	8,100	0.78	9	12	12.91	4 3/8	2 7/16	0.477	0.198	
HT38	4 3/4	2 11/16	25,300	587,300	15,200	1.30	10	15.5	13.08	4 9/32	2 9/16	0.477	0.200	
XT38	4 3/4	2 11/16	27,900	537,800	16,600	1.42	10	15	13.04	4 1/16	2 9/16	0.477	0.199	
XT39	4 7/8	2 13/16	32,900	603,000	19,700	1.69	10	15	13.08	4 5/32	2 11/16	0.479	0.200	
NC40	5 1/4	2 13/16	23,500	711,600	12,400	0.95	9	12	13.41	4 27/32	2 11/16	0.481	0.205	4
SH	4 3/4	2 9/16	15,300	512,000	8,100	0.62	9	12	12.91	4 1/2	2 7/16	0.477	0.198	
HT38	4 3/4	2 11/16	25,300	587,300	15,200	1.02	10	15.5	13.08	4 13/32	2 9/16	0.477	0.200	
XT38	4 3/4	2 11/16	27,700	537,800	16,600	1.12	10	15	13.04	4 3/16	2 9/16	0.477	0.199	
XT39	4 7/8	2 13/16	32,900	603,000	19,700	1.69	10	15	13.08	4 5/32	2 11/16	0.479	0.200	
NC40	5 1/4	2 13/16	23,500	711,600	12,400	0.86	9	12	13.41	4 29/32	2 11/16	0.481	0.205	4
SH	4 3/4	2 9/16	15,300	512,000	8,100	0.56	9	12	12.91	4 9/16	2 7/16	0.477	0.198	
HT38	4 3/4	2 9/16	26,900	649,200	16,100	0.99	10	15.5	13.27	4 13/32	2 7/16	0.475	0.203	
XT38	4 3/4	2 11/16	27,900	537,800	16,600	1.01	10	15	13.04	4 9/32	2 9/16	0.477	0.199	
XT39	4 7/8	2 13/16	32,900	603,000	19,700	1.21	10	15	13.08	4 11/32	2 11/16	0.479	0.200	
NC40	5 1/2	2 9/16	28,100	838,300	14,600	0.80	9	12	14.23	5 1/16	2 7/16	0.476	0.218	4
SH	4 3/4	2 9/16	15,300	512,000	8,100	0.44	9	12	12.91	4 23/32	2 7/16	0.477	0.198	
HT38	4 3/4	2 7/16	28,400	708,100	17,000	0.81	10	15.5	13.45	4 17/32	2 5/16	0.473	0.206	
XT38	4 3/4	2 11/16	27,700	537,800	16,600	0.79	10	15	13.04	4 7/16	2 9/16	0.477	0.199	
XT39	4 7/8	2 13/16	32,900	603,000	19,700	0.94	10	15	13.08	4 1/2	2 11/16	0.479	0.200	
HT38	4 3/4	2 7/16	28,400	708,100	17,000	0.78	10	15.5	13.45	4 9/16	2 5/16	0.473	0.206	4
XT38	4 3/4	2 11/16	27,700	537,800	16,600	0.76	10	15	13.04	4 15/32	2 9/16	0.477	0.199	
XT39	4 7/8	2 13/16	32,900	603,000	19,700	0.90	10	15	13.08	4 17/32	2 11/16	0.479	0.200	
HT38	5	2 7/16	33,000	708,100	19,800	0.85	10	15.5	13.93	4 5/8	2 5/16	0.472	0.213	4
XT38	4 3/4	2 9/16	31,300	599,600	18,800	0.81	10	15	13.23	4 15/32	2 7/16	0.475	0.202	
XT39	4 7/8	2 13/16	32,900	603,000	19,700	0.85	10	15	13.08	4 19/32	2 11/16	0.479	0.200	
NC40	5 1/4	2 13/16	23,500	711,600	12,400	1.01	9	12	15.64	4 13/16	2 11/16	0.445	0.239	4
HT38	4 3/4	2 11/16	25,300	587,300	15,200	1.09	10	15.5	15.28	4 3/8	2 9/16	0.442	0.234	
SH	4 3/4	2 7/16	17,100	570,900	9,100	0.73	9	12	15.31	4 7/16	2 5/16	0.440	0.234	
HT40	5 1/4	2 13/16	31,900	711,600	19,100	1.37	9	15	15.93	4 19/32	2 11/16	0.444	0.244	
NC46	6	3 1/4	33,600	901,200	17,600	1.44	9	12	16.51	5 9/32	3 1/8	0.453	0.253	
XT38	4 3/4	2 11/16	27,700	537,800	16,600	1.19	10	15	15.25	4 5/32	2 9/16	0.442	0.233	
XT39	4 7/8	2 13/16	32,900	603,000	19,700	1.41	10	15	13.08	4 5/32	2 11/16	0.479	0.234	
NC40	5 1/4	2 11/16	25,700	776,400	13,500	0.87	9	12	15.82	4 15/16	2 9/16	0.443	0.242	4
HT38	4 3/4	2 11/16	25,300	587,300	15,200	0.86	10	15.5	15.28	4 17/32	2 9/16	0.442	0.234	
SH	4 3/4	2 7/16	17,100	570,900	9,100	0.58	9	12	15.31	4 19/32	2 5/16	0.440	0.234	
HT40	5 1/4	2 13/16	31,900	711,600	19,100	1.08	9	15	15.93	4 23/32	2 11/16	0.444	0.244	
NC46	6	3 1/4	33,600	901,200	17,600	1.14	9	12	16.51	5 3/8	3 1/8	0.453	0.253	
XT38	4 3/4	2 11/16	27,700	537,800	16,600	0.95	10	15	15.25	4 5/16	2 9/16	0.442	0.233	
XT39	4 7/8	2 13/16	32,900	603,000	19,700	1.12	10	15	15.29	4 3/8	2 11/16	0.444	0.234	
NC40	5 1/2	2 7/16	30,100	897,200	15,600	0.92	9	12	16.62	5	2 5/16	0.439	0.254	4
HT38	5	2 9/16	29,600	649,200	17,800	0.91	10	15.5	15.95	4 17/32	2 7/16	0.440	0.244	
SH	4 3/4	2 7/16	17,100	570,900	9,100	0.52	9	12	15.31	4 21/32	2 5/16	0.440	0.234	
HT40	5 1/4	2 13/16	31,900	711,600	19,100	0.98	9	15	15.93	4 25/32	2 11/16	0.444	0.244	
NC46	6	3 1/4	33,600	901,200	17,600	1.03	9	12	16.51	5 7/16	3 1/8	0.453	0.253	
XT38	4 3/4	2 11/16	27,700	537,800	16,600	0.85	10	15	15.25	4 3/8	2 9/16	0.442	0.233	
XT39	4 7/8	2 13/16	32,900	603,000	19,700	1.01	10	15	15.29	4 7/16	2 11/16	0.444	0.234	

*2" Longer than standard.

Pipe Data

Size OD in.	Nominal Weight lb/ft	Grade and Upset Type	Torsional Yield Strength ft-lb	Tensile Yield Strength lb	Wall Thickness in.	Nominal ID in.	Pipe Body Section Area sq in.	Pipe Body Section Modulus cu in.	Pipe Body Polar Section Modulus cu in.	Internal Pressure psi	Collapse Pressure psi
4	14.00	S-135 IU	41,900	513,600	0.330	3.340	3.805	3.229	6.458	19,491	20,141
	14.00	S-135 IU	41,900	513,600	0.330	3.340	3.805	3.229	6.458	19,491	20,141
	14.00	S-135 IU	41,900	513,600	0.330	3.340	3.805	3.229	6.458	19,491	20,141
	14.00	S-135 IU	41,900	513,600	0.330	3.340	3.805	3.229	6.458	19,491	20,141
	14.00	S-135 EU	41,900	513,600	0.330	3.340	3.805	3.229	6.458	19,491	20,141
	14.00	S-135 IU	41,900	513,600	0.330	3.340	3.805	3.229	6.458	19,491	20,141
	14.00	S-135 IU	41,900	513,600	0.330	3.340	3.805	3.229	6.458	19,491	20,141
	14.00	S-135 IU	41,900	513,600	0.330	3.340	3.805	3.229	6.458	19,491	20,141
4	14.00	Z-140 IU	43,500	532,700	0.330	3.340	3.805	3.229	6.458	20,213	20,742
	14.00	Z-140 IU	43,500	532,700	0.330	3.340	3.805	3.229	6.458	20,213	20,742
	14.00	Z-140 IU	43,500	532,700	0.330	3.340	3.805	3.229	6.458	20,213	20,742
	14.00	Z-140 IU	43,500	532,700	0.330	3.340	3.805	3.229	6.458	20,213	20,742
	14.00	Z-140 IU	43,500	532,700	0.330	3.340	3.805	3.229	6.458	20,213	20,742
4	14.00	V-150 IU	46,600	570,700	0.330	3.340	3.805	3.229	6.458	21,656	21,912
	14.00	V-150 IU	46,600	570,700	0.330	3.340	3.805	3.229	6.458	21,656	21,912
	14.00	V-150 IU	46,600	570,700	0.330	3.340	3.805	3.229	6.458	21,656	21,912
	14.00	V-150 IU	46,600	570,700	0.330	3.340	3.805	3.229	6.458	21,656	21,912
	14.00	V-150 IU	46,600	570,700	0.330	3.340	3.805	3.229	6.458	21,656	21,912
4	15.70	E-75 IU	25,800	324,100	0.380	3.240	4.322	3.578	7.157	12,469	12,896
	15.70	E-75 IU	25,800	324,100	0.380	3.240	4.322	3.578	7.157	12,469	12,896
	15.70	E-75 IU	25,800	324,100	0.380	3.240	4.322	3.578	7.157	12,469	12,896
	15.70	E-75 EU	25,800	324,100	0.380	3.240	4.322	3.578	7.157	12,469	12,896
	15.70	E-75 IU	25,800	324,100	0.380	3.240	4.322	3.578	7.157	12,469	12,896
	15.70	E-75 IU	25,800	324,100	0.380	3.240	4.322	3.578	7.157	12,469	12,896
4	15.70	X-95 IU	32,700	410,500	0.380	3.240	4.322	3.578	7.157	15,794	16,335
	15.70	X-95 IU	32,700	410,500	0.380	3.240	4.322	3.578	7.157	15,794	16,335
	15.70	X-95 IU	32,700	410,500	0.380	3.240	4.322	3.578	7.157	15,794	16,335
	15.70	X-95 EU	32,700	410,500	0.380	3.240	4.322	3.578	7.157	15,794	16,335
	15.70	X-95 IU	32,700	410,500	0.380	3.240	4.322	3.578	7.157	15,794	16,335
	15.70	X-95 IU	32,700	410,500	0.380	3.240	4.322	3.578	7.157	15,794	16,335
4	15.70	G-105 IU	36,100	453,800	0.380	3.240	4.322	3.578	7.157	17,456	18,055
	15.70	G-105 IU	36,100	453,800	0.380	3.240	4.322	3.578	7.157	17,456	18,055
	15.70	G-105 IU	36,100	453,800	0.380	3.240	4.322	3.578	7.157	17,456	18,055
	15.70	G-105 EU	36,100	453,800	0.380	3.240	4.322	3.578	7.157	17,456	18,055
	15.70	G-105 IU	36,100	453,800	0.380	3.240	4.322	3.578	7.157	17,456	18,055
	15.70	G-105 IU	36,100	453,800	0.380	3.240	4.322	3.578	7.157	17,456	18,055
4	15.70	S-135 IU	46,500	583,400	0.380	3.240	4.322	3.578	7.157	22,444	23,213
	15.70	S-135 IU	46,500	583,400	0.380	3.240	4.322	3.578	7.157	22,444	23,213
	15.70	S-135 IU	46,500	583,400	0.380	3.240	4.322	3.578	7.157	22,444	23,213
	15.70	S-135 EU	46,500	583,400	0.380	3.240	4.322	3.578	7.157	22,444	23,213
	15.70	S-135 IU	46,500	583,400	0.380	3.240	4.322	3.578	7.157	22,444	23,213
	15.70	S-135 IU	46,500	583,400	0.380	3.240	4.322	3.578	7.157	22,444	23,213
	15.70	S-135 IU	46,500	583,400	0.380	3.240	4.322	3.578	7.157	22,444	23,213
4	15.70	Z-140 IU	48,200	605,000	0.380	3.240	4.322	3.578	7.157	23,275	24,073
	15.70	Z-140 IU	48,200	605,000	0.380	3.240	4.322	3.578	7.157	23,275	24,073
	15.70	Z-140 IU	48,200	605,000	0.380	3.240	4.322	3.578	7.157	23,275	24,073
	15.70	Z-140 IU	48,200	605,000	0.380	3.240	4.322	3.578	7.157	23,275	24,073
4	15.70	V-150 IU	51,600	648,200	0.380	3.240	4.322	3.578	7.157	24,938	25,793
	15.70	V-150 IU	51,600	648,200	0.380	3.240	4.322	3.578	7.157	24,938	25,793
	15.70	V-150 IU	51,600	648,200	0.380	3.240	4.322	3.578	7.157	24,938	25,793
	15.70	V-150 IU	51,600	648,200	0.380	3.240	4.322	3.578	7.157	24,938	25,793

GLOBAL™ ENERGY RESOURCES LLC

Tool Joint Data									Assembly Data					
Connection Type	Outside Diameter in.	Inside Diameter in.	Torsional Yield Strength ft-lb	Tensile Yield Strength lb	Make-up Torque ft-lb	Torsional Ratio Tool Joint to Pipe	* Pin Tong Space in.	* Box Tong Space in.	Adjusted Weight lb/ft	Minimum Tool Joint OD for Prem. Class in.	Drift Diameter in.	Capacity US gal/ft	Displace-ment US gal/ft	Size OD in.
NC40	5 1/2	2	36,400	1,080,100	18,900	0.87	9	12	17.15	5 3/16	1 7/16	0.433	0.262	4
HT38	5	2 7/16	33,000	708,100	19,800	0.79	10	15.5	16.13	4 11/16	2 5/16	0.438	0.247	
SH	4 3/4	2 7/16	17,100	570,900	9,100	0.41	9	12	15.31	N/A	2 5/16	0.440	0.234	
HT40	5 1/4	2 11/16	35,900	776,400	21,500	0.86	9	15	16.12	4 29/32	2 9/16	0.442	0.247	
NC46	6	3	39,200	1,048,400	20,500	0.94	9	12	16.90	5 9/16	2 7/8	0.449	0.259	
XT38	4 3/4	2 9/16	31,300	599,600	18,800	0.75	10	15	15.44	4 17/32	2 7/16	0.440	0.236	
XT39	4 7/8	2 9/16	37,000	729,700	22,200	0.88	10	15	15.67	4 17/32	2 7/16	0.440	0.240	
GPDS40	5 1/4	2 11/16	32,700	776,400	19,600	0.78	9	12	15.82	5	2 9/16	0.443	0.242	
HT38	5	2 7/16	33,000	708,100	19,800	0.76	10	15.5	16.13	4 23/32	2 5/16	0.438	0.247	4
HT40	5 1/4	2 11/16	35,900	776,400	21,500	0.83	9	15	16.12	4 15/16	2 9/16	0.442	0.247	
XT38	4 3/4	2 9/16	31,300	599,600	18,800	0.72	10	15	15.44	4 9/16	2 7/16	0.440	0.236	
XT39	4 7/8	2 9/16	37,000	729,700	22,200	0.85	10	15	15.67	4 9/16	2 7/16	0.440	0.240	
GPDS40	5 1/4	2 9/16	34,600	838,300	21,800	0.84	9	12	15.99	5	2 7/16	0.441	0.245	
HT38	5	2 7/16	33,000	708,100	19,800	0.71	10	15.5	16.13	4 25/32	2 5/16	0.438	0.247	4
HT40	5 1/4	2 11/16	35,900	776,400	21,500	0.77	9	15	16.12	5	2 9/16	0.442	0.247	
XT38	4 3/4	2 7/16	34,200	658,500	20,500	0.73	10	15	15.61	4 19/32	2 5/16	0.438	0.239	
XT39	4 7/8	2 9/16	37,000	729,700	22,200	0.79	10	15	15.67	4 5/8	2 7/16	0.440	0.240	
GPDS40	5 1/4	2 9/16	36,400	838,300	21,800	0.78	9	12	15.99	5 1/32	2 7/16	0.441	0.245	
NC40	5 1/4	2 13/16	23,500	711,600	12,400	0.91	9	12	17.22	4 7/8	2 11/16	0.421	0.263	4
HT40	5 1/4	2 13/16	31,900	711,600	19,100	1.24	9	15	17.49	4 5/8	2 11/16	0.420	0.268	
H90	5 1/2	2 13/16	35,400	913,700	20,400	1.37	9	12	17.67	4 31/32	2 11/16	0.420	0.270	
NC46	6	3	39,200	1,048,400	20,500	1.52	9	12	18.34	5 5/16	2 7/8	0.424	0.281	
XT39	4 7/8	2 9/16	37,000	729,700	22,200	1.43	10	15	17.24	4 5/32	2 7/16	0.415	0.264	
XT40	5 1/4	2 13/16	44,000	751,600	26,400	1.71	10	15	17.59	4 5/16	2 11/16	0.420	0.269	
NC40	5 1/4	2 9/16	27,800	838,300	14,600	0.85	9	12	17.57	5	2 7/16	0.417	0.269	4
HT40	5 1/4	2 13/16	31,900	711,600	19,100	0.98	9	15	17.49	4 25/32	2 11/16	0.420	0.268	
H90	5 1/2	2 13/16	35,400	913,700	20,400	1.08	9	12	17.67	5 3/32	2 11/16	0.420	0.270	
NC46	6	3	39,200	1,048,400	20,500	1.20	9	12	18.49	5 7/16	2 7/8	0.424	0.283	
XT39	4 7/8	2 9/16	37,000	729,700	22,200	1.13	10	15	17.24	4 5/16	2 7/16	0.415	0.264	
XT40	5 1/4	2 13/16	44,000	751,600	26,400	1.35	10	15	17.59	4 15/32	2 11/16	0.420	0.269	
NC40	5 1/2	2 7/16	30,100	897,200	15,600	0.83	9	12	18.20	5 1/16	2 5/16	0.414	0.278	4
HT40	5 1/4	2 13/16	31,900	711,600	19,100	0.88	9	15	17.49	4 27/32	2 11/16	0.420	0.268	
H90	5 1/2	2 13/16	35,400	913,700	20,400	0.98	9	15	18.00	5 5/32	2 11/16	0.420	0.275	
NC46	6	3	39,200	1,048,400	20,500	1.09	9	12	18.49	5 15/32	2 7/8	0.424	0.283	
XT39	4 7/8	2 9/16	37,000	729,700	22,200	1.02	10	15	17.24	4 13/32	2 7/16	0.415	0.264	
XT40	5 1/4	2 13/16	44,000	751,600	26,400	1.22	10	15	17.59	4 17/32	2 11/16	0.420	0.269	
NC40	5 1/2	2	36,400	1,080,100	18,900	0.78	9	12	18.73	5 1/4	1 7/8	0.409	0.286	4
HT40	5 1/2	2 9/16	39,500	838,300	23,700	0.85	9	15	17.88	4 15/16	2 7/16	0.415	0.273	
H90	5 3/4	2 11/16	38,400	978,500	21,800	0.83	9	15	18.74	5 5/16	2 9/16	0.417	0.287	
NC46	6	3	39,200	1,048,400	20,500	0.84	9	12	18.49	5 21/32	2 7/8	0.424	0.283	
XT39	4 7/8	2 9/16	37,000	729,700	22,200	0.80	10	15	17.24	4 5/8	2 7/16	0.415	0.264	
XT40	5 1/4	2 13/16	44,000	751,600	26,400	0.95	10	15	17.59	4 3/4	2 11/16	0.420	0.269	
GPDS40	5 1/4	2 9/16	36,400	838,300	21,800	0.78	9	12	17.57	5 1/32	2 7/16	0.417	0.269	
HT40	5 1/4	2 9/16	39,500	838,300	23,700	0.82	9	15	17.88	4 31/32	2 7/16	0.415	0.273	4
XT39	4 7/8	2 9/16	37,000	729,700	22,200	0.77	10	15	17.24	4 21/32	2 7/16	0.415	0.264	
XT40	5 1/4	2 13/16	44,000	751,600	26,400	0.91	10	15	17.59	4 25/32	2 11/16	0.420	0.269	
GPDS40	5 1/4	2 9/16	36,400	868,300	21,800	0.76	9	12	17.57	5 1/16	2 7/16	0.417	0.269	
HT40	5 1/4	2 7/16	41,000	897,200	24,600	0.79	9	15	18.05	5	2 5/16	0.413	0.276	4
XT39	4 7/8	2 9/16	37,000	729,700	22,200	0.72	10	15	17.24	4 25/32	2 7/16	0.415	0.264	
XT40	5 1/4	2 11/16	48,100	816,400	28,900	0.93	10	15	17.79	4 25/32	2 9/16	0.417	0.272	
GPDS40	5 1/4	2 7/16	38,100	897,200	22,900	0.74	9	12	17.74	5 3/32	2 5/16	0.415	0.271	

*2" Longer than standard.

GLOBAL™
ENERGY RESOURCES
LLC

Pipe Data

Size OD in.	Nominal Weight lb/ft	Grade and Upset Type	Torsional Yield Strength ft-lb	Tensile Yield Strength lb	Wall Thickness in.	Nominal ID in.	Pipe Body Section Area sq in.	Pipe Body Section Modulus cu in.	Pipe Body Polar Section Modulus cu in.	Internal Pressure psi	Collapse Pressure psi
4 1/2	16.60	E-75 IEU	30,800	330,600	0.337	3.826	4.407	4.271	8.543	9,829	10,392
	16.60	E-75 EU	30,800	330,600	0.337	3.826	4.407	4.271	8.543	9,829	10,392
	16.60	E-75 IEU	30,800	330,600	0.337	3.826	4.407	4.271	8.543	9,829	10,392
	16.60	E-75 IEU	30,800	330,600	0.337	3.826	4.407	4.271	8.543	9,829	10,392
	16.60	E-75 IEU	30,800	330,600	0.337	3.826	4.407	4.271	8.543	9,829	10,392
	16.60	E-75 EU	30,800	330,600	0.337	3.826	4.407	4.271	8.543	9,829	10,392
	16.60	E-75 EU	30,800	330,600	0.337	3.826	4.407	4.271	8.543	9,829	10,392
	16.60	E-75 IEU	30,800	330,600	0.337	3.826	4.407	4.271	8.543	9,829	10,392
	16.60	E-75 IEU	30,800	330,600	0.337	3.826	4.407	4.271	8.543	9,829	10,392
	16.60	E-75 EU	30,800	330,600	0.337	3.826	4.407	4.271	8.543	9,829	10,392
4 1/2	16.60	X-95 IEU	39,000	418,700	0.337	3.826	4.407	4.271	8.543	12,450	12,765
	16.60	X-95 EU	39,000	418,700	0.337	3.826	4.407	4.271	8.543	12,450	12,765
	16.60	X-95 IEU	39,000	418,700	0.337	3.826	4.407	4.271	8.543	12,450	12,765
	16.60	X-95 IEU	39,000	418,700	0.337	3.826	4.407	4.271	8.543	12,450	12,765
	16.60	X-95 IEU	39,000	418,700	0.337	3.826	4.407	4.271	8.543	12,450	12,765
	16.60	X-95 EU	39,000	418,700	0.337	3.826	4.407	4.271	8.543	12,450	12,765
	16.60	X-95 EU	39,000	418,700	0.337	3.826	4.407	4.271	8.543	12,450	12,765
	16.60	X-95 IEU	39,000	418,700	0.337	3.826	4.407	4.271	8.543	12,450	12,765
	16.60	X-95 IEU	39,000	418,700	0.337	3.826	4.407	4.271	8.543	12,450	12,765
	16.60	X-95 EU	39,000	418,700	0.337	3.826	4.407	4.271	8.543	12,450	12,765
4 1/2	16.60	G-105 IEU	43,100	462,800	0.337	3.826	4.407	4.271	8.543	13,761	13,825
	16.60	G-105 EU	43,100	462,800	0.337	3.826	4.407	4.271	8.543	13,761	13,825
	16.60	G-105 IEU	43,100	462,800	0.337	3.826	4.407	4.271	8.543	13,761	13,825
	16.60	G-105 IEU	43,100	462,800	0.337	3.826	4.407	4.271	8.543	13,761	13,825
	16.60	G-105 IEU	43,100	462,800	0.337	3.826	4.407	4.271	8.543	13,761	13,825
	16.60	G-105 EU	43,100	462,800	0.337	3.826	4.407	4.271	8.543	13,761	13,825
	16.60	G-105 EU	43,100	462,800	0.337	3.826	4.407	4.271	8.543	13,761	13,825
	16.60	G-105 IEU	43,100	462,800	0.337	3.826	4.407	4.271	8.543	13,761	13,825
	16.60	G-105 IEU	43,100	462,800	0.337	3.826	4.407	4.271	8.543	13,761	13,825
	16.60	G-105 EU	43,100	462,800	0.337	3.826	4.407	4.271	8.543	13,761	13,825
4 1/2	16.60	S-135 IEU	55,500	595,000	0.337	3.826	4.407	4.271	8.543	17,693	16,773
	16.60	S-135 EU	55,500	595,000	0.337	3.826	4.407	4.271	8.543	17,693	16,773
	16.60	S-135 IEU	55,500	595,000	0.337	3.826	4.407	4.271	8.543	17,693	16,773
	16.60	S-135 IEU	55,500	595,000	0.337	3.826	4.407	4.271	8.543	17,693	16,773
	16.60	S-135 IEU	55,500	595,000	0.337	3.826	4.407	4.271	8.543	17,693	16,773
	16.60	S-135 EU	55,500	595,000	0.337	3.826	4.407	4.271	8.543	17,693	16,773
	16.60	S-135 EU	55,500	595,000	0.337	3.826	4.407	4.271	8.543	17,693	16,773
	16.60	S-135 IEU	55,500	595,000	0.337	3.826	4.407	4.271	8.543	17,693	16,773
	16.60	S-135 IEU	55,500	595,000	0.337	3.826	4.407	4.271	8.543	17,693	16,773
	16.60	S-135 EU	55,500	595,000	0.337	3.826	4.407	4.271	8.543	17,693	16,773
	16.60	S-135 IEU	55,500	595,000	0.337	3.826	4.407	4.271	8.543	17,693	16,773
4 1/2	16.60	Z-140 IEU	57,500	617,000	0.337	3.826	4.407	4.271	8.543	18,348	17,228
	16.60	Z-140 EU	57,500	617,000	0.337	3.826	4.407	4.271	8.543	18,348	17,228
	16.60	Z-140 IEU	57,500	617,000	0.337	3.826	4.407	4.271	8.543	18,348	17,228
	16.60	Z-140 IEU	57,500	617,000	0.337	3.826	4.407	4.271	8.543	18,348	17,228
	16.60	Z-140 EU	57,500	617,000	0.337	3.826	4.407	4.271	8.543	18,348	17,228
	16.60	Z-140 IEU	57,500	617,000	0.337	3.826	4.407	4.271	8.543	18,348	17,228
4 1/2	16.60	V-150 IEU	61,600	661,100	0.337	3.826	4.407	4.271	8.543	19,658	18,103
	16.60	V-150 EU	61,600	661,100	0.337	3.826	4.407	4.271	8.543	19,658	18,103
	16.60	V-150 IEU	61,600	661,100	0.337	3.826	4.407	4.271	8.543	19,658	18,103
	16.60	V-150 IEU	61,600	661,100	0.337	3.826	4.407	4.271	8.543	19,658	18,103
	16.60	V-150 EU	61,600	661,100	0.337	3.826	4.407	4.271	8.543	19,658	18,103
	16.60	V-150 IEU	61,600	661,100	0.337	3.826	4.407	4.271	8.543	19,658	18,103

GLOBAL™ ENERGY RESOURCES LLC

Tool Joint Data									Assembly Data					
Connection Type	Outside Diameter in.	Inside Diameter in.	Torsional Yield Strength ft-lb	Tensile Yield Strength lb	Make-up Torque ft-lb	Torsional Ratio Tool Joint to Pipe	* Pin Tong Space in.	* Box Tong Space in.	Adjusted Weight lb/ft	Minimum Tool Joint OD for Prem. Class in.	Drift Diameter in.	Capacity US gal/ft	Displace-ment US gal/ft	Size OD in.
NC46	6 1/4	3 1/4	34,000	901,200	17,600	1.10	9	12	19.14	5 13/32	3 1/8	0.585	0.293	4 1/2
OH	5 7/8	3 3/4	27,300	714,000	14,600	0.89	9	12	17.58	5 15/32	3 5/8	0.596	0.269	
FH	6	3	34,800	976,200	17,600	1.13	9	12	19.03	5 3/8	2 7/8	0.580	0.291	
H90	6	3 1/4	39,000	938,400	18,800	1.27	9	12	18.61	5 11/32	3 1/8	0.585	0.285	
HT46	6 1/4	3 1/4	47,600	901,200	28,600	1.55	9	15	19.59	5 13/32	3 1/8	0.583	0.300	
NC50	6 5/8	3 3/4	38,100	939,100	19,800	1.24	9	12	19.19	5 23/32	3 5/8	0.595	0.294	
HT50	6 1/4	3 3/4	52,700	939,100	31,600	1.71	9	15	18.73	5 13/16	3 5/8	0.595	0.287	
XT40	5 1/4	3	37,400	648,900	22,400	1.21	10	15	17.92	4 7/8	2 7/8	0.579	0.274	
XT46	6	3 1/2	58,100	910,300	34,900	1.89	10	15	18.63	5 5/8	3 3/8	0.589	0.285	
XT50	6 3/8	3 3/4	75,200	1,085,500	45,100	2.44	10	15	19.17	5 31/32	3 5/8	0.595	0.293	
NC46	6 1/4	3 1/4	34,000	901,200	17,600	0.87	9	12	19.14	5 17/32	3 1/8	0.585	0.293	4 1/2
OH	5 7/8	3 1/2	33,900	884,800	18,200	0.87	9	12	18.02	5 19/32	3 3/8	0.590	0.276	
FH	6	3	34,800	976,200	17,600	0.89	9	12	19.03	5 1/2	2 7/8	0.580	0.291	
H90	6	3 1/4	39,000	938,400	18,800	1.00	9	12	18.61	5 15/32	3 1/8	0.585	0.285	
HT46	6 1/4	3 1/4	47,600	901,200	28,600	1.22	9	15	19.59	5 13/32	3 1/8	0.583	0.300	
NC50	6 5/8	3 3/4	38,100	939,100	19,800	0.98	9	12	19.19	5 27/32	3 5/8	0.595	0.294	
HT50	6 1/4	3 3/4	52,700	939,100	31,600	1.35	9	15	18.73	5 13/16	3 5/8	0.595	0.287	
XT40	5 1/4	3	37,400	648,900	22,400	0.96	10	15	17.92	4 7/8	2 7/8	0.579	0.274	
XT46	6	3 1/2	58,100	910,300	34,900	1.49	10	15	18.63	5 5/8	3 3/8	0.589	0.285	
XT50	6 3/8	3 3/4	75,200	1,085,500	45,100	1.93	10	15	19.17	5 31/32	3 5/8	0.595	0.293	
NC46	6 1/4	3	39,700	1,048,400	20,500	0.92	9	12	19.57	5 19/32	2 7/8	0.580	0.299	4 1/2
OH	6	3 1/4	40,300	1,043,800	21,500	0.94	9	12	18.69	5 21/32	3 1/8	0.585	0.286	
FH	6 1/4	2 3/4	40,200	1,111,600	20,100	0.93	9	12	19.96	5 9/16	2 5/8	0.575	0.305	
H90	6	3 1/4	39,000	938,400	18,800	0.90	9	12	18.61	5 17/32	3 1/8	0.585	0.285	
HT46	6 1/4	3 1/4	47,600	901,200	28,600	1.10	9	15	19.59	5 13/32	3 1/8	0.583	0.300	
NC50	6 5/8	3 3/4	38,100	939,100	19,800	0.88	9	12	19.19	5 29/32	3 5/8	0.595	0.294	
HT50	6 1/4	3 3/4	52,700	939,100	31,600	1.22	9	15	18.73	5 13/16	3 5/8	0.595	0.287	
XT40	5 1/4	3	37,400	648,900	22,400	0.87	10	15	17.92	4 7/8	2 7/8	0.579	0.274	
XT46	6	3 1/2	58,100	910,300	34,900	1.35	10	15	18.63	5 5/8	3 3/8	0.589	0.285	
XT50	6 3/8	3 3/4	75,200	1,085,500	45,100	1.74	10	15	19.17	5 31/32	3 5/8	0.595	0.293	
NC46	6 1/4	2 3/4	44,900	1,183,900	23,200	0.81	9	12	19.96	5 25/32	2 5/8	0.575	0.305	4 1/2
OH	6	3	43,400	1,191,100	24,600	0.78	9	12	19.07	5 13/16	2 7/8	0.581	0.292	
FH	6 1/4	2 3/4	40,200	1,111,600	20,100	0.72	9	12	19.96	5 3/4	2 5/8	0.575	0.305	
H90	6 1/4	2 3/4	51,500	1,221,100	24,600	0.93	9	12	19.96	5 11/16	2 5/8	0.575	0.305	
HT46	6 1/4	3 1/4	47,600	901,200	28,600	0.86	9	15	19.59	5 1/2	3 1/8	0.583	0.300	
NC50	6 5/8	3 1/2	45,100	1,109,900	23,400	0.81	9	12	19.65	6 1/16	3 3/8	0.590	0.295	
HT50	6 3/8	3 1/2	65,700	1,109,900	39,400	1.18	9	15	19.52	5 13/16	3 3/8	0.589	0.301	
XT40	5 1/4	2 13/16	44,000	751,600	26,400	0.79	10	15	18.23	4 15/16	2 11/16	0.575	0.299	
XT46	6	3 1/2	58,100	910,300	34,900	1.05	10	15	18.63	5 5/8	3 3/8	0.589	0.279	
XT50	6 3/8	3 3/4	75,200	1,085,500	45,100	1.35	10	15	19.17	5 31/32	3 5/8	0.595	0.293	
GPDS46	6 1/4	3 1/4	43,300	901,200	26,000	0.78	9	12	19.14	5 19/32	3 1/8	0.585	0.293	
HT46	6 1/4	3 1/4	47,600	901,200	28,600	0.83	9	15	19.59	5 17/32	3 1/8	0.583	0.300	4 1/2
HT50	6 3/8	3 1/2	65,700	1,109,900	39,400	1.14	9	15	19.52	5 13/16	3 3/8	0.589	0.299	
XT40	5 1/4	2 13/16	44,000	751,600	26,400	0.77	10	15	18.23	4 31/32	2 11/16	0.575	0.279	
XT46	6	3 1/2	58,100	910,300	34,900	1.01	10	15	18.63	5 5/8	3 3/8	0.589	0.285	
XT50	6 3/8	3 3/4	75,200	1,085,500	45,100	1.31	10	15	19.17	5 31/32	3 5/8	0.595	0.293	
GPDS46	6 1/4	3 1/4	43,300	901,200	26,000	0.75	9	12	19.14	5 5/8	3 1/8	0.585	0.293	
HT46	6 1/4	3 1/4	47,600	901,200	28,600	0.77	9	15	19.59	5 19/32	3 1/8	0.583	0.300	4 1/2
HT50	6 3/8	3 1/2	65,700	1,109,900	39,400	1.07	9	15	19.52	5 13/16	3 3/8	0.589	0.299	
XT40	5 1/4	2 13/16	44,000	751,600	26,400	0.71	10	15	18.23	5 1/16	2 11/16	0.575	0.279	
XT46	6 1/4	3 1/4	70,200	1,069,300	42,100	1.14	10	15	19.74	5 5/8	3 1/8	0.583	0.302	
XT50	6 3/8	3 1/2	81,200	1,256,300	48,700	1.32	10	15	19.67	5 31/32	3 3/8	0.589	0.301	
GPDS46	6 1/4	3 1/4	43,300	901,200	26,000	0.70	9	12	19.14	5 11/16	3 1/8	0.585	0.293	

*2" Longer than standard.

GLOBAL™ ENERGY RESOURCES LLC

Pipe Data

Size OD in.	Nominal Weight lb/ft	Grade and Upset Type	Torsional Yield Strength ft-lb	Tensile Yield Strength lb	Wall Thickness in.	Nominal ID in.	Pipe Body Section Area sq in.	Pipe Body Section Modulus cu in.	Pipe Body Polar Section Modulus cu in.	Internal Pressure psi	Collapse Pressure psi
4 1/2	20.00	E-75 IEU	36,900	412,400	0.430	3.640	5.498	5.116	10.232	12,542	12,964
	20.00	E-75 EU	36,900	412,400	0.430	3.640	5.498	5.116	10.232	12,542	12,964
	20.00	E-75 IEU	36,900	412,400	0.430	3.640	5.498	5.116	10.232	12,542	12,964
	20.00	E-75 IEU	36,900	412,400	0.430	3.640	5.498	5.116	10.232	12,542	12,964
	20.00	E-75 EU	36,900	412,400	0.430	3.640	5.498	5.116	10.232	12,542	12,964
	20.00	E-75 EU	36,900	412,400	0.430	3.640	5.498	5.116	10.232	12,542	12,964
	20.00	E-75 IEU	36,900	412,400	0.430	3.640	5.498	5.116	10.232	12,542	12,964
	20.00	E-75 EU	36,900	412,400	0.430	3.640	5.498	5.116	10.232	12,542	12,964
4 1/2	20.00	X-95 IEU	46,700	522,300	0.430	3.640	5.498	5.116	10.232	15,886	16,421
	20.00	X-95 EU	46,700	522,300	0.430	3.640	5.498	5.116	10.232	15,886	16,421
	20.00	X-95 IEU	46,700	522,300	0.430	3.640	5.498	5.116	10.232	15,886	16,421
	20.00	X-95 IEU	46,700	522,300	0.430	3.640	5.498	5.116	10.232	15,886	16,421
	20.00	X-95 EU	46,700	522,300	0.430	3.640	5.498	5.116	10.232	15,886	16,421
	20.00	X-95 EU	46,700	522,300	0.430	3.640	5.498	5.116	10.232	15,886	16,421
	20.00	X-95 IEU	46,700	522,300	0.430	3.640	5.498	5.116	10.232	15,886	16,421
	20.00	X-95 EU	46,700	522,300	0.430	3.640	5.498	5.116	10.232	15,886	16,421
4 1/2	20.00	G-105 IEU	51,700	577,300	0.430	3.640	5.498	5.116	10.232	17,558	18,149
	20.00	G-105 EU	51,700	577,300	0.430	3.640	5.498	5.116	10.232	17,558	18,149
	20.00	G-105 IEU	51,700	577,300	0.430	3.640	5.498	5.116	10.232	17,558	18,149
	20.00	G-105 IEU	51,700	577,300	0.430	3.640	5.498	5.116	10.232	17,558	18,149
	20.00	G-105 EU	51,700	577,300	0.430	3.640	5.498	5.116	10.232	17,558	18,149
	20.00	G-105 EU	51,700	577,300	0.430	3.640	5.498	5.116	10.232	17,558	18,149
	20.00	G-105 IEU	51,700	577,300	0.430	3.640	5.498	5.116	10.232	17,558	18,149
	20.00	G-105 EU	51,700	577,300	0.430	3.640	5.498	5.116	10.232	17,558	18,149
4 1/2	20.00	S-135 IEU	66,400	742,200	0.430	3.640	5.498	5.116	10.232	22,575	23,335
	20.00	S-135 EU	66,400	742,200	0.430	3.640	5.498	5.116	10.232	22,575	23,335
	20.00	S-135 IEU	66,400	742,200	0.430	3.640	5.498	5.116	10.232	22,575	23,335
	20.00	S-135 IEU	66,400	742,200	0.430	3.640	5.498	5.116	10.232	22,575	23,335
	20.00	S-135 EU	66,400	742,200	0.430	3.640	5.498	5.116	10.232	22,575	23,335
	20.00	S-135 EU	66,400	742,200	0.430	3.640	5.498	5.116	10.232	22,575	23,335
	20.00	S-135 IEU	66,400	742,200	0.430	3.640	5.498	5.116	10.232	22,575	23,335
	20.00	S-135 EU	66,400	742,200	0.430	3.640	5.498	5.116	10.232	22,575	23,335
	20.00	S-135 IEU	66,400	742,200	0.430	3.640	5.498	5.116	10.232	22,575	23,335
4 1/2	20.00	Z-140 IEU	68,900	769,700	0.430	3.640	5.498	5.116	10.232	23,411	24,199
	20.00	Z-140 EU	68,900	769,700	0.430	3.640	5.498	5.116	10.232	23,411	24,199
	20.00	Z-140 IEU	68,900	769,700	0.430	3.640	5.498	5.116	10.232	23,411	24,199
	20.00	Z-140 EU	68,900	769,700	0.430	3.640	5.498	5.116	10.232	23,411	24,199
	20.00	Z-140 IEU	68,900	769,700	0.430	3.640	5.498	5.116	10.232	23,411	24,199
4 1/2	20.00	V-150 IEU	73,800	824,700	0.430	3.640	5.498	5.116	10.232	25,083	25,927
	20.00	V-150 EU	73,800	824,700	0.430	3.640	5.498	5.116	10.232	25,083	25,927
	20.00	V-150 IEU	73,800	824,700	0.430	3.640	5.498	5.116	10.232	25,083	25,927
	20.00	V-150 EU	73,800	824,700	0.430	3.640	5.498	5.116	10.232	25,083	25,927
	20.00	V-150 IEU	73,800	824,700	0.430	3.640	5.498	5.116	10.232	25,083	25,927
5	19.50	E-75 IEU	41,200	395,600	0.362	4.276	5.275	5.708	11.415	9,503	9,962
	19.50	E-75 IEU	41,200	395,600	0.362	4.276	5.275	5.708	11.415	9,503	9,962
	19.50	E-75 IEU	41,200	395,600	0.362	4.276	5.275	5.708	11.415	9,503	9,962
	19.50	E-75 IEU	41,200	395,600	0.362	4.276	5.275	5.708	11.415	9,503	9,962
	19.50	E-75 IEU	41,200	395,600	0.362	4.276	5.275	5.708	11.415	9,503	9,962

GLOBAL™ ENERGY RESOURCES LLC

Tool Joint Data									Assembly Data					
Connection Type	Outside Diameter in.	Inside Diameter in.	Torsional Yield Strength ft-lb	Tensile Yield Strength lb	Make-up Torque ft-lb	Torsional Ratio Tool Joint to Pipe	* Pin Tong Space in.	* Box Tong Space in.	Adjusted Weight lb/ft	Minimum Tool Joint OD for Prem. Class in.	Drift Diameter in.	Capacity US gal/ft	Displace-ment US gal/ft	Size OD in.
NC46	6 1/4	3	39,700	1,048,400	20,500	1.08	9	12	22.89	5 1/2	2 7/8	0.527	0.350	4 1/2
OH6	3 1/2	34,100	884,800	18,200	0.92	9	12	21.64	5 17/32	3 3/8	0.538	0.331		
H90	6	3 1/4	39,000	938,400	18,800	1.06	9	12	21.94	5 7/16	3 1/8	0.532	0.336	
HT46	6 1/4	3 1/4	47,600	901,200	28,600	1.29	9	15	22.89	5 13/32	3 1/8	0.531	0.350	
NC50	6 5/8	3 5/8	41,700	1,026,000	21,600	1.13	9	12	22.77	5 13/16	3 1/2	0.540	0.348	
HT50	6 1/4	3 5/8	59,200	1,026,000	35,500	1.60	9	15	22.31	5 13/16	3 1/2	0.540	0.341	
XT46	6	3 1/2	58,100	910,300	34,900	1.57	10	15	21.93	5 5/8	3 3/8	0.537	0.335	
XT50	6 3/8	3 1/2	81,200	1,256,300	48,700	2.20	10	15	22.99	5 31/32	3 3/8	0.537	0.352	
NC46	6 1/4	3	39,700	1,048,400	20,500	0.85	9	12	22.89	5 21/32	2 7/8	0.527	0.350	4 1/2
OH	6 1/4	3 1/4	40,700	1,043,800	21,500	0.87	9	12	22.58	5 11/16	3 1/8	0.533	0.345	
H90	6	3 1/4	39,000	938,400	18,800	0.84	9	12	21.94	5 9/16	3 1/8	0.532	0.336	
HT46	6 1/4	3 1/4	47,600	901,200	28,600	1.02	9	15	22.89	5 13/32	3 1/8	0.531	0.350	
NC50	6 5/8	3 1/2	41,500	1,109,900	23,400	0.97	9	12	23.00	5 15/16	3 3/8	0.538	0.352	
HT50	6 1/4	3 1/2	62,700	1,109,900	37,600	1.34	9	15	22.55	5 13/16	3 3/8	0.537	0.345	
XT46	6	3 1/2	58,100	910,300	34,900	1.24	10	15	21.93	5 5/8	3 3/8	0.537	0.335	
XT50	6 3/8	3 1/2	81,200	1,256,300	48,700	1.74	10	15	22.99	5 31/32	3 3/8	0.537	0.352	
NC46	6 1/4	2 3/4	44,900	1,183,900	23,200	0.87	9	12	23.28	5 23/32	2 5/8	0.523	0.356	4 1/2
OH	6 1/4	3	46,600	1,191,100	24,600	0.90	9	12	22.97	5 3/4	2 7/8	0.528	0.351	
H90	6 1/4	3	45,700	1,085,700	21,800	0.88	9	12	22.89	5 5/8	2 7/8	0.527	0.350	
HT46	6 1/4	3 1/4	47,600	901,200	28,600	0.92	9	15	22.89	5 7/16	3 1/8	0.531	0.350	
NC50	6 5/8	3 1/2	45,100	1,109,900	23,400	0.87	9	12	23.00	6 1/32	3 3/8	0.538	0.352	
HT50	6 1/4	3 1/2	62,700	1,109,900	37,600	1.21	9	15	22.55	5 13/16	3 3/8	0.537	0.345	
XT46	6	3 1/2	58,100	910,300	34,900	1.12	10	15	21.93	5 5/8	3 3/8	0.537	0.335	
XT50	6 3/8	3 1/2	81,200	1,256,300	48,700	1.57	10	15	22.99	5 31/32	3 3/8	0.537	0.352	
NC46	6 1/4	2 3/4	44,900	1,183,900	23,200	0.68	9	12	23.28	5 15/16	2 5/8	0.523	0.356	4 1/2
OH	6 3/8	2 3/4	52,200	1,326,600	27,400	0.79	9	12	23.61	5 31/32	2 5/8	0.524	0.361	
H90	6 3/8	2 3/4	51,700	1,221,100	24,600	0.78	9	12	23.57	5 27/32	2 5/8	0.523	0.360	
HT46	6 1/4	3	57,700	1,048,400	34,600	0.87	9	15	23.34	5 9/16	2 7/8	0.526	0.357	
NC50	6 5/8	3 1/4	51,700	1,269,000	26,800	0.78	9	12	23.43	6 7/32	3 1/8	0.532	0.358	
HT50	6 3/8	3 1/2	65,700	1,109,900	39,400	0.99	9	15	23.85	5 13/16	3 3/8	0.537	0.350	
XT46	6	3 1/4	64,800	1,069,300	38,900	0.98	10	15	22.42	5 5/8	3 1/8	0.531	0.343	
XT50	6 3/8	3 1/2	81,200	1,256,300	48,700	1.22	10	15	23.99	5 31/32	3 3/8	0.537	0.352	
GPDS46	6 1/4	3	53,400	1,048,400	32,000	0.80	9	12	22.89	5 21/32	2 7/8	0.527	0.350	
HT46	6 1/4	3	57,700	1,048,400	34,600	0.84	9	15	23.34	5 19/32	2 7/8	0.526	0.357	4 1/2
HT50	6 3/8	3 1/2	65,700	1,109,900	39,400	0.95	9	15	22.85	5 27/32	3 3/8	0.537	0.350	
XT46	6	3 1/4	64,800	1,069,300	38,900	0.94	10	15	22.42	5 5/8	3 1/8	0.531	0.343	
XT50	6 3/8	3 1/2	81,200	1,256,300	48,700	1.18	10	15	22.99	5 31/32	3 3/8	0.537	0.352	
GPDS46	6 1/4	3	53,400	1,048,400	32,000	0.78	9	12	22.89	5 11/16	2 7/8	0.527	0.350	
HT46	6 1/4	3	57,700	1,048,400	34,600	0.78	9	15	23.34	5 21/32	2 7/8	0.526	0.357	4 1/2
HT50	6 3/8	3 1/2	65,700	1,109,900	39,400	0.89	9	15	22.85	5 29/32	3 3/8	0.537	0.350	
XT46	6 1/4	3 1/8	75,700	1,144,400	45,400	1.03	10	15	23.26	5 5/8	3	0.528	0.356	
XT50	6 3/8	3 1/2	81,200	1,256,300	48,700	1.10	10	15	22.99	5 31/32	3 3/8	0.537	0.352	
GPDS46	6 1/4	3	53,400	1,048,400	32,000	0.72	9	12	22.89	5 3/4	2 7/8	0.527	0.350	
NC50	6 5/8	3 3/4	38,100	939,100	19,800	0.92	9	12	22.12	5 7/8	3 5/8	0.733	0.338	5
HT50	6 5/8	3 3/4	53,300	939,100	32,000	1.29	9	15	22.57	5 13/16	3 5/8	0.732	0.345	
FH	7	3 3/4	62,900	1,448,400	33,400	1.53	10	12	23.20	6 3/8	3 5/8	0.732	0.355	
XT46	6	3 1/2	36,500	910,300	21,900	0.89	10	15	21.69	5 5/8	3 3/8	0.726	0.332	
XT50	6 1/2	4	38,700	902,900	23,200	0.94	10	15	21.83	5 31/32	3 7/8	0.738	0.334	

*2" Longer than standard.

Pipe Data

Size OD in.	Nominal Weight lb/ft	Grade and Upset Type	Torsional Yield Strength ft-lb	Tensile Yield Strength lb	Wall Thickness in.	Nominal ID in.	Pipe Body Section Area sq in.	Pipe Body Section Modulus cu in.	Pipe Body Polar Section Modulus cu in.	Internal Pressure psi	Collapse Pressure psi
5	19.50	X-95 IEU	52,100	501,100	0.362	4.276	5.275	5.708	11.415	12,037	12,026
	19.50	X-95 IEU	52,100	501,100	0.362	4.276	5.275	5.708	11.415	12,037	12,026
	19.50	X-95 IEU	52,100	501,100	0.362	4.276	5.275	5.708	11.415	12,037	12,026
	19.50	X-95 IEU	52,100	501,100	0.362	4.276	5.275	5.708	11.415	12,037	12,026
	19.50	X-95 IEU	52,100	501,100	0.362	4.276	5.275	5.708	11.415	12,037	12,026
5	19.50	G-105 IEU	57,600	553,800	0.362	4.276	5.275	5.708	11.415	13,304	12,999
	19.50	G-105 IEU	57,600	553,800	0.362	4.276	5.275	5.708	11.415	13,304	12,999
	19.50	G-105 IEU	57,600	553,800	0.362	4.276	5.275	5.708	11.415	13,304	12,999
	19.50	G-105 IEU	57,600	553,800	0.362	4.276	5.275	5.708	11.415	13,304	12,999
	19.50	G-105 IEU	57,600	553,800	0.362	4.276	5.275	5.708	11.415	13,304	12,999
	19.50	G-105 IEU	57,600	553,800	0.362	4.276	5.275	5.708	11.415	13,304	12,999
5	19.50	S-135 IEU	74,100	712,100	0.362	4.276	5.275	5.708	11.415	17,105	15,672
	19.50	S-135 IEU	74,100	712,100	0.362	4.276	5.275	5.708	11.415	17,105	15,672
	19.50	S-135 IEU	74,100	712,100	0.362	4.276	5.275	5.708	11.415	17,105	15,672
	19.50	S-135 IEU	74,100	712,100	0.362	4.276	5.275	5.708	11.415	17,105	15,672
	19.50	S-135 IEU	74,100	712,100	0.362	4.276	5.275	5.708	11.415	17,105	15,672
	19.50	S-135 IEU	74,100	712,100	0.362	4.276	5.275	5.708	11.415	17,105	15,672
5	19.50	Z-140 IEU	76,800	738,400	0.362	4.276	5.275	5.708	11.415	17,738	16,079
	19.50	Z-140 IEU	76,800	738,400	0.362	4.276	5.275	5.708	11.415	17,738	16,079
	19.50	Z-140 IEU	76,800	738,400	0.362	4.276	5.275	5.708	11.415	17,738	16,079
	19.50	Z-140 IEU	76,800	738,400	0.362	4.276	5.275	5.708	11.415	17,738	16,079
5	19.50	V-150 IEU	82,300	791,200	0.362	4.276	5.275	5.708	11.415	19,005	16,858
	19.50	V-150 IEU	82,300	791,200	0.362	4.276	5.275	5.708	11.415	19,005	16,858
	19.50	V-150 IEU	82,300	791,200	0.362	4.276	5.275	5.708	11.415	19,005	16,858
	19.50	V-150 IEU	82,300	791,200	0.362	4.276	5.275	5.708	11.415	19,005	16,858
5	25.60	E-75 IEU	52,300	530,100	0.500	4.000	7.069	7.245	14.491	13,125	13,500
	25.60	E-75 IEU	52,300	530,100	0.500	4.000	7.069	7.245	14.491	13,125	13,500
	25.60	E-75 IEU	52,300	530,100	0.500	4.000	7.069	7.245	14.491	13,125	13,500
	25.60	E-75 IEU	52,300	530,100	0.500	4.000	7.069	7.245	14.491	13,125	13,500
5	25.60	X-95 IEU	66,200	671,500	0.500	4.000	7.069	7.245	14.491	16,625	17,100
	25.60	X-95 IEU	66,200	671,500	0.500	4.000	7.069	7.245	14.491	16,625	17,100
	25.60	X-95 IEU	66,200	671,500	0.500	4.000	7.069	7.245	14.491	16,625	17,100
	25.60	X-95 IEU	66,200	671,500	0.500	4.000	7.069	7.245	14.491	16,625	17,100
5	25.60	G-105 IEU	73,200	742,200	0.500	4.000	7.069	7.245	14.491	18,375	18,900
	25.60	G-105 IEU	73,200	742,200	0.500	4.000	7.069	7.245	14.491	18,375	18,900
	25.60	G-105 IEU	73,200	742,200	0.500	4.000	7.069	7.245	14.491	18,375	18,900
	25.60	G-105 IEU	73,200	742,200	0.500	4.000	7.069	7.245	14.491	18,375	18,900
	25.60	G-105 IEU	73,200	742,200	0.500	4.000	7.069	7.245	14.491	18,375	18,900
5	25.60	S-135 IEU	94,100	954,300	0.500	4.000	7.069	7.245	14.491	23,625	24,300
	25.60	S-135 IEU	94,100	954,300	0.500	4.000	7.069	7.245	14.491	23,625	24,300
	25.60	S-135 IEU	94,100	954,300	0.500	4.000	7.069	7.245	14.491	23,625	24,300
	25.60	S-135 IEU	94,100	954,300	0.500	4.000	7.069	7.245	14.491	23,625	24,300
	25.60	S-135 IEU	94,100	954,300	0.500	4.000	7.069	7.245	14.491	23,625	24,300
5	25.60	Z-140 IEU	97,500	989,600	0.500	4.000	7.069	7.245	14.491	24,500	25,200
	25.60	Z-140 IEU	97,500	989,600	0.500	4.000	7.069	7.245	14.491	24,500	25,200
	25.60	Z-140 IEU	97,500	989,600	0.500	4.000	7.069	7.245	14.491	24,500	25,200
5	25.60	V-150 IEU	104,500	1,060,300	0.500	4.000	7.069	7.245	14.491	26,250	27,000
	25.60	V-150 IEU	104,500	1,060,300	0.500	4.000	7.069	7.245	14.491	26,250	27,000
	25.60	V-150 IEU	104,500	1,060,300	0.500	4.000	7.069	7.245	14.491	26,250	27,000

GLOBAL™ ENERGY RESOURCES LLC

Tool Joint Data									Assembly Data					
Connection Type	Outside Diameter in.	Inside Diameter in.	Torsional Yield Strength ft-lb	Tensile Yield Strength lb	Make-up Torque ft-lb	Torsional Ratio Tool Joint to Pipe	* Pin Tong Space in.	* Box Tong Space in.	Adjusted Weight lb/ft	Minimum Tool Joint OD for Prem. Class in.	Drift Diameter in.	Capacity US gal/ft	Displace-ment US gal/ft	Size OD in.
NC50	6 5/8	3 1/2	45,100	1,109,900	23,400	0.87	9	12	22.61	6 1/32	3 3/8	0.727	0.346	5
HT50	6 5/8	3 3/4	53,300	939,100	32,000	1.02	9	15	22.57	5 13/16	3 5/8	0.732	0.345	
FH7	3 3/4	62,900	1,448,400	33,400	1.21	10	12	23.20	6 1/2	3 5/8	0.732	0.355		
XT46	6	3 1/2	58,100	910,300	34,900	1.12	10	15	21.69	5 5/8	3 3/8	0.726	0.332	
XT50	6 1/2	4	62,500	902,900	37,500	1.20	10	15	21.83	5 31/32	3 7/8	0.738	0.334	
NC50	6 5/8	3 1/4	51,700	1,269,000	26,800	0.90	9	12	23.07	6 3/32	3 1/8	0.722	0.353	5
HT50	6 5/8	3 1/2	66,200	1,109,900	39,700	1.15	9	15	23.10	5 13/16	3 3/8	0.726	0.353	
FH	7	3 3/4	62,900	1,448,400	33,400	1.09	10	12	23.20	6 9/16	3 5/8	0.732	0.355	
XT46	6	3 1/2	58,100	910,300	34,900	1.01	10	15	21.69	5 5/8	3 3/8	0.726	0.332	
XT50	6 1/2	4	62,500	902,900	37,500	1.09	10	15	21.83	5 31/32	3 7/8	0.738	0.334	
GPDS50	6 5/8	3 1/2	60,400	1,110,200	36,200	1.05	9	12	21.61	5 13/16	3 3/8	0.727	0.346	
NC50	6 5/8	2 3/4	63,400	1,551,700	32,900	0.86	9	12	23.89	6 5/16	2 5/8	0.713	0.365	5
HT50	6 5/8	3 1/2	66,200	1,109,900	39,700	0.89	9	15	23.10	5 15/16	3 3/8	0.726	0.353	
FH	7 1/4	3 1/2	72,500	1,619,200	37,400	0.98	10	12	24.38	6 3/4	3 3/8	0.726	0.373	
XT46	6	3 1/2	58,100	910,300	34,900	0.78	10	15	21.69	5 23/32	3 3/8	0.726	0.332	
XT50	6 1/2	3 3/4	77,000	1,085,500	46,200	1.04	10	15	22.39	5 31/32	3 5/8	0.731	0.343	
GPDS50	6 5/8	3 1/2	60,400	1,110,200	36,200	0.82	9	12	21.61	6 1/32	3 3/8	0.727	0.346	
HT50	6 5/8	3 1/2	66,200	1,109,900	39,700	0.86	9	15	23.10	5 31/32	3 3/8	0.726	0.353	5
XT46	6	3 1/2	58,100	910,300	34,900	0.76	10	15	21.69	5 25/32	3 3/8	0.726	0.332	
XT50	6 1/2	3 3/4	77,000	1,085,500	46,200	1.00	10	15	22.39	5 31/32	3 5/8	0.731	0.343	
GPDS50	6 5/8	3 1/2	60,400	1,110,200	36,200	0.79	9	12	21.61	6 3/32	3 3/8	0.727	0.346	
HT50	6 5/8	3 1/2	66,200	1,109,900	39,700	0.80	9	15	23.10	6 1/32	3 3/8	0.726	0.353	5
XT46	6 1/4	3 1/4	70,200	1,069,300	42,100	0.85	10	15	22.78	5 23/32	3 1/8	0.720	0.348	
XT50	6 1/2	3 3/4	77,000	1,085,500	46,200	0.94	10	15	22.39	5 31/32	3 5/8	0.731	0.343	
GPDS50	6 5/8	3 1/2	60,400	1,110,200	36,200	0.73	9	12	21.61	6 5/32	3 3/8	0.727	0.346	
NC50	6 5/8	3 1/2	45,100	1,109,900	23,400	0.86	9	12	28.08	6 1/32	3 3/8	0.641	0.430	5
HT50	6 5/8	3 3/4	53,300	939,100	32,000	1.02	9	15	28.01	5 13/16	3 5/8	0.646	0.428	
FH	7	3 1/2	62,900	1,619,200	37,400	1.20	10	12	29.16	6 1/2	3 3/8	0.641	0.446	
XT50	6 5/8	3 3/4	77,300	1,085,500	46,400	1.48	10	15	28.14	5 31/32	3 5/8	0.646	0.430	
NC50	6 5/8	3	57,800	1,416,200	30,000	0.87	9	12	28.97	6 7/32	2 7/8	0.631	0.443	5
HT50	6 5/8	3 1/2	66,200	1,109,900	39,700	1.00	9	15	28.53	5 13/16	3 3/8	0.640	0.436	
FH	7	3 1/2	62,900	1,619,200	37,400	0.95	10	12	29.16	6 21/32	3 3/8	0.641	0.446	
XT50	6 5/8	3 3/4	77,300	1,085,500	46,400	1.17	10	15	28.14	5 31/32	3 5/8	0.646	0.430	
NC50	6 5/8	2 3/4	63,400	1,551,700	32,900	0.87	9	12	29.36	6 9/32	2 5/8	0.627	0.449	5
HT50	6 5/8	3 1/2	66,200	1,109,900	39,700	0.90	9	15	29.53	5 29/32	3 3/8	0.640	0.436	
FH	7 1/4	3 1/2	72,500	1,619,200	37,400	0.99	10	12	29.82	6 23/32	3 3/8	0.640	0.456	
XT50	6 5/8	3 3/4	77,300	1,085,500	46,400	1.06	10	15	28.14	5 31/32	3 5/8	0.646	0.430	
GPDS50	6 5/8	3 1/2	60,400	1,110,200	36,200	0.83	9	12	28.08	6 1/32	3 3/8	0.641	0.430	
NC50	6 5/8	2 3/4	63,400	1,551,700	32,900	0.67	9	12	29.36	6 17/32	2 5/8	0.627	0.449	5
HT50	6 5/8	3 1/2	66,200	1,109,900	39,700	0.70	9	15	29.53	6 3/16	3 3/8	0.640	0.436	
FH	7 1/4	3 1/4	78,700	1,778,300	41,200	0.84	10	12	30.30	6 15/16	3 1/8	0.635	0.464	
XT50	6 5/8	3 1/2	90,700	1,256,300	54,400	0.96	10	15	28.67	5 31/32	3 3/8	0.640	0.439	
GPDS50	6 5/8	3 1/2	60,400	1,110,200	36,200	0.64	9	12	28.08	6 9/32	3 3/8	0.641	0.430	
HT50	6 5/8	3 1/4	78,000	1,269,000	46,800	0.80	9	15	29.02	6 1/8	3 1/8	0.634	0.444	5
XT50	6 5/8	3 3/4	90,700	1,256,300	54,400	0.93	10	15	28.67	6	3 3/8	0.640	0.439	
GPDS50	6 5/8	3 1/4	72,200	1,269,200	43,300	0.74	9	12	28.54	6 7/32	3 1/8	0.636	0.437	
HT50	6 5/8	3 1/4	78,000	1,269,000	46,800	0.75	9	15	29.02	6 7/32	3 1/8	0.634	0.444	5
XT50	6 5/8	3 3/8	97,000	1,337,300	58,200	0.93	10	15	28.93	6 1/32	3 1/4	0.637	0.443	
GPDS50	6 5/8	3 1/4	72,200	1,269,200	43,300	0.69	9	12	28.54	6 5/16	3 1/8	0.636	0.437	

*2" Longer than standard.

Pipe Data

Size OD in.	Nominal Weight lb/ft	Grade and Upset Type	Torsional Yield Strength ft-lb	Tensile Yield Strength lb	Wall Thickness in.	Nominal ID in.	Pipe Body Section Area sq in.	Pipe Body Section Modulus cu in.	Pipe Body Polar Section Modulus cu in.	Internal Pressure psi	Collapse Pressure psi
5 1/2	21.90	E-75 IEU	50,700	437,100	0.361	4.778	5.828	7.031	14.062	8,413	8,615
	21.90	E-75 IEU	50,700	437,100	0.361	4.778	5.828	7.031	14.062	8,413	8,615
	21.90	E-75 IEU	50,700	437,100	0.361	4.778	5.828	7.031	14.062	8,413	8,615
	21.90	E-75 IEU	50,700	437,100	0.361	4.778	5.828	7.031	14.062	8,413	8,615
5 1/2	21.90	X-95 IEU	64,200	553,700	0.361	4.778	5.828	7.031	14.062	10,019	10,912
	21.90	X-95 IEU	64,200	553,700	0.361	4.778	5.828	7.031	14.062	10,019	10,912
	21.90	X-95 IEU	64,200	553,700	0.361	4.778	5.828	7.031	14.062	10,019	10,912
	21.90	X-95 IEU	64,200	553,700	0.361	4.778	5.828	7.031	14.062	10,019	10,912
5 1/2	21.90	G-105 IEU	71,000	612,000	0.361	4.778	5.828	7.031	14.062	10,753	12,061
	21.90	G-105 IEU	71,000	612,000	0.361	4.778	5.828	7.031	14.062	10,753	12,061
	21.90	G-105 IEU	71,000	612,000	0.361	4.778	5.828	7.031	14.062	10,753	12,061
	21.90	G-105 IEU	71,000	612,000	0.361	4.778	5.828	7.031	14.062	10,753	12,061
	21.90	G-105 IEU	71,000	612,000	0.361	4.778	5.828	7.031	14.062	10,753	12,061
5 1/2	21.90	S-135 IEU	91,300	786,800	0.361	4.778	5.828	7.031	14.062	12,679	15,507
	21.90	S-135 IEU	91,300	786,800	0.361	4.778	5.828	7.031	14.062	12,679	15,507
	21.90	S-135 IEU	91,300	786,800	0.361	4.778	5.828	7.031	14.062	12,679	15,507
	21.90	S-135 IEU	91,300	786,800	0.361	4.778	5.828	7.031	14.062	12,679	15,507
	21.90	S-135 IEU	91,300	786,800	0.361	4.778	5.828	7.031	14.062	12,679	15,507
5 1/2	21.90	Z-140 IEU	94,700	816,000	0.361	4.778	5.828	7.031	14.062	12,957	16,081
	21.90	Z-140 IEU	94,700	816,000	0.361	4.778	5.828	7.031	14.062	12,957	16,081
	21.90	Z-140 IEU	94,700	816,000	0.361	4.778	5.828	7.031	14.062	12,957	16,081
	21.90	Z-140 IEU	94,700	816,000	0.361	4.778	5.828	7.031	14.062	12,957	16,081
	21.90	Z-140 IEU	94,700	816,000	0.361	4.778	5.828	7.031	14.062	12,957	16,081
5 1/2	21.90	V-150 IEU	101,400	874,200	0.361	4.778	5.828	7.031	14.062	13,473	17,230
	21.90	V-150 IEU	101,400	874,200	0.361	4.778	5.828	7.031	14.062	13,473	17,230
	21.90	V-150 IEU	101,400	874,200	0.361	4.778	5.828	7.031	14.062	13,473	17,230
	21.90	V-150 IEU	101,400	874,200	0.361	4.778	5.828	7.031	14.062	13,473	17,230
	21.90	V-150 IEU	101,400	874,200	0.361	4.778	5.828	7.031	14.062	13,473	17,230
5 1/2	24.70	E-75 IEU	56,600	497,200	0.415	4.670	6.630	7.844	15.688	10,464	9,903
	24.70	E-75 IEU	56,600	497,200	0.415	4.670	6.630	7.844	15.688	10,464	9,903
	24.70	E-75 IEU	56,600	497,200	0.415	4.670	6.630	7.844	15.688	10,464	9,903
	24.70	E-75 IEU	56,600	497,200	0.415	4.670	6.630	7.844	15.688	10,464	9,903
5 1/2	24.70	X-95 IEU	71,700	629,800	0.415	4.670	6.630	7.844	15.688	12,933	12,544
	24.70	X-95 IEU	71,700	629,800	0.415	4.670	6.630	7.844	15.688	12,933	12,544
	24.70	X-95 IEU	71,700	629,800	0.415	4.670	6.630	7.844	15.688	12,933	12,544
	24.70	X-95 IEU	71,700	629,800	0.415	4.670	6.630	7.844	15.688	12,933	12,544
5 1/2	24.70	G-105 IEU	79,200	696,100	0.415	4.670	6.630	7.844	15.688	14,013	13,865
	24.70	G-105 IEU	79,200	696,100	0.415	4.670	6.630	7.844	15.688	14,013	13,865
	24.70	G-105 IEU	79,200	696,100	0.415	4.670	6.630	7.844	15.688	14,013	13,865
	24.70	G-105 IEU	79,200	696,100	0.415	4.670	6.630	7.844	15.688	14,013	13,865
	24.70	G-105 IEU	79,200	696,100	0.415	4.670	6.630	7.844	15.688	14,013	13,865
5 1/2	24.70	S-135 IEU	101,800	895,000	0.415	4.670	6.630	7.844	15.688	17,023	17,826
	24.70	S-135 IEU	101,800	895,000	0.415	4.670	6.630	7.844	15.688	17,023	17,826
	24.70	S-135 IEU	101,800	895,000	0.415	4.670	6.630	7.844	15.688	17,023	17,826
	24.70	S-135 IEU	101,800	895,000	0.415	4.670	6.630	7.844	15.688	17,023	17,826
	24.70	S-135 IEU	101,800	895,000	0.415	4.670	6.630	7.844	15.688	17,023	17,826

GLOBAL™ ENERGY RESOURCES LLC

Tool Joint Data									Assembly Data					
Connection Type	Outside Diameter in.	Inside Diameter in.	Torsional Yield Strength ft-lb	Tensile Yield Strength lb	Make-up Torque ft-lb	Torsional Ratio Tool Joint to Pipe	* Pin Tong Space in.	* Box Tong Space in.	Adjusted Weight lb/ft	Minimum Tool Joint OD for Prem. Class in.	Drift Diameter in.	Capacity US gal/ft	Displace-ment US gal/ft	Size OD in.
FH	7	4	57,900	1,265,800	31,200	1.14	10	12	24.83	6 15/32	3 7/8	0.910	0.380	5 1/2
HT55	7	4	77,200	1,265,800	46,300	1.52	10	15	25.32	6 13/32	3 7/8	0.908	0.387	
XT54	6 3/4	4 1/4	70,400	960,700	42,200	1.39	10	15	24.04	6 7/32	4 1/8	0.915	0.368	
XT57	7	4 1/4	94,300	1,208,700	56,600	1.86	10	15	24.72	6 15/32	4 1/8	0.915	0.378	
FH	7	3 3/4	65,100	1,448,400	35,700	1.01	10	12	25.45	6 5/8	3 5/8	0.904	0.389	5 1/2
HT55	7	4	77,200	1,265,800	46,300	1.20	10	15	25.42	6 13/32	3 7/8	0.908	0.389	
XT54	6 3/4	4 1/4	70,400	960,700	42,200	1.10	10	15	24.04	6 7/32	4 1/8	0.915	0.368	
XT57	7	4 1/4	94,300	1,208,700	56,600	1.47	10	15	24.72	6 15/32	4 1/8	0.915	0.378	
FH	7 1/4	3 1/2	75,000	1,619,200	40,000	1.06	10	12	26.62	6 11/16	3 3/8	0.898	0.407	5 1/2
HT55	7	4	77,200	1,265,800	46,300	1.09	10	15	25.42	6 13/32	3 7/8	0.908	0.389	
XT54	6 3/4	4 1/4	70,400	960,700	42,200	0.99	10	15	24.04	6 7/32	4 1/8	0.915	0.368	
XT57	7	4 1/4	94,300	1,208,700	56,600	1.86	10	15	24.72	6 15/32	4 1/8	0.915	0.378	
GPDS55	7	4 1/8	74,200	1,292,500	44,500	1.05	10	12	24.83	6 7/16	3 7/8	0.910	0.380	
FH	7 1/2	3	90,200	1,925,500	47,700	0.99	10	12	28.24	6 29/32	2 7/8	0.886	0.432	5 1/2
HT55	7	4	77,200	1,265,800	46,300	0.85	10	15	25.42	6 5/8	3 7/8	0.908	0.389	
XT54	6 3/4	4 1/4	70,400	960,700	42,200	0.77	10	15	24.04	6 5/16	4 1/8	0.915	0.368	
XT57	7	4 1/4	94,300	1,208,700	56,600	1.03	10	15	24.72	6 15/32	4 1/8	0.915	0.378	
GPDS55	7	4	74,200	1,292,500	44,500	0.81	9	12	24.83	6 11/16	3 7/8	0.910	0.380	
FH	7 1/2	3	90,200	1,925,500	47,700	0.95	10	12	28.24	6 15/16	2 7/8	0.886	0.432	5 1/2
HT55	7	4	77,200	1,265,800	46,300	0.82	10	15	25.42	6 21/32	3 7/8	0.908	0.389	
XT54	6 3/4	4 1/4	70,400	960,700	42,200	0.74	10	15	24.04	6 11/32	4 1/8	0.915	0.368	
XT57	7	4 1/4	94,300	1,208,700	56,600	1.00	10	15	24.72	6 15/32	4 1/8	0.915	0.378	
GPDS55	7	4	74,200	1,292,500	44,500	0.78	10	12	24.83	6 23/32	3 7/8	0.910	0.380	
FH	7 1/2	3	90,200	1,925,500	47,700	0.89	10	12	28.24	7	2 7/8	0.886	0.432	5 1/2
HT55	7	4	77,200	1,265,800	46,300	0.76	10	15	25.42	6 23/32	3 7/8	0.908	0.389	
XT54	6 3/4	4	86,600	1,155,100	52,000	0.85	10	15	24.63	6 9/32	3 7/8	0.908	0.377	
XT57	7	4 1/4	94,300	1,208,700	56,600	0.93	10	15	24.72	6 15/32	4 1/8	0.915	0.378	
GPDS55	7	4	74,200	1,292,500	44,500	0.73	10	12	24.83	6 25/32	3 7/8	0.910	0.380	
FH	7	4	57,900	1,265,800	31,200	1.02	10	12	27.37	6 17/32	3 7/8	0.872	0.419	5 1/2
HT55	7	4	77,200	1,265,800	46,300	1.36	10	15	27.85	6 13/32	3 7/8	0.870	0.426	
XT54	6 3/4	4 1/4	70,400	960,700	42,200	1.24	10	15	26.46	6 7/32	4 1/8	0.877	0.405	
XT57	7	4 1/4	94,300	1,208,700	56,600	1.67	10	15	24.14	6 15/32	4 1/8	0.877	0.415	
FH	7 1/4	3 1/2	75,000	1,619,200	40,000	1.05	10	12	29.07	6 11/16	3 3/8	0.859	0.445	5 1/2
HT55	7	4	77,200	1,265,800	46,300	1.08	10	15	27.85	6 13/32	3 7/8	0.870	0.426	
XT54	6 3/4	4 1/4	70,400	960,700	42,200	0.98	10	15	26.57	6 7/32	4 1/8	0.877	0.406	
XT57	7	4 1/4	94,300	1,208,700	56,600	1.32	10	15	27.25	6 15/32	4 1/8	0.877	0.417	
FH	7 1/4	3 1/2	75,000	1,619,200	40,000	0.95	10	12	29.07	6 25/32	3 3/8	0.859	0.445	5 1/2
HT55	7	4	77,200	1,265,800	46,300	0.97	10	15	27.85	6 15/32	3 7/8	0.870	0.426	
XT54	6 3/4	4 1/4	70,400	960,700	42,200	0.89	10	15	26.57	6 7/32	4 1/8	0.877	0.406	
XT57	7	4 1/4	94,300	1,208,700	56,600	1.19	10	15	27.25	6 15/32	4 1/8	0.877	0.417	
GPDS55	7	4	74,200	1,292,500	44,500	0.94	10	12	27.27	6 17/32	3 7/8	0.872	0.417	
FH	7 1/2	3	90,200	1,925,500	47,700	0.89	10	12	30.69	7	2 7/8	0.848	0.469	5 1/2
HT55	7	4	77,200	1,265,800	46,300	0.76	10	15	27.85	6 23/32	3 7/8	0.870	0.426	
XT54	6 3/4	4	86,600	1,155,100	52,000	0.85	10	15	27.17	6 9/32	3 7/8	0.870	0.416	
XT57	7	4 1/4	94,300	1,208,700	56,600	0.93	10	15	27.25	6 15/32	4 1/8	0.877	0.417	
GPDS55	7	4	74,200	1,292,500	44,500	0.73	10	12	27.27	6 25/32	3 7/8	0.872	0.417	

*2" Longer than standard.

Pipe Data

Size OD in.	Nominal Weight lb/ft	Grade and Upset Type	Torsional Yield Strength ft-lb	Tensile Yield Strength lb	Wall Thickness in.	Nominal ID in.	Pipe Body Section Area sq in.	Pipe Body Section Modulus cu in.	Pipe Body Polar Section Modulus cu in.	Internal Pressure psi	Collapse Pressure psi
5 1/2	24.70	Z-140 IEU	105,600	928,100	0.415	4.670	6.630	7.844	15.688	17,489	18,486
	24.70	Z-140 IEU	105,600	928,100	0.415	4.670	6.630	7.844	15.688	17,489	18,486
	24.70	Z-140 IEU	105,600	928,100	0.415	4.670	6.630	7.844	15.688	17,489	18,486
	24.70	Z-140 IEU	105,600	928,100	0.415	4.670	6.630	7.844	15.688	17,489	18,486
	24.70	Z-140 IEU	105,600	928,100	0.415	4.670	6.630	7.844	15.688	17,489	18,486
5 1/2	24.70	V-150 IEU	113,100	994,400	0.415	4.670	6.630	7.844	15.688	18,386	19,807
	24.70	V-150 IEU	113,100	994,400	0.415	4.670	6.630	7.844	15.688	18,386	19,807
	24.70	V-150 IEU	113,100	994,400	0.415	4.670	6.630	7.844	15.688	18,386	19,807
	24.70	V-150 IEU	113,100	994,400	0.415	4.670	6.630	7.844	15.688	18,386	19,807
	24.70	V-150 IEU	113,100	994,400	0.415	4.670	6.630	7.844	15.688	18,386	19,807
5 7/8	23.40	E-75 IEU	58,600	469,000	0.361	5.153	6.254	8.125	16.251	7,453	8,065
5 7/8	23.40	X-95 IEU	74,200	594,100	0.361	5.153	6.254	8.125	16.251	8,775	10,216
5 7/8	23.40	G-105 IEU	82,000	656,600	0.361	5.153	6.254	8.125	16.251	9,362	11,291
5 7/8	23.40	S-135 IEU	105,500	844,200	0.361	5.153	6.254	8.125	16.251	10,825	14,517
5 7/8	23.40	Z-140 IEU	109,400	875,500	0.361	5.153	6.254	8.125	16.251	11,023	15,054
5 7/8	23.40	V-150 IEU	117,200	938,000	0.361	5.153	6.254	8.125	16.251	11,376	16,130
5 7/8	26.30	E-75 IEU	65,500	533,900	0.415	5.045	7.119	9.083	18.165	9,558	9,271
5 7/8	26.30	X-95 IEU	83,000	676,300	0.415	5.045	7.119	9.083	18.165	11,503	11,744
5 7/8	26.30	G-105 IEU	91,700	747,400	0.415	5.045	7.119	9.083	18.165	12,414	12,980
5 7/8	26.30	S-135 IEU	117,900	961,000	0.415	5.045	7.119	9.083	18.165	14,892	16,688
5 7/8	26.30	Z-140 IEU	122,300	996,600	0.415	5.045	7.119	9.083	18.165	15,266	17,306
5 7/8	26.30	V-150 IEU	131,000	1,067,800	0.415	5.045	7.119	9.083	18.165	15,976	18,543
5 7/8	34.21	S-135 IEU	159,000	1,391,600	0.625	4.625	10.303	12,262	24.524	25,700	25,670
5 7/8	41.05	S-135 IEU	186,400	1,629,300	0.750	4.375	12,069	13.785	27.570	30,090	30,070
5 7/8	43.95	S-135 IEU	187,741	1,745,405	0.813	4.250	12.929	14.950	29.417	37,363	31,180
6 5/8	25.20	E-75 IEU	70,600	489,500	0.330	5.965	6.526	9.786	19.572	4,788	6,538
	25.20	E-75 IEU	70,600	489,500	0.330	5.965	6.526	9.786	19.572	4,788	6,538
	25.20	E-75 IEU	70,600	489,500	0.330	5.965	6.526	9.786	19.572	4,788	6,538
6 5/8	25.20	X-95 IEU	89,400	620,000	0.330	5.965	6.526	9.786	19.572	5,321	8,281
	25.20	X-95 IEU	89,400	620,000	0.330	5.965	6.526	9.786	19.572	5,321	8,281
	25.20	X-95 IEU	89,400	620,000	0.330	5.965	6.526	9.786	19.572	5,321	8,281
6 5/8	25.20	G-105 IEU	98,800	685,200	0.330	5.965	6.526	9.786	19.572	5,500	9,153
	25.20	G-105 IEU	98,800	685,200	0.330	5.965	6.526	9.786	19.572	5,500	9,153
	25.20	G-105 IEU	98,800	685,200	0.330	5.965	6.526	9.786	19.572	5,500	9,153
6 5/8	25.20	S-135 IEU	127,000	881,000	0.330	5.965	6.526	9.786	19.572	6,036	11,768
	25.20	S-135 IEU	127,000	881,000	0.330	5.965	6.526	9.786	19.572	6,036	11,768
	25.20	S-135 IEU	127,000	881,000	0.330	5.965	6.526	9.786	19.572	6,036	11,768
	25.20	S-135 IEU	127,000	881,000	0.330	5.965	6.526	9.786	19.572	6,036	11,768
6 5/8	25.20	Z-140 IEU	131,700	913,700	0.330	5.965	6.526	9.786	19.572	6,121	12,204
	25.20	Z-140 IEU	131,700	913,700	0.330	5.965	6.526	9.786	19.572	6,121	12,204
	25.20	Z-140 IEU	131,700	913,700	0.330	5.965	6.526	9.786	19.572	6,121	12,204
	25.20	Z-140 IEU	131,700	913,700	0.330	5.965	6.526	9.786	19.572	6,121	12,204

GLOBAL™ ENERGY RESOURCES LLC

Tool Joint Data									Assembly Data					
Connection Type	Outside Diameter in.	Inside Diameter in.	Torsional Yield Strength ft-lb	Tensile Yield Strength lb	Make-up Torque ft-lb	Torsional Ratio Tool Joint to Pipe	* Pin Tong Space in.	* Box Tong Space in.	Adjusted Weight lb/ft	Minimum Tool Joint OD for Prem. Class in.	Drift Diameter in.	Capacity US gal/ft	Displace-ment US gal/ft	Size OD in.
FH7 1/2	3	90,200	1,925,500	47,700	0.85	10	12	30.69	7 1/32	2 7/8	0.848	0.469	5 1/2	
HT55	7	3 3/4	87,700	1,448,400	52,600	0.83	10	15	28.42	6 21/32	3 5/8	0.863	0.435	
XT54	6 3/4	4	86,600	1,155,100	52,000	0.82	10	15	27.17	6 11/32	3 7/8	0.870	0.416	
XT57	7	4 1/4	94,300	1,208,700	56,600	0.89	10	15	27.25	6 15/32	4 1/8	0.877	0.417	
GPDS55	7 1/8	3 3/4	89,300	1,475,100	53,600	0.85	10	12	28.12	6 23/32	3 5/8	0.865	0.430	
FH	7 1/2	3	90,200	1,925,500	47,700	0.80	10	12	30.69	7 3/32	2 7/8	0.848	0.469	5 1/2
HT55	7	3 3/4	87,700	1,448,400	52,600	0.78	10	15	28.42	6 23/32	3 5/8	0.863	0.435	
XT54	6 3/4	4	86,600	1,155,100	52,000	0.77	10	15	27.17	6 7/16	3 7/8	0.870	0.416	
XT57	7	4	106,200	1,403,100	63,700	0.94	10	15	27.85	6 15/32	3 7/8	0.870	0.426	
GPDS55	7 1/8	4 1/8	66,600	1,196,700	40,000	0.59	10	12	27.31	6 31/32	4	0.875	0.418	
XT57	7	4 1/4	94,300	1,208,700	56,600	1.61	10	15	26.48	6 15/32	4 1/8	1.055	0.405	5 7/8
XT57	7	4 1/4	94,300	1,208,700	56,600	1.27	10	15	26.48	6 15/32	4 1/8	1.055	0.405	5 7/8
XT57	7	4 1/4	94,300	1,208,700	56,600	1.15	10	15	26.48	6 15/32	4 1/8	1.055	0.405	5 7/8
XT57	7	4 1/4	94,300	1,208,700	56,600	0.89	10	15	26.48	6 15/32	4 1/8	1.055	0.405	5 7/8
XT57	7	4 1/4	94,300	1,208,700	56,600	0.86	10	15	26.48	6 17/32	4 1/8	1.055	0.405	5 7/8
XT57	7	4 1/4	94,300	1,208,700	56,600	0.80	10	15	26.48	6 5/8	4 1/8	1.055	0.405	5 7/8
XT57	7	4 1/4	94,300	1,208,700	56,600	1.44	10	15	29.12	6 15/32	4 1/8	1.014	0.445	5 7/8
XT57	7	4 1/4	94,300	1,208,700	56,600	1.14	10	15	29.12	6 15/32	4 1/8	1.014	0.445	5 7/8
XT57	7	4 1/4	94,300	1,208,700	56,600	1.03	10	15	29.12	6 15/32	4 1/8	1.014	0.445	5 7/8
XT57	7	4 1/4	94,300	1,208,700	56,600	0.80	10	15	29.12	6 5/8	4 1/8	1.014	0.445	5 7/8
XT57	7	4 1/4	94,300	1,208,700	56,600	0.77	10	15	29.12	6 21/32	4 1/8	1.014	0.445	5 7/8
XT57	7	4 1/4	94,300	1,208,700	56,600	0.72	10	15	29.12	6 3/4	4 1/8	1.014	0.445	5 7/8
XT57	7	4 1/4	94,300	1,208,700	56,600	0.59	12	17	41.16	6 7/8	3 7/8	0.81	0.63	5 7/8
XT57	7	4 1/4	105,111	1,625,823	63,100	0.51	12	17	48.18	6 57/64	3 1/2	0.72	0.74	5 7/8
XT57	7	4 1/4	106,600	1,748,400	69,800	0.58	12	17	51.66	6 57/64	3 3/8	0.68	0.79	5 7/8
FH	8	5	73,700	1,448,400	38,400	1.04	10	13	28.79	7 7/16	4 7/8	1.418	0.440	6 5/8
HT65	8	5	99,700	1,448,400	59,800	1.41	10	16	29.38	7 11/32	4 7/8	1.415	0.449	
XT65	8	5	135,300	1,543,700	81,200	1.92	10	15	29.18	7 11/32	4 7/8	1.416	0.446	
FH	8	5	73,700	1,448,400	38,400	0.82	10	13	28.79	7 5/8	4 7/8	1.418	0.440	6 5/8
HT65	8	5	99,700	1,448,400	59,800	1.12	10	16	29.38	7 11/32	4 7/8	1.415	0.449	
XT65	8	5	135,300	1,543,700	81,200	1.51	10	15	29.18	7 11/32	4 7/8	1.416	0.446	
FH	8 1/4	4 3/4	86,200	1,678,100	44,600	0.87	10	13	30.25	7 11/16	4 5/8	1.409	0.463	6 5/8
HT65	8	5	99,700	1,448,400	59,800	1.01	10	16	29.38	7 13/32	4 7/8	1.415	0.449	
XT65	8	5	135,300	1,543,700	81,200	1.37	10	15	29.18	7 11/32	4 7/8	1.416	0.446	
FH	8 1/2	4 1/4	109,200	2,102,300	56,100	0.86	10	13	32.36	7 29/32	4 1/8	1.394	0.495	6 5/8
HT65	8	5	99,700	1,448,400	59,800	0.79	10	16	29.38	7 5/8	4 7/8	1.415	0.449	
XT65	8	5	135,300	1,543,700	81,200	1.07	10	15	29.18	7 11/32	4 7/8	1.416	0.446	
GPDS65	8	4 7/8	107,500	1,596,400	64,500	0.85	10	13	29.13	7 5/8	4 3/4	1.414	0.446	
FH	8 1/2	4 1/4	109,200	2,102,300	56,100	0.83	10	13	32.36	7 31/32	4 1/8	1.394	0.495	6 5/8
HT65	8	5	99,700	1,448,400	59,800	0.76	10	16	29.38	7 11/16	4 7/8	1.415	0.449	
XT65	8	5	135,300	1,543,700	81,200	1.03	10	15	29.18	7 11/32	4 7/8	1.416	0.446	
GPDS65	8 1/4	4 7/8	108,200	1,596,400	64,900	0.82	10	13	29.91	7 21/32	4 3/4	1.413	0.458	

*2" Longer than standard.

GLOBAL™ ENERGY RESOURCES LLC

Pipe Data

Size OD in.	Nominal Weight lb/ft	Grade and Upset Type	Torsional Yield Strength ft-lb	Tensile Yield Strength lb	Wall Thickness in.	Nominal ID in.	Pipe Body Section Area sq in.	Pipe Body Section Modulus cu in.	Pipe Body Polar Section Modulus cu in.	Internal Pressure psi	Collapse Pressure psi
6 5/8	25.20	V-150 IEU	141,200	978,900	0.330	5.965	6.526	9.786	19.572	6,260	13,075
	25.20	V-150 IEU	141,200	978,900	0.330	5.965	6.526	9.786	19.572	6,260	13,075
	25.20	V-150 IEU	141,200	978,900	0.330	5.965	6.526	9.786	19.572	6,260	13,075
	25.20	V-150 IEU	141,200	978,900	0.330	5.965	6.526	9.786	19.572	6,260	13,075
6 5/8	27.70	E-75 IEU	76,300	534,200	0.362	5.901	7.123	10.578	21.156	5,894	7,172
	27.70	E-75 IEU	76,300	534,200	0.362	5.901	7.123	10.578	21.156	5,894	7,172
	27.70	E-75 IEU	76,300	534,200	0.362	5.901	7.123	10.578	21.156	5,894	7,172
6 5/8	27.70	X-95 IEU	96,600	676,700	0.362	5.901	7.123	10.578	21.156	6,755	9,084
	27.70	X-95 IEU	96,600	676,700	0.362	5.901	7.123	10.578	21.156	6,755	9,084
	27.70	X-95 IEU	96,600	676,700	0.362	5.901	7.123	10.578	21.156	6,755	9,084
6 5/8	27.70	G-105 IEU	106,800	747,900	0.362	5.901	7.123	10.578	21.156	7,103	10,040
	27.70	G-105 IEU	106,800	747,900	0.362	5.901	7.123	10.578	21.156	7,103	10,040
	27.70	G-105 IEU	106,800	747,900	0.362	5.901	7.123	10.578	21.156	7,103	10,040
6 5/8	27.70	S-135 IEU	137,300	961,600	0.362	5.901	7.123	10.578	21.156	7,813	12,909
	27.70	S-135 IEU	137,300	961,600	0.362	5.901	7.123	10.578	21.156	7,813	12,909
	27.70	S-135 IEU	137,300	961,600	0.362	5.901	7.123	10.578	21.156	7,813	12,909
	27.70	S-135 IEU	137,300	961,600	0.362	5.901	7.123	10.578	21.156	7,813	12,909
6 5/8	27.70	Z-140 IEU	142,400	997,200	0.362	5.901	7.123	10.578	21.156	7,881	13,387
	27.70	Z-140 IEU	142,400	997,200	0.362	5.901	7.123	10.578	21.156	7,881	13,387
	27.70	Z-140 IEU	142,400	997,200	0.362	5.901	7.123	10.578	21.156	7,881	13,387
	27.70	Z-140 IEU	142,400	997,200	0.362	5.901	7.123	10.578	21.156	7,881	13,387
6 5/8	27.70	V-150 IEU	152,600	1,068,400	0.362	5.901	7.123	10.578	21.156	7,970	14,343
	27.70	V-150 IEU	152,600	1,068,400	0.362	5.901	7.123	10.578	21.156	7,970	14,343
	27.70	V-150 IEU	152,600	1,068,400	0.362	5.901	7.123	10.578	21.156	7,970	14,343
	27.70	V-150 IEU	152,600	1,068,400	0.362	5.901	7.123	10.578	21.156	7,970	14,343

Tool Joint Data									Assembly Data					
Connection Type	Outside Diameter in.	Inside Diameter in.	Torsional Yield Strength ft-lb	Tensile Yield Strength lb	Make-up Torque ft-lb	Torsional Ratio Tool Joint to Pipe	* Pin Tong Space in.	* Box Tong Space in.	Adjusted Weight lb/ft	Minimum Tool Joint OD for Prem. Class in.	Drift Diameter in.	Capacity US gal/ft	Displace-ment US gal/ft	Size OD in.
FH	8 1/2	4 1/4	109,200	2,102,300	56,100	0.77	10	13	32.36	8 1/32	4 1/8	1.394	0.495	6 5/8
HT65	8	5	99,700	1,448,400	59,800	0.71	10	16	29.38	7 3/4	4 7/8	1.415	0.449	
XT65	8	5	135,300	1,543,700	81,200	0.96	10	15	29.18	7 11/32	4 7/8	1.416	0.446	
GPDS65	8 1/4	4 7/8	108,200	1,596,400	64,900	0.77	10	13	29.91	7 3/4	4 3/4	1.413	0.458	
FH	8	5	73,700	1,448,400	38,400	0.97	10	13	30.61	7 1/2	4 7/8	1.389	0.468	6 5/8
HT65	8	5	99,700	1,448,400	59,800	1.31	10	16	31.19	7 11/32	4 7/8	1.386	0.477	
XT65	8	5	135,300	1,543,700	81,200	1.77	10	15	31.00	7 11/32	4 7/8	1.387	0.474	
FH	8 1/4	4 3/4	86,200	1,678,100	44,600	0.89	10	13	32.07	7 11/16	4 5/8	1.381	0.491	6 5/8
HT65	8	5	99,700	1,448,100	59,800	1.03	10	16	31.19	7 3/8	4 7/8	1.386	0.477	
XT65	8	5	135,300	1,543,700	81,200	1.40	10	15	31.00	7 11/32	4 7/8	1.387	0.474	
FH	8 1/4	4 3/4	86,200	1,678,100	44,600	0.81	10	13	32.07	7 3/4	4 5/8	1.381	0.491	6 5/8
HT65	8	5	99,700	1,448,400	59,800	0.93	10	16	31.19	7 15/32	4 7/8	1.386	0.477	
XT65	8	5	135,300	1,543,700	81,200	1.27	10	15	31.00	7 11/32	4 7/8	1.387	0.474	
FH	8 1/2	4 1/4	109,200	2,102,300	56,100	0.80	10	13	34.18	8	4 1/8	1.365	0.523	6 5/8
HT65	8	5	99,700	1,448,400	59,800	0.73	10	16	31.19	7 23/32	4 7/8	1.386	0.477	
XT65	8	5	135,300	1,543,700	81,200	0.99	10	15	31.00	7 11/32	4 7/8	1.387	0.474	
GPDS65	8	4 7/8	107,500	1,596,400	64,500	0.78	10	13	30.96	7 23/32	4 3/4	1.385	0.474	
FH	8 1/2	4 1/4	109,200	2,102,300	56,100	0.77	10	13	34.18	8 1/32	4 1/8	1.365	0.523	6 5/8
HT65	8	5	99,700	1,448,400	59,800	0.70	10	16	31.19	7 3/4	4 7/8	1.386	0.477	
XT65	8	5	135,300	1,543,700	81,200	0.95	10	15	31.00	7 11/32	4 7/8	1.387	0.474	
GPDS65	8 1/4	4 7/8	108,200	1,596,400	64,900	0.76	10	13	31.74	7 3/4	4 3/4	1.385	0.485	
FH	8 1/2	4 1/4	109,200	2,102,300	56,100	0.72	10	13	34.18	8 1/8	4 1/8	1.365	0.523	6 5/8
HT65	8	5	99,700	1,448,400	59,800	0.65	10	16	31.19	7 27/32	4 7/8	1.386	0.477	
XT65	8	5	135,300	1,543,700	81,200	0.89	10	15	31.00	7 7/16	4 7/8	1.387	0.474	
GPDS65	8 1/4	4 7/8	108,200	1,596,400	64,900	0.71	10	13	31.74	7 27/32	4 3/4	1.385	0.485	

*2" Longer than standard.

Notes:

1. Torsional yield strength of conventional tool joints is calculated per API RP7G Latest Edition.
2. Torsional yield strength of Double-Shoulder Tool Joints (HT, XT, GPDS) is calculated per a formula similar to the one in API RP7G Latest Edition.
3. The make-up torque of the tool joint is based on the lower of 60% of the Tool joint torsional yield strength or the T3 value calculated per the equation in API RP7G Latest Edition. Minimum make-up torques of 50% of the tool joint torsional strength, excluding contributions of the secondary shoulder, may also be used.
4. Performance ratings for eXtreme Torque Metal-Seal (XT-M) Connection types are comparable to these shown for XT of the same size.
5. The adjusted weight of the assembly is based on an average pipe length of 29.4 ft plus the tool joint length.
6. The minimum tool joint OD for premium class is based on a tool joint torsional strength of 80% of the torsional strength of the premium class pipe to which it is attached.

Drill Pipe - Main Dimensions and Mass

Designations [a]					Pipe Body OD	Pipe Wall Thickness	Drill Pipe Weld Neck	Tool Joint				RSC Bevel Diameter	Approx, Mass [c]
Label 1	Label 2	Grade	Upset Type	RSC Type [d]	D_{dp} in.	t in.	D_{te} [b] in.	OD D in.	Pin ID d_p in.	Pin OD Length L_{pb} in.	Box OD Length L_b in.	D_f in.	w_{dp} lb/ft
					see Table C.2	−12.5 %	max	±0.031	+0.016 −0.031	±0.250	±0.250	±0.016	calculated
1	2	3	4	5	6	7	8	9	10	11	12	13	14
External Upset (EU)													
2 3/8	6.65	E	EU	NC26	2.375	0.280	2.563	3.375	1.750	9.000	10.000	3.266	7.04
2 3/8	6.65	X, G	EU	NC26	2.375	0.280	2.563	3.375	1.750	9.000	10.000	3.266	7.04
2 7/8	10.40	E	EU	NC31	2.875	0.362	3.188	4.125	2.125	9.000	11.000	3.953	10.95
2 7/8	10.40	X, G	EU	NC31	2.875	0.362	3.188	4.125	2.000	9.000	11.000	3.953	11.03
2 7/8	10.40	S	EU	NC31	2.875	0.362	3.188	4.375	1.625	9.000	11.000	3.953	11.56
3 1/2	9.50	E	EU	NC38	3.500	0.254	3.875	4.750	2.688	10.000	12.500	4.578	10.72
3 1/2	13.30	E	EU	NC38	3.500	0.368	3.875	4.750	2.688	10.000	12.500	4.578	14.05
3 1/2	13.30	X	EU	NC38	3.500	0.368	3.875	5.000	2.563	10.000	12.500	4.578	14.57
3 1/2	13.30	G	EU	NC38	3.500	0.368	3.875	5.000	2.438	10.000	12.500	4.578	14.68
3 1/2	13.30	S	EU	NC38	3.500	0.368	3.875	5.000	2.125	10.000	12.500	4.578	14.91
3 1/2	15.50	E	EU	NC38	3.500	0.449	3.875	5.000	2.563	10.000	12.500	4.578	16.71
3 1/2	15.50	X	EU	NC38	3.500	0.449	3.875	5.000	2.438	10.000	12.500	4.578	16.81
3 1/2	15.50	G	EU	NC38	3.500	0.449	3.875	5.000	2.125	10.000	12.500	4.578	16.77
3 1/2	15.50	S	EU	NC40	3.500	0.449	3.875	5.500	2.250	9.000	12.000	5.016	17.33
4	14.00	E	EU	NC46	4.000	0.330	4.500	6.000	3.250	9.000	12.000	5.719	15.89
4	14.00	X, G	EU	NC46	4.000	0.330	4.500	6.000	3.250	9.000	12.000	5.719	15.89
4	14.00	S	EU	NC46	4.000	0.330	4.500	6.000	3.000	9.000	12.000	5.719	16.08

Drill Pipe - Main Dimensions and Mass

Designations [a]					Pipe Body OD	Pipe Wall Thickness	Drill Pipe Weld Neck	Tool Joint				RSC Bevel Diameter	Approx. Mass [c]
Label 1	Label 2	Grade	Upset Type	RSC Type [d]	D_{dp} in.	t in.	D_{te} [b] in.	OD D in.	Pin ID d_p in.	Pin OD Length L_{pb} in.	Box OD Length L_b in.	D_f in.	w_{dp} lb/ft
					see Table C.2	−12.5 %	max	±0.031	+0.016 −0.031	±0.250	±0.250	±0.016	calculated
1	2	3	4	5	6	7	8	9	10	11	12	13	14
External Upset (Continued)													
4 1/2	13.75	E	EU	NC50	4.500	0.271	5.000	6.625	3.750	9.000	12.000	6.063	15.92
4 1/2	16.60	E	EU	NC50	4.500	0.337	5.000	6.625	3.750	9.000	12.000	6.063	18.48
4 1/2	16.60	X, G	EU	NC50	4.500	0.337	5.000	6.625	3.750	9.000	12.000	6.063	18.48
4 1/2	16.60	S	EU	NC50	4.500	0.337	5.000	6.625	3.500	9.000	12.000	6.063	18.70
4 1/2	20.00	E	EU	NC50	4.500	0.430	5.000	6.625	3.625	9.000	12.000	6.063	22.16
4 1/2	20.00	X, G	EU	NC50	4.500	0.430	5.000	6.625	3.500	9.000	12.000	6.063	22.27
4 1/2	20.00	S	EU	NC50	4.500	0.430	5.000	6.625	3.000	9.000	12.000	6.063	22.66
Internal Upset (IU)													
4	14	E	IU	NC40	4.000	0.330	4.188	5.252	2.813	9.000	12.000	5.016	14.93
4	14	X	IU	NC40	4.000	0.330	4.188	5.252	2.688	9.000	12.000	5.016	15.01
4	14	G	IU	NC40	4.000	0.330	4.188	5.500	2.438	9.000	12.000	5.016	15.55
4	14	S	IU	NC40	4.000	0.330	4.188	5.500	2.000	9.000	12.000	5.016	15.78
4 1/2	13.75	E	IU	NC46	4.500	0.271	4.688	6.000	3.375	9.000	12.000	5.719	14.99
Internal-External Upset (IEU)													
4 1/2	16.60	E	IEU	NC46	4.500	0.337	4.688	6.250	3.250	9.000	12.000	5.719	18.61
4 1/2	16.60	X, G	IEU	NC46	4.500	0.337	4.688	6.250	3.000	9.000	12.000	5.719	18.79
4 1/2	16.60	S	IEU	NC46	4.500	0.337	4.688	6.250	2.750	9.000	12.000	5.719	18.97
4 1/2	20.00	E	IEU	NC46	4.500	0.430	4.688	6.250	3.000	9.000	12.000	5.719	18.61

Drill Pipe - Main Dimensions and Mass

Designations [a]					Pipe Body OD	Pipe Wall Thickness	Drill Pipe Weld Neck	Tool Joint				RSC Bevel Diameter	Approx. Mass [c]
Label 1	Label 2	Grade	Upset Type	RSC Type [d]	D_{dp}	t	D_{te} [b]	D	d_p	L_{pb}	L_b	D_f	w_{dp}
					in.	in.	in.	in.	in.	in.	in.	in.	lb/ft
					see Table C.2	−12.5 %	max	±0.031	+0.016 −0.031	±0.250	±0.250	±0.016	calculated
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Internal-external Upset (Continued)													
4 1/2	20.00	X	IEU	NC46	4.500	0.430	4.688	6.250	2.750	9.000	12.000	5.719	22.26
4 1/2	20.00	G	IEU	NC46	4.500	0.430	4.688	6.250	2.500	9.000	12.000	5.719	22.44
4 1/2	20.00	S	IEU	NC46	4.500	0.430	4.688	6.250	2.250	9.000	12.000	5.719	22.59
5	19.50	E	IEU	NC50	5.000	0.362	5.125	6.625	3.750	9.000	12.000	6.063	21.37
5	19.50	X	IEU	NC50	5.000	0.362	5.125	6.625	3.500	9.000	12.000	6.063	21.89
5	19.50	G	IEU	NC50	5.000	0.362	5.125	6.625	3.250	9.000	12.000	6.063	22.14
5	19.50	S	IEU	NC50	5.000	0.362	5.125	6.625	2.750	9.000	12.000	6.719	22.58
5	19.50	E	IEU	5 1/2 FH	5.000	0.362	5.125	7.000	3.750	10.000	12.000	6.719	22.32
5	19.50	X, G	IEU	5 1/2 FH	5.000	0.362	5.125	7.000	3.750	10.000	12.000	6.719	22.58
5	19.50	S	IEU	5 1/2 FH	5.000	0.362	5.125	7.250	3.500	10.000	12.000	6.719	23.44
5	25.60	E	IEU	NC50	5.000	0.500	5.125	6.625	3.500	9.000	12.000	6.063	27.36
5	25.60	X	IEU	NC50	5.000	0.500	5.125	6.625	3.000	9.000	12.000	6.063	27.75
5	25.60	G	IEU	NC50	5.000	0.500	5.125	6.625	2.750	9.000	12.000	6.063	27.93
5	25.60	E	IEU	5 1/2 FH	5.000	0.500	5.125	7.000	3.500	10.000	12.000	6.719	28.29
5	25.60	X	IEU	5 1/2 FH	5.000	0.500	5.125	7.000	3.500	10.000	12.000	6.719	28.29
5	25.60	G	IEU	5 1/2 FH	5.000	0.500	5.125	7.250	3.500	10.000	12.000	6.719	28.86
5	25.60	S	IEU	5 1/2 FH	5.000	0.500	5.125	7.250	3.250	10.000	12.000	6.719	29.08
5	TW 0.750	S	IEU	5 1/2 FH	5.000	0.750	5.125	7.250	3.250	10.000	12.000	6.719	38.44

Drill Pipe - Main Dimensions and Mass

Designations [a]					Pipe Body OD	Pipe Wall Thickness	Drill Pipe Weld Neck	Tool Joint				RSC Bevel Diameter	Approx. Mass [c]
Label 1	Label 2	Grade	Upset Type	RSC Type [d]	D_{dp}	t	D_{te} [b]	OD	Pin ID	Pin OD Length	Box OD Length		
					D_{dp} in.	t in.	D_{te} [b] in.	D in.	d_p in.	L_{pb} in.	L_b in.	D_f in.	w_{dp} lb/ft
					see Table C.2	−12.5 %	max	±0.031	+0.016 −0.031	±0.250	±0.250	±0.016	calculated
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Internal-external Upset (Continued)													
5 1/2	21.90	E	IEU	5 1/2 FH	5.500	0.361	5.688	7.000	4.000	10.000	12.000	6.719	24.10
5 1/2	21.90	X	IEU	5 1/2 FH	5.500	0.361	5.688	7.000	3.750	10.000	12.000	6.719	24.35
5 1/2	21.90	G	IEU	5 1/2 FH	5.500	0.361	5.688	7.250	3.500	10.000	12.000	6.719	25.12
5 1/2	21.90	S	IEU	5 1/2 FH	5.500	0.361	5.688	7.500	3.000	10.000	12.000	7.094	26.12
5 1/2	24.70	E	IEU	5 1/2 FH	5.500	0.415	5.688	7.000	4.000	10.000	12.000	6.719	26.57
5 1/2	24.70	X G	IEU	5 1/2 FH	5.500	0.415	5.688	7.250	3.500	10.000	12.000	6.719	27.58
5 1/2	24.70	S	IEU	5 1/2 FH	5.500	0.415	5.688	7.500	3.000	10.000	12.000	7.094	28.57
5 1/2	TW 0.500	S	IEU	5 1/2 FH	5.500	0.500	5.688	7.250	3.500	10.000	12.000	6.719	31.11
5 1/2	TW 0.625	S	IEU	5 1/2 FH	5.500	0.625	5.688	7.250	3.125	10.000	12.000	6.719	36.67
5 1/2	TW 0.750	S	IEU	5 1/2 FH	5.500	0.750	5.688	7.500	3.000	10.000	12.000	7.094	42.24
5 7/8	23.40	E	IEU	5 1/2 FH	5.875	0.361	6.000	7.000	4.000	10.000	12.000	6.719	25.40
5 7/8	23.40	X	IEU	5 1/2 FH	5.875	0.361	6.000	7.250	3.500	10.000	12.000	6.719	26.44
5 7/8	23.40	G	IEU	5 1/2 FH	5.875	0.361	6.000	7.250	3.500	10.000	12.000	6.719	26.44
5 7/8	23.40	S	IEU	5 1/2 FH	5.875	0.361	6.000	7.250	3.000	10.000	12.000	6.719	26.88
5 7/8	26.30	E	IEU	5 1/2 FH	5.875	0.415	6.000	7.000	3.250	10.000	12.000	6.719	28.80
5 7/8	26.30	X, G	IEU	5 1/2 FH	5.875	0.415	6.000	7.250	3.500	10.000	12.000	6.719	29.10
5 7/8	26.30	S	IEU	5 1/2 FH	5.875	0.415	6.000	7.500	3.250	10.000	12.000	7.094	29.89
5 7/8	34.21	S	IEU	5 1/2 FH	5.875	0.625	6.000	7.500	3.000	10.000	12.000	7.094	40.13

Drill Pipe - Main Dimensions and Mass

Designations [a]					Pipe Body OD	Pipe Wall Thickness	Drill Pipe Weld Neck	Tool Joint				RSC Bevel Diameter	Approx. Mass [c]
Label 1	Label 2	Grade	Upset Type	RSC Type [d]	D_{dp} in.	t in.	D_{te} [b] in.	OD D in.	Pin ID d_p in.	Pin OD Length L_{pb} in.	Box OD Length L_b in.	D_f in.	w_{dp} lb/ft
					see Table C.2	−12.5 %	max	±0.031	+0.016 −0.031	±0.250	±0.250	±0.016	calculated
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Internal-external Upset (Continued)													
5 7/8	41.05	S	IEU	5 1/2 FH	5.875	0.750	6.000	7.500	3.000	10.000	12.000	7.094	45.54
5 7/8	TW 0.813	S	IEU	5 1/2 FH	5.875	0.813	6.000	7.500	3.000	10.000	12.000	7.094	48.51
6 5/8	25.20	E	IEU	6 5/8 FH	6.625	0.330	6.938	8.000	5.000	10.000	13.000	7.703	27.49
6 5/8	25.20	X	IEU	6 5/8 FH	6.625	0.330	6.938	8.000	5.000	10.000	13.000	7.703	27.49
6 5/8	25.20	G	IEU	6 5/8 FH	6.625	0.330	6.938	8.250	4.750	10.000	13.000	7.703	28.45
6 5/8	25.20	S	IEU	6 5/8 FH	6.625	0.330	6.938	8.500	4.250	10.000	13.000	7.703	29.74
6 5/8	27.70	E	IEU	6 5/8 FH	6.625	0.362	6.938	8.000	5.000	10.000	13.000	7.703	29.32
6 5/8	27.70	X, G	IEU	6 5/8 FH	6.625	0.362	6.938	8.250	4.750	10.000	13.000	7.703	30.28
6 5/8	27.70	S	IEU	6 5/8 FH	6.625	0.362	6.938	8.500	4.250	10.000	13.000	7.703	31.56
6 5/8	TW 0.522	S	IEU	6 5/8 FH	6.625	0.522	6.938	8.500	4.250	10.000	13.000	7.703	38.53
6 5/8	TW 0.625	S	IEU	6 5/8 FH	6.625	0.625	6.938	8.500	4.250	10.000	13.000	7.703	45.17
6 5/8	TW 0.750	S	IEU	6 5/8 FH	6.625	0.750	6.938	8.500	4.250	10.000	13.000	7.703	52.39
6 5/8	TW 0.813	S	IEU	6 5/8 FH	6.625	0.813	6.938	8.500	4.250	10.000	13.000	7.703	55.88

[a] Designations are shown for identification in ordering.

[b] D_{te} is held to a maximum to ensure fit with elevator.

[c] These values have been based on a drill pipe body length of 29.4 ft and are provided for information only; for other lengths, see API 7G for the method of calculation.

[d] The RSC type indicates the size and style of the applicable RSC.

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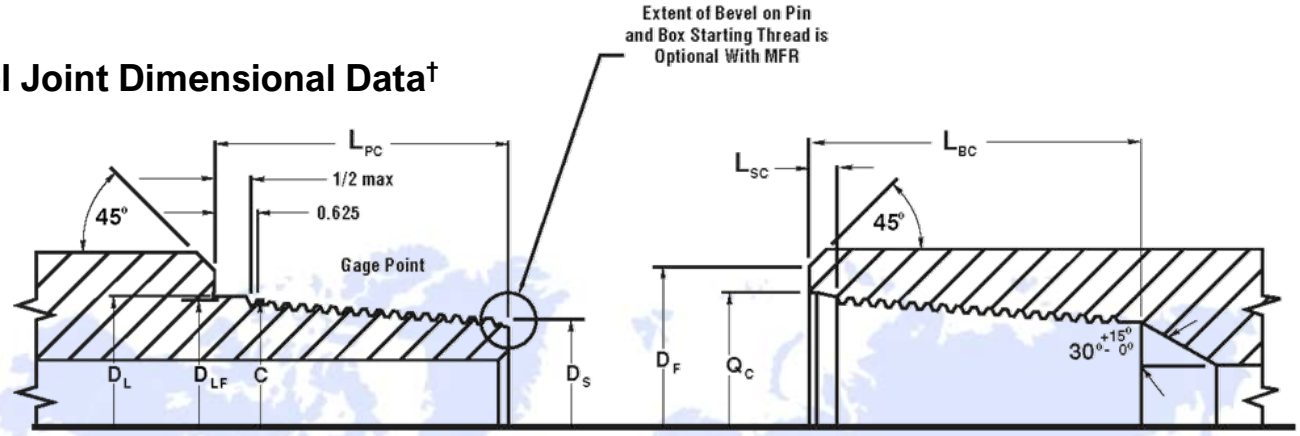
TOOL JOINT
Dimensional & Values
DATA TABLES†

TOOL JOINT DIMENSIONAL & VALUES DATA TABLES†

API Spec Rp-7g & 5DP, Q1® (latest edition)

Tool Joint Dimensional Data†



D – OD
d – ID
D_L – Major Cone Diameter at Shoulder
D_{LF} – Diameter of Cylinder Section
C – Pitch Diameter at Gage Point
D_F – Bevel Diameter
D_S – Small Diameter of Pin
Q_C – Box Counterbore Diameter
L_{PC} – Length of Pin
L_{BC} – Depth of Box
L_{SC} – Box Smooth Counterbore Depth

Dimensional Data Rotary Shouldered Connections

Cone Diameter	Size	Type	OD	Pitch ID	Threads Diameter	Thread per in.	Thread Taper	Bevel Form	Box Counterbore Diameter	Box Counterbore Diameter	Depth of Depth	Pin Box	Pin Major Cone Length	Pin Cylinder Diameter	Pin Minor Diameter
		D	d	C				D_F	Q_C	L_{SC}	L_{BC}	L_{PC}	D_L	D_{LF}	D_S
in.		in.	in.	in.		in./ft		in.	in.	in.	in.	in.	in.	in.	in.
2 3/8	PAC	2 7/8	1 3/8	2.203	4	1 1/2	V .076	2 45/64	2 13/32	3/8	3 1/8	2 3/8	2.359	2.312	2.063
	SH	2 7/8	1 1/4	2.230	4	2	V .065	2 25/32	2 1/2	5/8	3 1/2	2 7/8	2.438	2.328	1.968
	NC23	3 1/8	1 1/4	2.355	4	2	V .038R	3	2 5/8	5/8	3 5/8	3	2.563	2.437	2.063
	A.P.I. REG.	3 1/8	1	2.365	5	3	V .040	3 1/64	2 1/16	5/8	3 5/8	3	2.625	—	1.875
	SLH90	3 1/4	1 13/16	2.578	3	1 1/4	90 V .084	3 1/8	2 49/64	3/8	3 1/16	2 3/4	2.725	2.672	2.439
	OH LW	3 1/8	2	2.588	4	1 1/2	V .076	3	2 51/64	5/8	3	2 3/8	2.750	2.656	2.453
	OH SW	3 1/4	1 3/4	2.588	4	1 1/2	V .076	3 9/64	2 51/64	5/8	3	2 3/8	2.750	2.656	2.453
	WO	3 1/8	2	2.605	4	2	V .065	3 1/16	2 55/64	5/8	3	2 3/8	2.818	2.688	2.422
	NC26	3 3/8	1 3/4	2.668	4	2	V .038R	3 17/64	2 15/16	5/8	3 5/8	3	2.876	2.750	2.376
2 7/8	PAC	3 1/8	1 1/2	2.369	4	1 1/2	V .076	3	2 37/64	3/8	3	2 3/8	2.531	2.437	2.234
	SH	3 3/8	1 3/4	2.668	4	2	V .065	3 17/64	2 15/16	5/8	3 5/8	3	2.876	2.750	2.376
	API REG.	3 3/4	1 1/4	2.740	5	3	V .040	3 37/64	3 1/16	5/8	4 1/8	3 1/2	3.000	—	2.125
	OH LW	3 3/4	2 7/16	2.984	4	1 1/2	V .076	3 39/64	3 13/64	5/8	3 1/2	2 1/2	3.156	3.046	2.844
	OH SW	3 7/8	2 5/32	2.984	4	1 1/2	V .076	3 39/64	3 13/64	5/8	3 1/2	2 7/8	3.156	3.046	2.797
	SLH90	4 1/8	2 5/32	3.049	3	1 1/4	90 V .084	3 29/32	3 15/64	3/8	3 3/8	2 7/8	3.196	3.157	2.897
	XH	4 1/4	1 7/8	3.119	4	2	V .065	4 1/32	3 23/64	5/8	4 5/8	4	3.327	3.203	2.656
	WO	4 1/8	2 7/16	3.121	4	2	V .065	3 5/8	3 3/8	5/8	3 5/8	3	3.328	3.203	2.828
	NC31	4 1/8	2 1/8	3.183	4	2	V .038R	3 61/64	3 29/64	5/8	4 1/8	3 1/2	3.391	3.266	2.812
	FH	4 1/4	2 1/8	3.364	5	3	V .040	4 7/64	3 11/16	5/8	3 9/16	3 1/2	3.625	3.453	2.750
3 1/2	PAC	3 3/4	2	2.884	4	1 1/2	V .076	3 19/32	3 7/64	3/8	3 7/8	3 1/4	3.047	3.000	2.641
	SH	4 1/8	2 1/8	3.183	4	2	V .065	3 61/64	3 29/64	5/8	4 1/8	3 1/2	3.391	3.266	2.812
	API REG.	4 1/4	1 1/2	3.240	5	3	V .040	4 5/64	3 9/16	5/8	4 3/8	3 3/4	3.500	—	2.562
	XH	4 3/4	2 7/16	3.604	4	2	V .065	4 17/32	3 7/8	5/8	4 1/8	3 1/2	3.812	3.688	2.230
	SLH90	4 3/4	2 11/16	3.688	3	1 1/4	90 V .084	4 7/16	3 7/8	3/8	3 3/8	3 1/8	3.835	3.780	3.509
	OH LW	4 1/2	3	3.728	4	1 1/2	V .076	4 23/64	3 15/16	5/8	3 7/8	3 1/4	3.891	3.796	3.484
	OH SW	4 3/4	2 11/16	3.728	4	1 1/2	V .076	4 23/64	3 15/16	5/8	3 7/8	3 1/4	3.891	3.796	3.484

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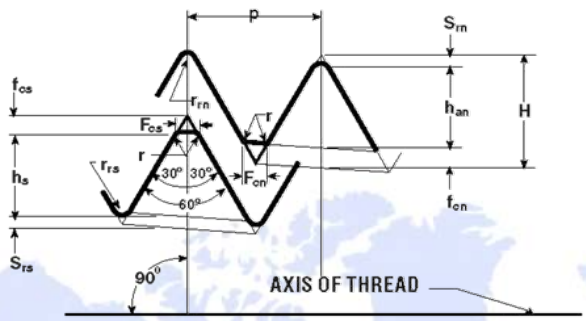
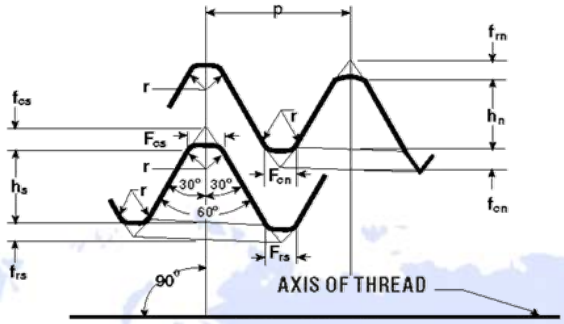
Dimensional Data Rotary Shouldered Connections

Size	Type	OD	ID	Pitch Diameter	Threads per in.	Thread Taper	Thread Form	Bevel Diameter	Box Counter-bore Diameter	Box Counter-bore Depth	Depth of Box	Pin Length	Pin Major Cone Diameter	Pin Cylinder Diameter	Pin Minor Cone Diameter
		D	d	C				D_F	Q_C	L_{SC}	L_{BC}	L_{PC}	D_L	D_{LF}	D_S
in.		in.	in.	in.	in./ft			in.	in.	in.	in.	in.	in.	in.	in.
3 1/2	FH	4 5/8	2 7/16	3.734	5	3	V .040	4 31/64	4 3/64	5/8	4 3/8	3 3/4	3.994	—	3.062
	NC38	4 3/4	2 11/16	3.808	4	2	V .038R	4 37/64	4 5/64	5/8	4 5/8	4	4.016	3.891	3.343
	WO	4 3/4	3	3.808	4	2	V .065	4 37/64	4 5/64	5/8	4 5/8	3 1/2	4.016	3.891	3.437
	H90	5 1/4	2 3/4	3.929	3 1/2	2	90 V .050	4 63/64	4 3/16	5/8	4 1/4	3 7/8	4.125	4.000	3.479
	NC35	4 3/4	2 11/16	3.531	4	2	V .038	4 33/64	3 13/16	5/8	4 3/8	3 3/4	3.739	3.625	3.109
4	SH	4 5/8	2 9/16	3.604	4	2	V .065	4 17/32	3 7/8	5/8	4 1/8	3 1/2	3.812	3.688	3.234
	NC40	5 1/4	2 13/16	4.072	4	2	V .038R	5 1/64	4 11/32	5/8	5 1/8	4 1/2	4.280	4.156	3.531
	H90	5 1/2	2 13/16	4.304	3 1/2	2	90 V .050	5 17/64	4 9/16	5/8	4 1/2	4 1/8	4.500	4.375	3.813
	OH LW	5 1/4	3 15/32	4.416	4	1 1/2	V .076	5 3/16	4 5/8	5/8	4 5/8	3 1/2	4.578	4.484	4.140
	OH SW	5 1/2	3 1/4	4.416	4	1 1/2	V .076	5 9/32	4 5/8	5/8	4 5/8	4	4.578	4.484	4.078
	NC44	6	2 1/4	4.417	4	2	V .038R	5 11/16	4 11/16	5/8	5 1/8	4 1/2	4.625	4.500	3.875
	NC46	6	3 1/4	4.626	4	2	V .038R	5 17/32	4 29/32	5/8	5 1/8	4 1/2	4.834	4.718	4.093
	WO	5 3/4	3 7/16	4.626	4	2	V .065	5 17/32	4 29/32	5/8	5 1/8	4 1/2	4.828	4.718	4.093
4 1/2	SH	5	2 11/16	3.808	4	2	V .065	4 37/64	4 5/64	5/8	4 5/8	4	4.016	3.875	3.343
	API REG.	5 1/2	2 1/4	4.365	5	3	V .040	5 19/64	4 11/16	5/8	4 7/8	4 1/4	4.625	—	3.562
	FH	6	3	4.532	5	3	V .040	5 17/32	4 7/8	5/8	4 5/8	4	4.792	—	3.796
	NC46	6 1/4	3 1/4	4.626	4	2	V .038R	5 23/32	4 29/32	5/8	5 1/8	4 1/2	4.834	4.718	4.093
	H90	6	3 1/4	4.638	3 1/2	2	90 V .050	5 23/32	4 29/32	5/8	4 3/4	4 3/8	4.834	4.709	4.105
	OH LW	5 3/8	3 31/32	4.752	4	1 1/2	V .076	5 1/2	4 31/32	5/8	4 3/8	3 3/4	4.922	4.828	4.453
	OH SW	5 7/8	3 3/4	4.752	4	1 1/2	V .076	5 9/64	4 31/32	5/8	4 3/8	3 3/4	4.922	4.828	4.453
	NC50	6 5/8	3 3/4	5.042	4	2	V .038R	6 1/16	5 5/16	5/8	5 1/8	4 1/2	5.250	5.125	4.500
	WO	6 1/8	3 7/8	5.042	4	2	V .065	5 19/64	5 5/16	5/8	5 1/8	4 1/2	5.250	5.125	4.500
5	H90	—	—	4.908	3 1/2	2	90 V .050	—	5 11/64	5/8	5 3/16	4 5/8	5.104	4.922	4.334
	XH	6 3/8	3 3/4	5.042	4	2	V .065	5 59/64	5 5/16	5/8	5 1/8	4 1/2	5.250	5.125	4.500
5 1/2	H90	—	—	5.179	3 1/2	2	90 V .050	—	5 7/16	5/8	5 7/16	4 5/8	5.375	5.188	4.604
	API REG.	6 3/4	2 3/4	5.234	4	3	V .050	6 15/32	5 37/64	5/8	5 3/8	4 3/4	5.520	—	4.328
	FH	7	4	5.591	4	2	V .050	6 23/32	5 29/32	5/8	5 3/8	5	5.825	—	5.000
	NC56	7	3 3/4	5.616	4	3	V .038R	6 47/64	5 15/16	5/8	5 3/8	5	5.876	5.703	4.626
	IF	7 3/8	4 13/16	6.189	4	2	V .065	7 9/64	6 29/64	5/8	5 3/8	5	6.397	—	5.562
6 5/8	API REG.	7 3/4	3 1/2	5.758	4	2	V .050	7 21/64	6 1/16	5/8	5 3/8	5	5.992	—	5.156
	H90	—	—	5.804	3 1/2	2	90 V .050	—	6 1/4	5/8	5 11/16	4 7/8	6.000	5.813	5.188
	NC61	8 1/4	3	6.178	4	3	V .038R	7 13/16	6 1/2	5/8	6 1/8	5 1/2	6.438	6.266	5.063
	FH	8	5	6.520	4	2	V .050	7 45/64	6 27/32	5/8	5 3/8	5	6.753	—	5.921
	IF	8 1/2	5 29/32	7.251	4	2	V .065	8 1/4	7 33/64	5/8	5 3/8	5	7.458	7.343	6.626
7	H90	—	—	6.252	3 1/2	3	90 V .050	—	7 1/8	13/32	5 13/16	5 3/8	6.500	6.375	5.156
7 5/8	API REG.	8 7/8	4	6.715	4	3	V .050	8 7/16	7 3/32	5/8	5 7/8	5 1/4	7.000	—	5.688
	NC70	9 1/2	3	7.053	4	3	V .038R	8 31/32	7 33/8	5/8	6 5/8	6	7.313	7.141	5.813
	H90			7.141	3 1/2	3	90 V .050	—	8	13/32	6 9/16	6	7.389	7.264	5.889
8 5/8	API REG.	10	4 3/4	7.666	4	3	V .050	9 33/64	8 3/64	5/8	6	5 3/8	7.951	—	6.609
	NC77	10	3	7.741	4	3	V .038R	9 11/32	8 1/16	5/8	7 1/8	6 1/2	8.000	7.828	6.376
	H90	—	—	8.016	3 1/2	3	90 V .050	—	9 3/8	13/32	7 1/16	6 1/2	8.264	8.139	6.639

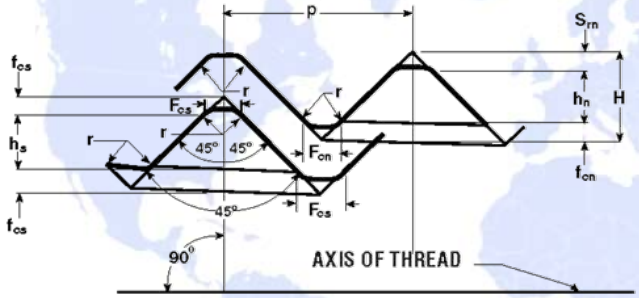
Thread Form Dimensional Data†



V.038R, V.040 and V.050



V.065 and V.076



90-V.050 and 90-V.084

H – Thread Height, Not Truncated
h_n, h_s – Thread Height, Truncated
S_{rn}, S_{rs}, F_{rn}, F_{rs} – Root Truncation
f_{cn}, f_{cn} – Crest Truncation
F_{cn}, F_{cn} – Width of Flat, Crest
F_{rn}, F_{rs} – Width of Flat, Root
r_{rn}, r_{rs} – Root Radius
r – Radius at Thread Corners

Thread Form Dimensions

Thread Form and Applicable Joints	Threads per in.	Taper in./ft	H in.	h_n, h_s in.	S_{rn}, S_{rs} f_m, f_{rs} in.	f_{cn}, f_{cs} in.	F_{cn}, F_{cs} in.	F_{rn}, F_{rs} in.	r_m, r_{rs} in.	r in.
V-.038R										
NC23 thru NC50	4	2	0.216	0.122	0.038	0.056	0.065	—	0.038	0.015
NC56 thru NC77	4	3	0.215	0.121	0.038	0.056	0.065	—	0.038	0.015
V-.040	5	3	0.172	0.118	0.020	0.034	0.040	—	0.020	0.015
2 3/8, 2 7/8, 3 1/2, 4 1/2 Reg.										
3 1/2, 4 1/2 FH										
V-.050										
6 5/8 Reg., 5 1/2, 6 5/8 FH	4	2	0.216	0.148	0.025	0.043	0.050	—	0.025	0.015
5 1/2, 7 5/8, 8 5/8 Reg.	4	3	0.215	0.147	0.025	0.043	0.050	—	0.025	0.015
V-.065	4	2	0.216	0.111	0.048	0.056	0.065	0.056	—	0.015
5 1/2, 6 5/8 IF										
H90 (90° V-.050)	3 1/2	2	0.142	0.100	0.017	0.025	0.050	0.034	0.030	0.015
SLH90 (90° V-.084)	3	1 1/4	0.166	0.091	0.034	0.042	0.084	0.068	0.030	0.015
V-.076										
PAC, OH	4	1 1/2	0.216	0.093	0.058	0.066	0.076	0.067	—	0.015

GLOBAL™
ENERGY RESOURCES
LLC

DRILL PIPE
CARE & HANDLING

DRILL PIPE
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DRILL PIPE CARE & HANDLING

API Spec Rp-7g & 5DP, Q1® (latest edition)

Drill Pipe Introduction

DEFINITION

The drill pipe connects to rig surface equipment with the bottomhole assembly and the bit, both to pump drilling fluid to the bit and to be able to raise, lower and rotate the bottomhole assembly and bit.

Source: Schlumberger Oilfield Glossary

Proper care and handling is **critical** to ensure that the drill pipe performs as desired and withstands the demanding conditions it faces while drilling. Following the care and handling recommendations outlined in this document will ensure your investment is protected.

Drill Pipe is designed to both rotate and lift the bottom hole assembly (BHA) during drilling, and must withstand high torque, tension, bending and pressure loads. API grade drill pipe is typically controlled by API spec DP, defining the materials, manufacturing and dimensions.

Drill Pipe is most commonly manufactured by welding two (2) Tool Joints, a PIN and a BOX end, to either end of a seamless upset tube.

API Grade	Min. Yield Strength (ksi)		API Range	Length (ft)
E-75	75		1	18’ – 22’
X-95	95		2	27’ – 30’
G-105	105		3	38’ – 45’
S-135	135			
Z-140	140			
V-150	150			
U-165	165			

API GRADES are used to classify the strength of the material used in the pipe to the body, API Ranges define the seal-to-seal length of the tubular.

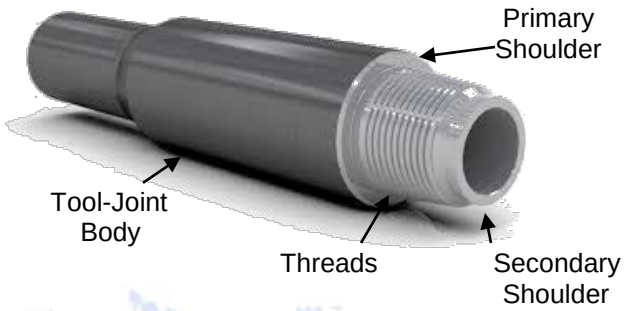
Additionally proprietary material grades may be utilized if required by the customer. This includes grades specially designed for Sour Service H_2S use that are sulfur corrosive cracking (SSC) resistant.

Rotary Shouldered Connections

DEFINITION

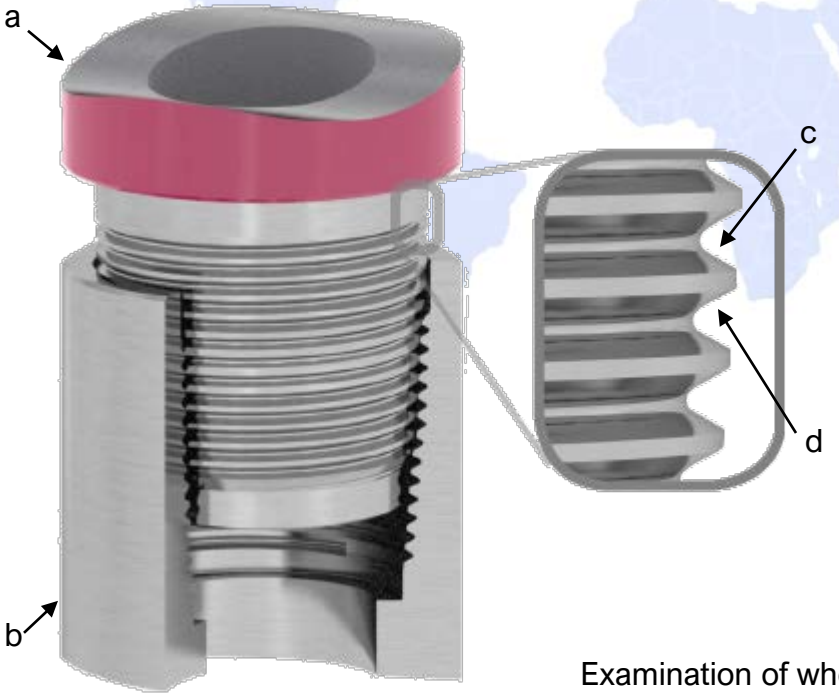
A connection used on drill string elements which has course, tapered threads and sealing shoulders.

Source: API RP 7G, Recommended Practice for Drill Stem Design and Operation Limits



A connection's primary shoulder acts as a stop for threading action and seals the connection.

Modern Rotary shouldered connections utilize a **double shoulder** design. The **secondary shoulder** makes contact when connection is torqued to minimum makeup torque in gives enhanced load distribution across the threads, as well as increased the torsional capacity.



Connection Threadform

The **load flank** of the thread is on the uphole side of the PIN and is subjected to load stresses **upon makeup**.

The **lead flank** of the thread is on the downhole side of the PIN and is subjected to stresses and impact during the **stabbing** of the connection.

a. PIN
b. BOX
c. Load Flank
d. Lead Flank

Examination of where damage occurs on a threadform can help determine the mechanisms and reasons for damage occurring to a connection.

Arrival Inspection

Upon arrival of new or refurbished drill pipe, rig crew should check pipe **quantity** and **markings** against documentation.

Thread protectors should be checked for damage and debris which could result in thread damage. Any unknown compounds present on the threads or protectors shall be removed.

Spare protectors should be held on hand to replace any that are damaged.

Operations should be provided with the **Drill Pipe** and **HWDP Performance Data Sheets** and ensure data sheets parameters match drill pipe. Data sheets may be obtained through contacting Global Energy or visiting our web site Downhole Tubulars resource page.

Thread Compound

A high-quality **copper-based thread compound** (API pipe dope) should be applied prior to all makeups. Connection must be **clean, dry, and free of contaminants** before applying.

Thread compound should be **thoroughly mixed** before use to ensure solids and lubricants are distributed evenly throughout the Grease base.

DEFINITION: THREAD COMPOUND

Substance that is applied to threaded oilfield pipe connections prior to make-up to assist in their lubrication during assembly and disassembly and in their sealing against high internal and external pressures in service.

Source: API RP 5A3, Recommended Practice on Thread Compounds for Tubing, Casing, and Line Pipe.

Apply and even, **thin layer** of compound to **all** contacting surfaces, including primary and secondary shoulders. Thread rotation is not significant for uniform application, the connection will not spread compound during threading.

Clean Connection

Poor Application

Correct Application of Compound

All CTP data sheets are calculated for a compound **friction factor of 1.0.** Compounds with higher friction factors (1.10 or 1.15) may be used at the operator's discretion.

Thread Protectors

Thread Protectors is designed to protect both **Threads** and **Seals** from damage on the PIN and BOX connections of Drill Pipe.

Thread Protectors must be in use as Drill Pipe is moved or stored. Only remove PIN protectors after the Drill Pipe is pulled out of the mouse hole and a connection is to be made up.

If a protector is damaged, remove and visually inspect the connection for damage or debris.

PIN Protector **BOX Protector**

Old & Damaged Thread Protectors

Drill Pipe with New Thread Protectors

Stabbing of Drill Pipe

Stabbing guides should be used whenever double shouldered connections are made up.

Guides ensure **proper alignment** of PIN and BOX tool joints and reduce damage to seal faces and connection threads.

Use of a stabbing guide also **reduces time** spent aligning connections and minimizing **finger pinch points** when stabbing and spinning up.

Do not rotate with weight on **partially stab connections**, as this induces impact and grinding on the thread flanks.

Lead flanks damaged, on stabbing threads

Minimizing the amount of weight applied to the connection during stabbing will reduce damage to the lead flanks of the tool joint threads.

Verify counterbalance systems are functioning, to mitigate excessive stabbing forces.

Drill Pipe Makeup Torque

DEFINITION: TRIPPING

The act of pulling the drillstring out of the hole or replacing it in the hole. A pipe trip is usually done because the bid has dulled or has otherwise ceased to drill efficiently and must be replaced.

Source: Schlumberger Oilfield Glossary

Tripping

When tripping out, **alternate brakes** to ensure that joint makeup cycles and where is even throughout string.

Monitor break-out torques when tripping out: high breakout torques can indicate **down-hole makeup** and/or **thread damage**.

Connection Makeup

Starting threads should be spun-in using a **slow speed spinner** or by hand with **chain tongs**. High-speed spinners should only be used once the threads have been engaged.

Using rig tongs or the iron roughneck to make up each connection to 100% of **recommended makeup torque**. Multiple connections should not be made-up simultaneously.

Ensure tongs are not placed on hardband or within 2 inches of primary shoulder seal on BOX.

Top-Drive Saver Sub

Thread damage can **propagate** from any damage thread, but proper attention must be given to monitor damage to the **Top-Drive Saver Sub** (TDSS).

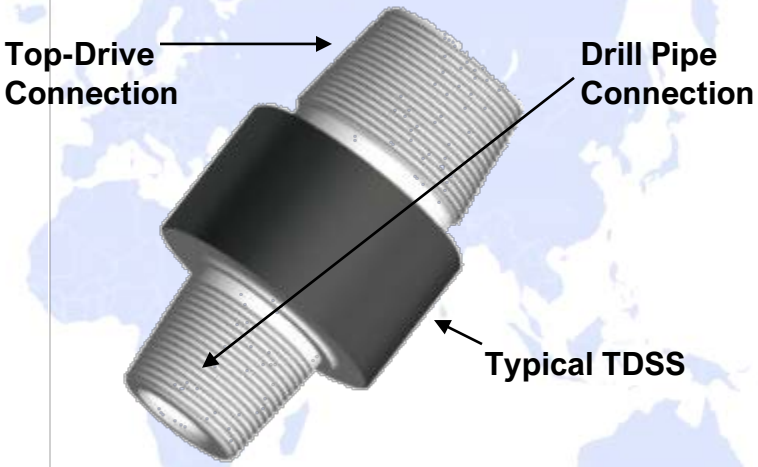
As the most made up connection on a rig, damage to the TDSS will propagate throughout the entire drill string during makeup.

DEFINITION: SAVER SUB

A sacrificial substitute device made up in the drill stem to absorb much of the wear of frequently broken joints (such as between the Kelly and/or Top-Drive and the Drill Pipe)

Source: Dictionary of Petroleum Terms

TDSS must be **inspected regularly for damage**, and repaired or replaced immediately before irreversible damage is induced on drill string.



Thread damage own TDSS requiring repair

Extremely damage TDSS sent for "Repair"

Reading Data Sheet

Drill Pipe Performance Data Sheets act as a reference for drilling operations. It is up to the end user to determine its use in specific drilling circumstances.

Metric and imperial unit sheets are available with all global energy (GER) products.

API specifications classify drill pipe based on inspection results of wall thickness, as drill pipe that has been worn in the well is capable of withstanding lower loads.

Drill strings with an inspected wall thickness not less than 80% are classified as **API premium** and have reduced operating limits. Wall thickness is not less than 70% results in a classification of class 2.

		NEW	REC MIN OD
OD	*in*	5.250	4.813
Tensile Yield Strength	*lbs*	918,900	918,900
Torsional Yield Strength	*ft-lbs*	48,600	32,600
Recommended Makeup Torque	*ft-lbs*	29,200	19,600
Maximum Makeup Torque	*ft-lbs*	31,600	21,200

Pipe

Pipe size	*in*	4.500
Pipe weight	*lb/ft*	20.00
Upset Type		IEU
Tube grade		S135
Range		2
Tube Yield	*ksi*	135
ID	*in*	3.640

Tool Joint

Connection Type		400 DUO
Material Yield Strength	*ksi*	130
OD	*in*	5.250
ID	*in*	2.688
Pin Shoulder Angle	*deg*	18
Pin Tool Joint Length	*in*	14.0
Box Tool Joint Length	*in*	14.0

Tinsel yield strength is limit of the connection when pure tension is applied, without torque applied.

Recommended makeup torque is the calculated amount of torque that can be applied to connection during makeup.

Drill Pipe Configuration section lists to design parameters, including material selection and geometry.

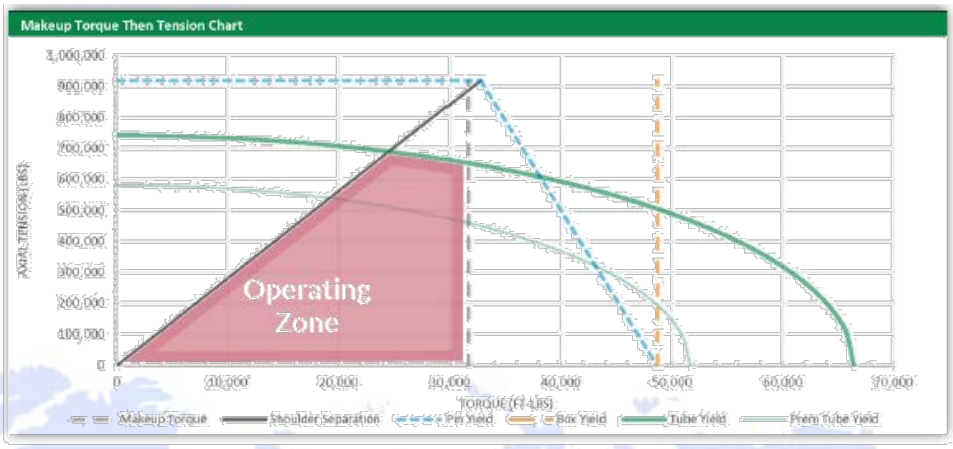
Tool Joint configuration section lists key tool joint parameters such as connection, size and material strength.

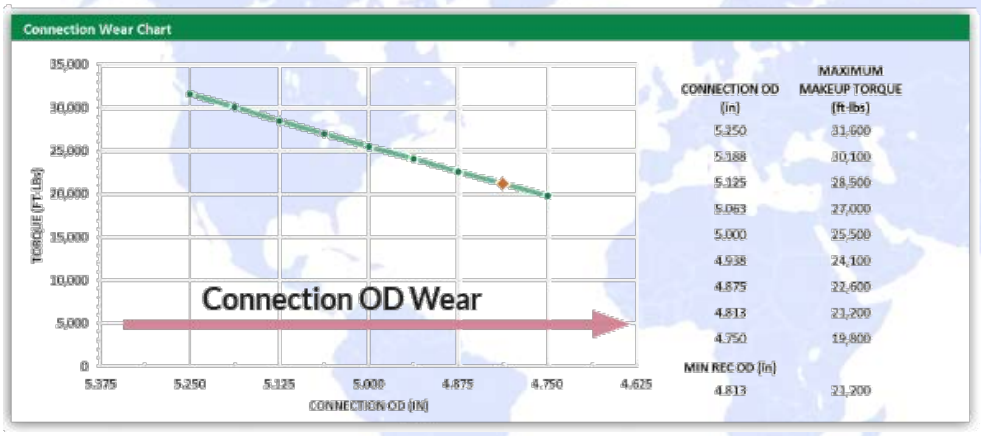
Maximum makeup torque is the calculated maximum amount of torque that can be applied to the connection during makeup.

Makeup Torque Then Tension Chart

Provides a reference for the safe operation tension and torque parameters under combined loading.

The zone highlighted in **magenta** represents the conditions that do not exceed recommend tool joint torque, PIN/BOX yield, shoulder separation, or tube yield.





Connection Wear Chart

As a drill string is used, wear on the outside of the tool joint box will occur, limiting the **recommended makeup torque** that the connection can safely handle.

Measured connection OD's may be operated at the corresponding recommended makeup torques given in this chart, however operation should not continue once connection OD wears below minimum recommended OD due to overly **thin box counterbore**.

Troubleshooting Drill Pipe

Thread Damage/Galling

Ensure all connections are receiving proper application of ***thread compound***, and are free of contaminants and debris. Ensure thread compound is well mixed. Ensure no compatibility issues with compound and drilling fluid.

Check condition of ***saver sub***. Damage and where can easily propagate through the entire drill string.

Check ***rig alignment***, to ensure threads of drill string in table align with connections in the head and are not placing additional stress on threads.

Breakout Torque

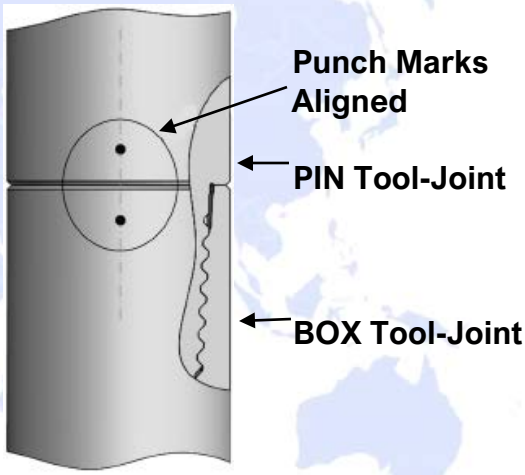
Ensure torque measurement equipment is ***calibrated***. Ensure ***correct makeup torque*** is applied to connection (including friction factor connection when applicable).

Ensure ***tongs/iron roughneck*** are gripping in ***proper location***, away from seal and Hardbanding. Gripping over thin box connections can distort and damage connection.

Ensure connections are not being over torqued due to downhole makeup.

Downhole Makeup

Ensure connection is not subjected to excess makeup torque due to downhole dynamics. Downhole makeup can contribute to connection damage and/or high breakout torques. To ***verify downhole*** makeup is occurring, mark PIN and BOX once sealed and monitor the rotation (marking should not rotate >0.5”).



Pipe Damage

Ensure slips are not set too hard to minimize deep mechanical damage. Slips, dies and bushings should be inspected and replaced frequently.

Ensure corrosion of pipe is monitored, using oil-based drilling fluids whenever possible. Water-based or brine fluids should have a pH carefully monitored and corrosion inhibitors used appropriately to minimize tube deterioration.

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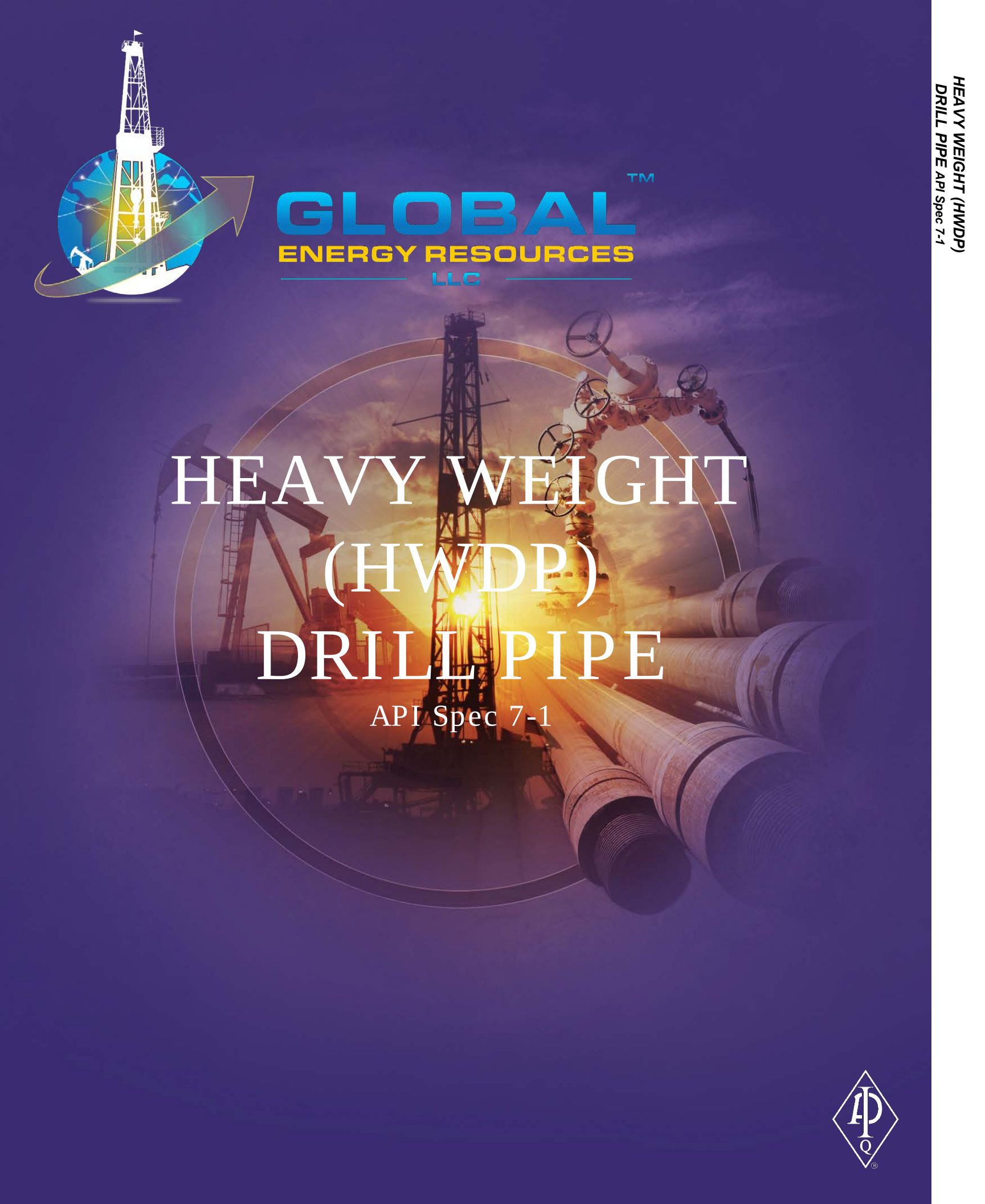
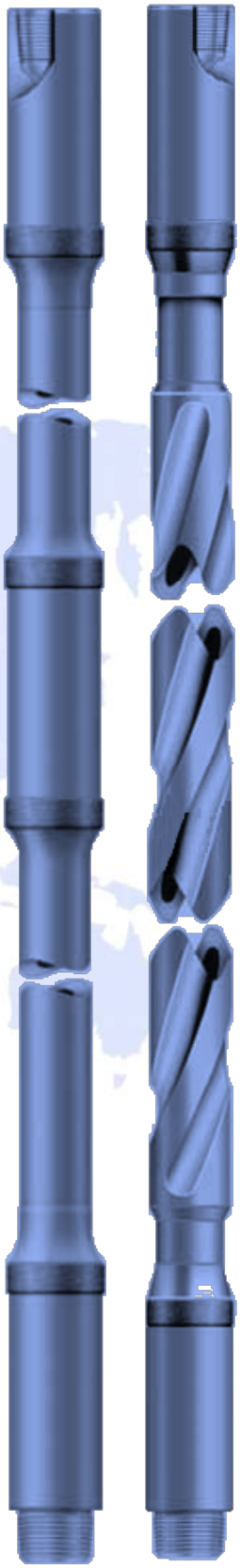
HEAVY WEIGHT (HWDP) DRILL PIPE

API Spec 7-1



HEAVY WEIGHT - DRILL PIPE

API Spec 7-1, Q1® (2nd edition)



Conquer Toughest Wells with the Muscle of Heavy Weight Drill Pipe (and its Spiral Ally)…

Unleash superior strength, flexibility, and control for efficient, reliable drilling in any environment, with both conventional and spiral options.

Gone are the days of settling for standard pipes when the well gets rough. Heavy weight drill pipe (HWDP) and its spiral weight companion (SWDP) are your secret weapons for tackling demanding formations, directional challenges, and deepwater demands. These aren't just pipes, they're precision-engineered muscle, delivering the power and agility needed to conquer your toughest drilling hurdles.

Choose Your Option:

- Conventional HWDP: Punch-packing power with thicker steel, it adds crucial weight for enhanced bit pressure and directional control. Deepwater? High pressure? Bring it on. HWDP stands strong where standard pipes fold.

- Spiral Weight SWDP: This agile warrior combines weight with enhanced fatigue resistance and improved wellbore cleaning thanks to its spiral design. Conquer deviated paths and optimize mud circulation for efficient drilling.

Both Options Serve Your Needs:

- Standard and Spiral HWDP available in Sour Service Grades H2S: When H2S rears its head, we've got your back. Both pipe configurations can be equipped to withstand harsh sour environments, ensuring safe and reliable operations.

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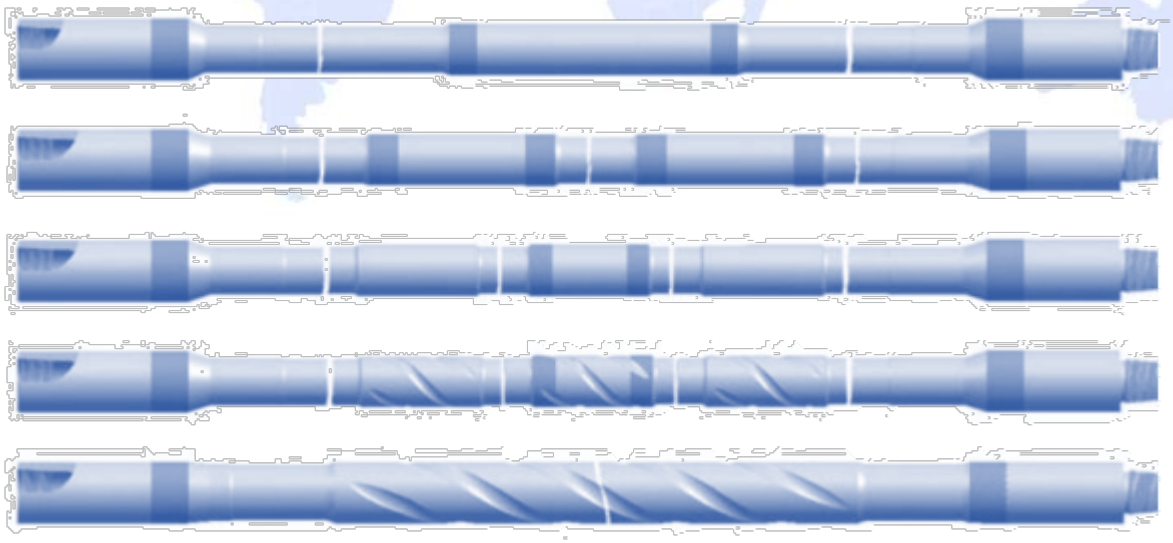
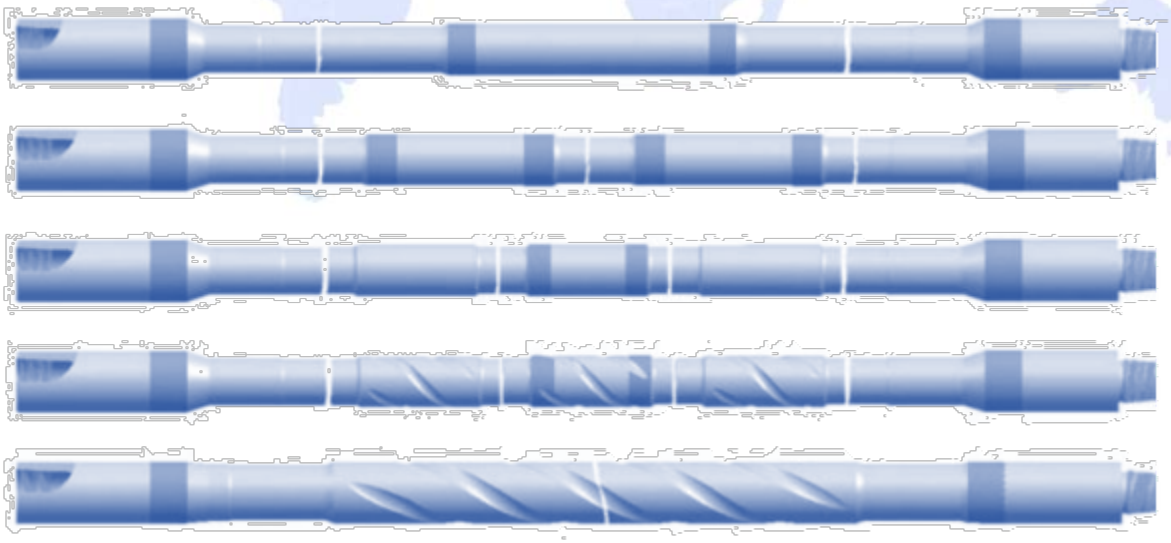
Heavy Weight Drill Pipe Date Table†

Tube									Tool Joint					Assembly		
Nominal Dimensions							Mechanical Properties		Nominal Dimensions			Mechanical Properties		Adjusted Weight		
Nominal Size (A)	ID	Wall Thickness	Area (sq in)	Section Modules (cu in)	Center Upset (C) (in)	End Upsets (B) (in)	Tensile Yield (lb)	Torsional Yield (ft-lb)	Connection Size and Type	OD (D) (in)	ID (in)	Tensile Yield (lb)	Torsional Yield (ft-lb)	Per Foot	Per 31 ft Joint (lb)	Make-up Torque (ft-lb)
2 7/8[1]	1 1/2	0.688	4.727	2.161	3 5/16	2 15/16	520,000	22,400	NC 26 (2 3/8 IF)	3 3/8	1 1/2	357,700	6,300	17.26	535	3,800
3 1/2	2 1/16	0.719	6.282	3.702	4	3 7/8	345,500	19,600	NC 38 (3 1/2 IF)	4 3/4	2 1/16	867,100	19,200	25.65	795	11,500
3 1/2	2 1/4	0.625	5.645	3.490	4	3 7/8	310,500	18,500	NC 38 (3 1/2 IF)	4 3/4	2 1/4	790,900	19,200	23.48	728	11,500
4	2 9/16	0.719	7.411	5.225	4 1/2	4 3/16	407,600	27,600	NC 40 (4 FH)	5 1/4	2 9/16	838,300	27,800	29.92	928	14,600
4 1/2	2 3/4	0.875	9.965	7.698	5	4 11/16	548,100	40,700	NC 46 (4 IF)	6 1/4	2 3/4	1,151,00	43,600	41.45	1,285	22,500
5	3	1.000	12.666	10.681	5 1/2	5 1/8	691,200	56,500	NC 50 (4 1/2 IF)	6 5/8	3	1416,200	57,800	50.38	1,562	30,000
5 1/2	3 1/4	1.125	15.463	14.342	6	5 11/16	850,400	75,900	5 1/2 FH	7 1/4	3 1/4	1,778,300	78,700	61.63	1,911	41,200
									HT™55				115,100			69,000*
5 7/8	4	0.938	14.542	15.630	6 3/8	6	799,800	82,700	XT®57	7	4	1,403,100	106,200	57.42	1,780	63,700*
6 5/8	4 1/2	1.063	18.574	22.476	7 1/8	6 15/16	1,021,600	118,900	6 5/8 FH	8	4 1/2	1,896,100	87,900	71.43	2,214	50,500



Spiral Weight Drill Pipe Table†

Tube									Tool Joint					Assembly		
Nominal Dimensions							Mechanical Properties		Nominal Dimensions			Mechanical Properties		Adjusted Weight		
Nominal Size	ID (A)	Wall Thickness	Area (sq in)	Section Modulus (cu in)	Spiral Upsets (C) (in)	Box End Upset (B) (in)	Tensile Yield (lb)	Torsional Yield (ft-lb)	Connection Size and Type	OD (D) (in)	ID (in)	Tensile Yield (lb)	Torsional Yield (ft-lb)	Per foot	Per 31 ft Joint (lb)	Make-up Torque (ft-lb)
3 3/16[1]	2	0.594	4.840	2.687	5 5/16	Nominal	532,400	28,400	SLH90	3 7/8	2	407,000	12,000	19.48	604	6,300
3 1/2	2 1/4	0.625	5.645	3.490	4	3 5/8	310,500	18,500	NC 38 (3 1/2 IF)	4 7/8	2 1/4	790,000	22,900	30.39	942	13,100
4	2 9/16	0.719	7.411	5.225	4 1/2	4 1/8	407,600	27,600	NC 40 (4 FH)	5	2 9/16	838,300	20,900	28.90	896	12,600
									XT39			729,700	40,800			24,500[2]
4 1/2	2 3/4	0.875	9.965	7.698	5	4 5/8	548,100	40,700	NC 46 (4 IF)	6 1/4	2 3/4	1,183,900	44,900	49.53	1,535	23,200
5	3	1.000	12.566	10.681	5 1/2	5 1/8	691,200	56,500	NC 50 (4 1/2 IF)	6 5/8	3	1,416,200	57,800	59.16	1,834	30,000
									HT50				88,800			53,300 [2]
5 1/2	4	0.750	11.192	11.764	6	5 5/8	615,600	62,200	5 1/2 FH	7	4	1,265,800	56,000	54.57		29,200
									HT55*				77,200			46,300 [2]
5 7/8	4	0.938	14.542	16.630	6 3/8	6	799,800	82,700	XT57*	7	4	1,403,100	106,200	65.38	2,027	63,700 [2]
6 5/8	4 1/2	1.063	18.574	22.476	7 1/8	6 3/4	1,021,600	118,900	6 5/8 FH	8	4 1/2	1,896,100	88,000	82.12		50,500



Benefits That Go Beyond Brawn:

- Both Conventional Heavy Weight Drill Pipe (HWDP) and/or Spiral Weight Drill Pipe (SWDP) provides for a gradual transition from your drill pipe to your drill collars.
- Efficiency Unleashed: HWDP's power translates to faster drilling times and optimized operations. Conquer challenges while saving time and money.
- Reliability Redefined: Minimize downtime and wellbore complications with HWDP's superior strength and wear resistance. Peace of mind, delivered.
- Maximize Your Well's Potential: HWDP's durability extends the life of your wellbore, boosting production and return on investment. Every drop counts.

Don't settle for the standard, when you can dominate with Global Energy's superiorly designed Conventional Heavy Weight Drill Pipe (HWDP) and/or Spiral Weight Drill Pipe (SWDP). Contact your Global Energy Sales Representative and/or visit our website www.globalenergyusa.com today to learn more and unleash the muscle that conquers even the toughest wells, in any environment.

Global Energy, Heavy-Weight Drill Pipe (HWDP).

Hardbanding on HWDP protects the Tool Joint and the Central Body and Minimizes Casing wear.

Global Energy, Spiral-Weight Drill Pipe.

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HEAVY WEIGHT (HWDP)

Manufacturing Flow Chart

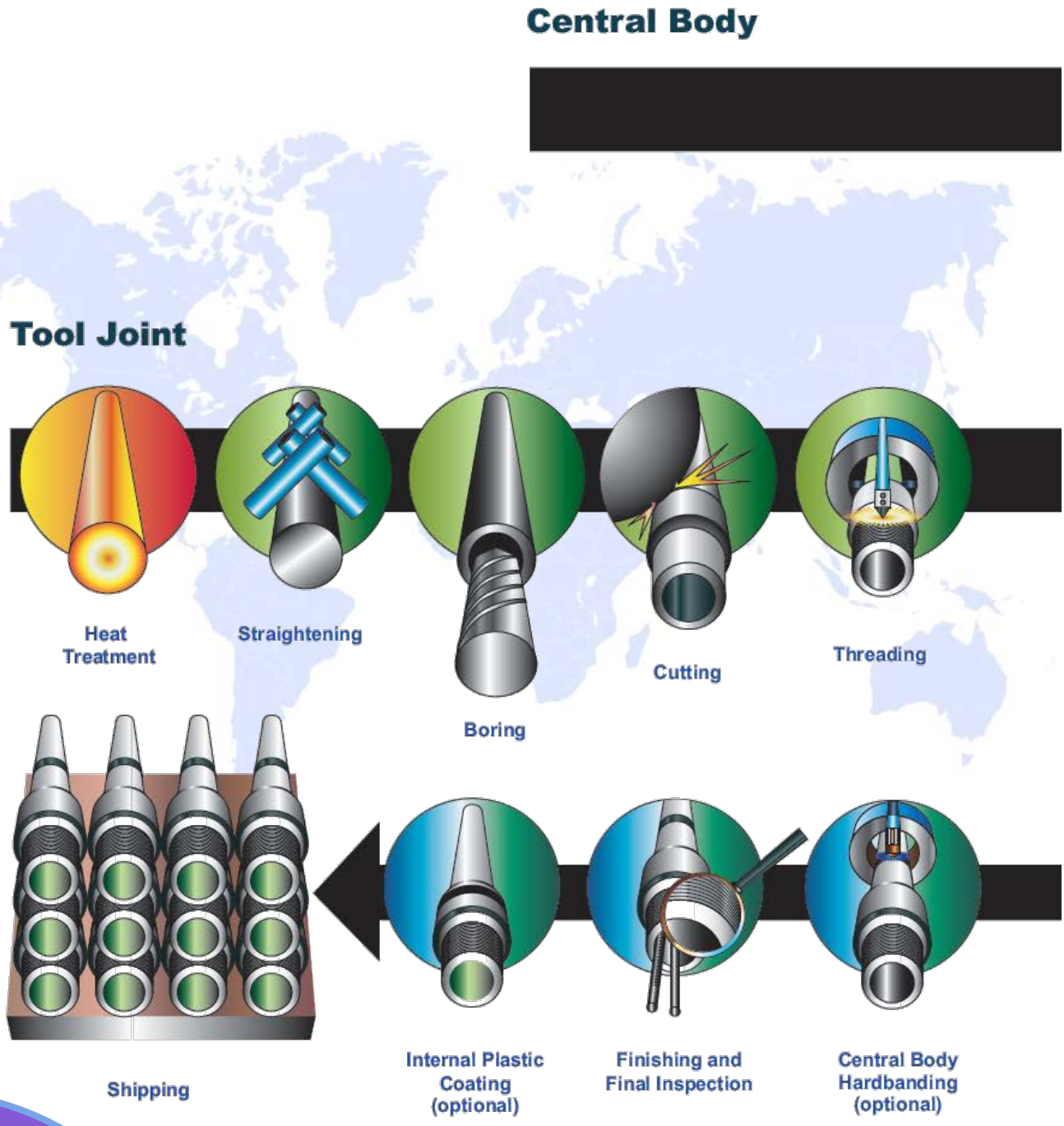
DRILL PIPE

API Spec 7-1

HEAVY WEIGHT DRILL PIPE (HWDP)

MANUFACTURING FLOW CHART (Welded Construction)

API Spec 7-1, Q1® (2nd edition)



Heavy weight drill pipe is manufactured to customer requirements and, where applicable, to specifications such as API, ISO, NS1, DS1, etc. It is inspected 100% after completion.

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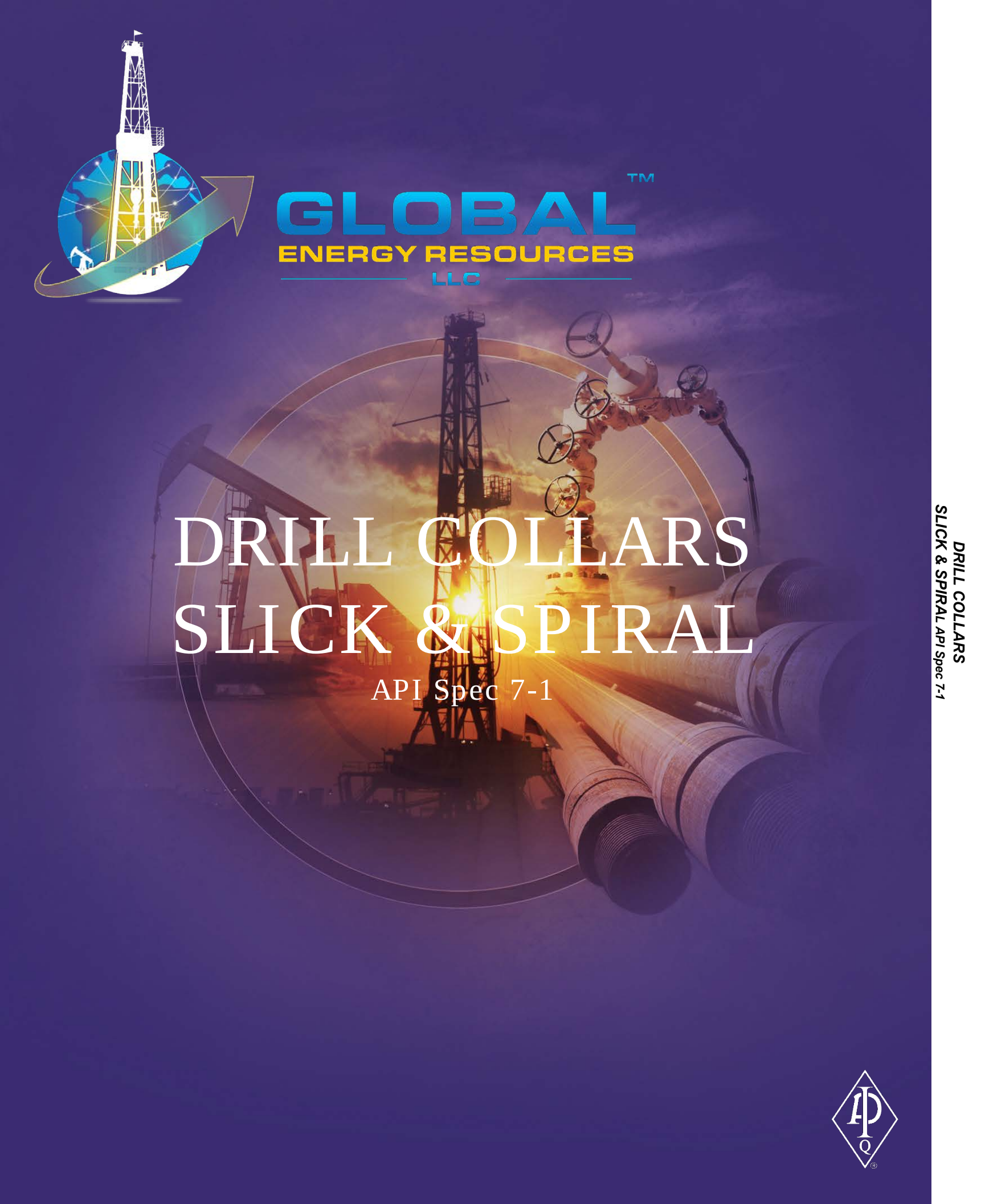


DRILL COLLARS
SLICK & SPIRAL

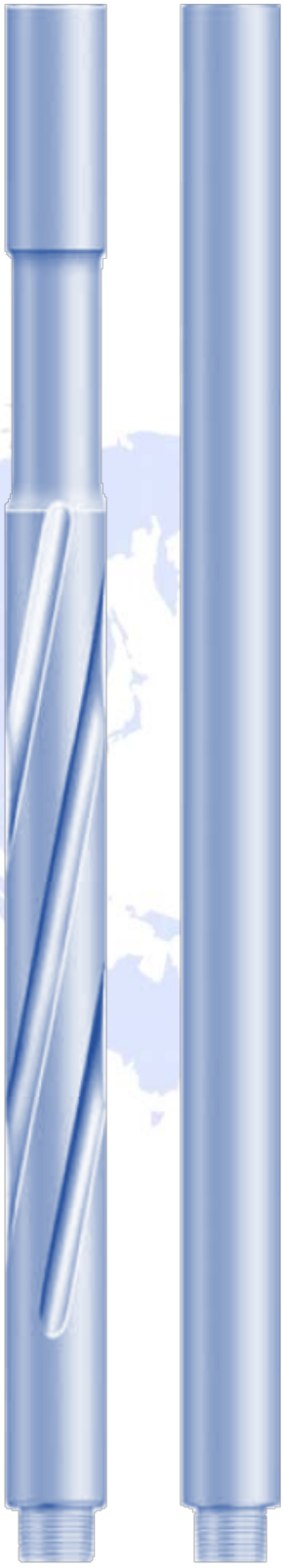
API Spec 7-1

DRILL COLLARS
SLICK & SPIRAL API Spec 7-1

DRILL COLLARS

Slick & Spiraled

API Spec 7-1, Q1® (2nd edition)



Master Every Wellbore: Advanced Drill Collars by Global Energy… Precision. Control. Confidence. Forge Your Drilling Success with Superior Drill Collars.

Your drill collars are the backbone of your drilling operation… carrying weight, transferring torque, and ensuring directional control. At [Your Company Name], we forge advanced drill collars for every challenge, delivering unparalleled performance and confidence in any drilling environment.

Uncompromising Quality:

- High-grade steel: We use only the highest-quality steel alloys, ensuring exceptional strength, fatigue resistance, and durability.
- Advanced manufacturing: Our precision machining and heat treatment processes guarantee consistent thread engagement, optimal weight distribution, and extended service life.
- Unmatched reliability: Each drill collar undergoes rigorous testing and inspection to meet or exceed API and industry standards.

Tailored Solutions for Your Needs:

- Standard or Spiral Collars: Choose from smooth or spiral-grooved collars for optimized weight distribution, hole cleaning, and directional control.
- Custom configurations: We offer a wide range of sizes, lengths, and thread types to perfectly match your specific wellbore needs.
- Zipped and Double Zipped options: Minimize connection failure risk and extend thread life with custom-welded thread extensions.

Benefits you can count on:

- Maximize borehole accuracy and directional control.
- Minimize drilling fluid loss and optimize hole cleaning.
- Boost drilling efficiency and reduce operational costs.
- Extend drill collar life and minimize maintenance downtime.
- Experience unparalleled performance and confidence in any drilling environment.

The Power of Spiral Collars:

- Enhanced stability and reduced torque: Ideal for directional, extended reach, and high-angle wells. [Image: A drill collar with spiral grooves navigating a curved wellbore]
- Improved hole cleaning: Spiral grooves channel drilling fluid, minimizing washout and maximizing efficiency.
- Reduced wear and tear: Smoother operation translates to longer drill collar life and lower maintenance costs.

Unleash Your Drilling Potential:

Partner with Global Energy and experience the difference of advanced drill collars. We offer:

- Expert technical support: Our team of drilling professionals is here to assist you in choosing the perfect solution for your project.
- Global reach and reliability: We deliver high-quality drill collars to projects worldwide.
- Unwavering commitment to safety: We prioritize safety in every aspect of our operations, from manufacturing to on-site support.

Contact your Global Energy Sales Representative today to discuss your specific drilling needs. Visit our website at www.globalenergyusa.com for more information on our advanced drill collars solutions. Let our drill collars forge your path to success!

DRILL COLLAR DATA TABLE†

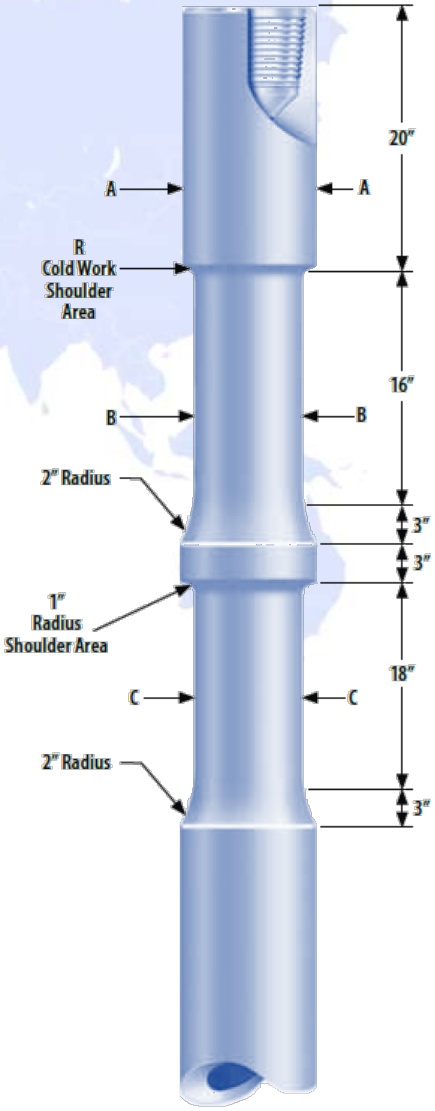
Drill Collar Number[1]	Drill Collar Diameter	Bore + 1/16"-0"	Length	Approximate Weight	Section Modulus	Displacement (open ended)	Typical Bending Strength Ratio
	in	in	ft	lb/ft	in³	US gal/ft	
NC 23-31	3 1/8	1 1/4	30	22.00	2.919	0.337	2.57:1
NC 26-35 (2 3/8 IF)	3 1/2	1 1/2	30	26.70	4.067	0.408	2.42:1
NC 31-41 (2 7/8 IF)	4 1/8	2	30 or 31	34.72	6.510	0.531	2.43:1
NC 35-47	4 3/4	2	30 or 31	44.51	10.191	0.757	2.58:1
NC 38-50 (3 1/2 IF)	5	2 1/4	30 or 31	53.18	11.769	0.815	2.38:1
NC 44-60	6	2 1/4	30 or 31	82.61	20.786	1.264	2.49:1
NC 44-60	6	2 13/16	30 or 31	74.90	20.182	1.146	2.84:1
NC 44-62	6 1/4	2 1/4	30 or 31	90.52	23.566	1.385	2.91:1
NC 46-62 (4 IF)	6 1/4	2 13/16	30 or 31	83.09	22.986	1.271	2.63:1
NC 46-65 (4 IF)	6 1/2	2 1/4	30 or 31	99.19	26.574	1.522	2.76:1
NC 46-65 (4 IF)	6 1/2	2 13/16	30 or 31	91.59	26.016	1.401	3.05:1
NC 46-67 (4 IF)	6 3/4	2 1/4	30 or 31	108.02	29.821	1.652	3.18:1
NC 50-70 (4 1/2 IF)	7	2 1/4	30 or 31	117.52	33.315	1.798	2.54:1
NC 50-70 (4 1/2 IF)	7	2 13/16	30 or 31	109.60	32.796	1.676	2.73:1
NC 50-72 (4 1/2 IF)	7 1/4	2 13/16	30 or 31	119.10	36.565	1.822	3.12:1
NC 56-77	7 3/4	2 13/16	30 or 31	139.10	44.906	2.140	2.70:1
NC 56-80	8	2 13/16	30 or 31	149.60	49.498	2.307	3.02:1
6 5/8 API Reg	8 1/4	2 13/16	30 or 31	160.44	54.382	2.472	2.93:1
NC 61-90	9	2 13/16	30 or 31	194.95	70.887	2.995	3.17:1
7 5/8 API Reg	9 1/2	3	30 or 31	217.00	83.336	3.319	2.81:1
NC 70-97	9 3/4	3	30 or 31	230.00	90.179	3.518	2.57:1
NC 70-100	10	3	30 or 31	242.97	97.380	3.717	2.81:1
8 5/8 API Reg	11	3	30 or 31	299.00	129.948	4.574	2.84:1

DRILL COLLAR SLIP and ELEVATOR RECESSES (ZIPPS)

Optimize handling and safety with Global Energy's optional slip and elevator recesses (Zipps). We cold-roll the upper radius of the elevator recess for enhanced product life, offering the flexibility to utilize either recess individually or in tandem. Unless specified otherwise, slip and elevator recesses (Zipps) are machined to adhere to the latest API RP7G guidelines for maximum compatibility and peace of mind.

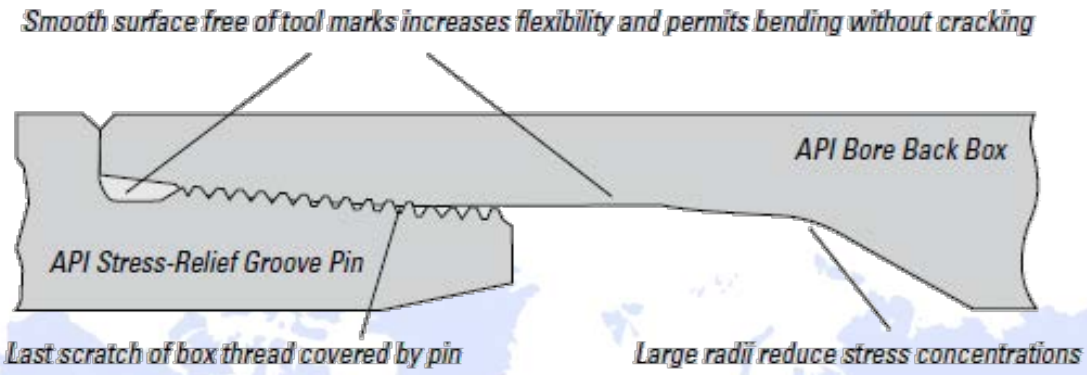
SLIP and ELEVATOR RECESSES (ZIPPS) DATA TABLE†

Drill Collar Diameter	Elevator Recess Diameter	Slip Recess Diameter	Elevator Recess Radius
A	B	C	R
in	in	in	in
4 1/8[1]	3 11/16	3 3/4	1/8
4 3/4	4 1/4	4 3/8	1/8
5	4 1/2	4 5/8	1/8
6	5 3/8	5 1/2	1/8
6 1/4	5 5/8	5 3/4	1/8
6 1/2	5 7/8	6	1/8
6 3/4	6	6 1/4	3/16
7	6 1/4	6 1/2	3/16
7 1/4	6 1/2	6 3/4	3/16
7 3/4	7	7 1/4	3/16
8	7 1/4	7 1/2	3/16
8 1/4	7 1/2	7 3/4	3/16
9	8 1/8	8 1/2	1/4
9 1/2	8 5/8	9	1/4
9 3/4	8 7/8	9 1/4	1/4
10	9 1/8	9 1/2	1/4
11	10 1/8	10 1/2	1/4



NOTE: Slip and Elevator Recesses are not recommended for Drill Collars with OD's below 4-3/4" inches†.

DRILL COLLAR & HWDP CONNECTION… Stress-Relief Option



Stress-relief option.

DRILL COLLAR MATERIAL

The following chart outlines various material grades used for different drill collar sizes.

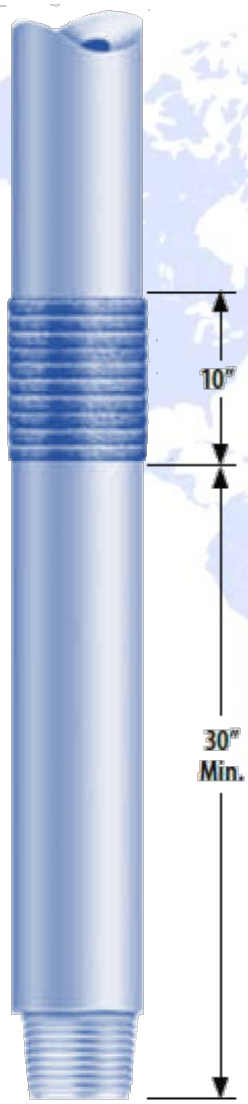
DRILL COLLAR MATERIAL GRADES TABLE†

OD (in)	Material Specification	Minimum Yield Strength (psi)	Minimum Tensile Strength (psi)	Elongation (%)	Minimum Charpy[1] (ft-lb)	Minimum Hardness (BHN)
3 1/8 to 6 7/8	AISI 4145 H Modified	110,000	140,000	13	40	285
7 to 11	AISI 4145 H Modified	110,000	135,000	13	40	285
3 1/8 to 6 7/8	Stainless	110,000	120,000	18	—	—
7 to 11	Stainless	100,000	110,000	20	—	—

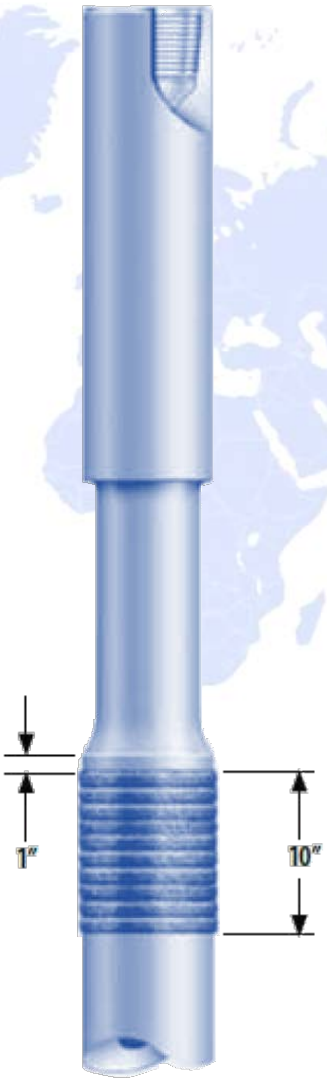
DRILL COLLAR HARDBAND CONFIGURATIONS

Hardbanding:

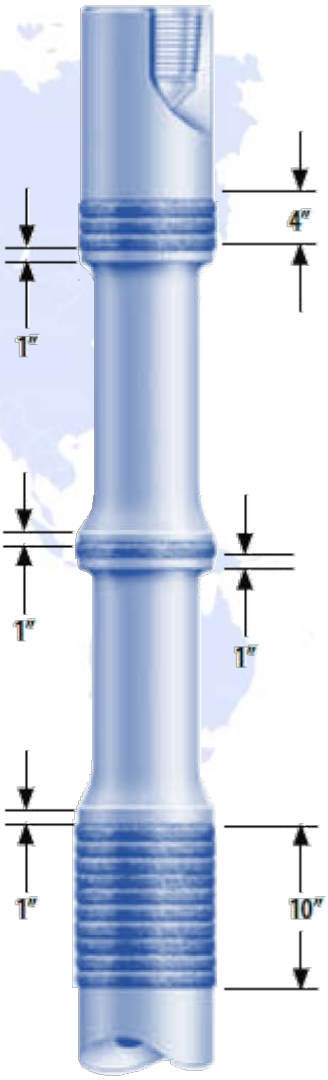
- Extend your drill collar's lifespan and combat wear with Global Energy's range of Hardbanding materials. We apply industry-standard configurations (see illustrations) or customize solutions to match your specific drilling challenges.



Pin End



Box End with Slip Recess Only



Box End with Slip and Elevator Recess

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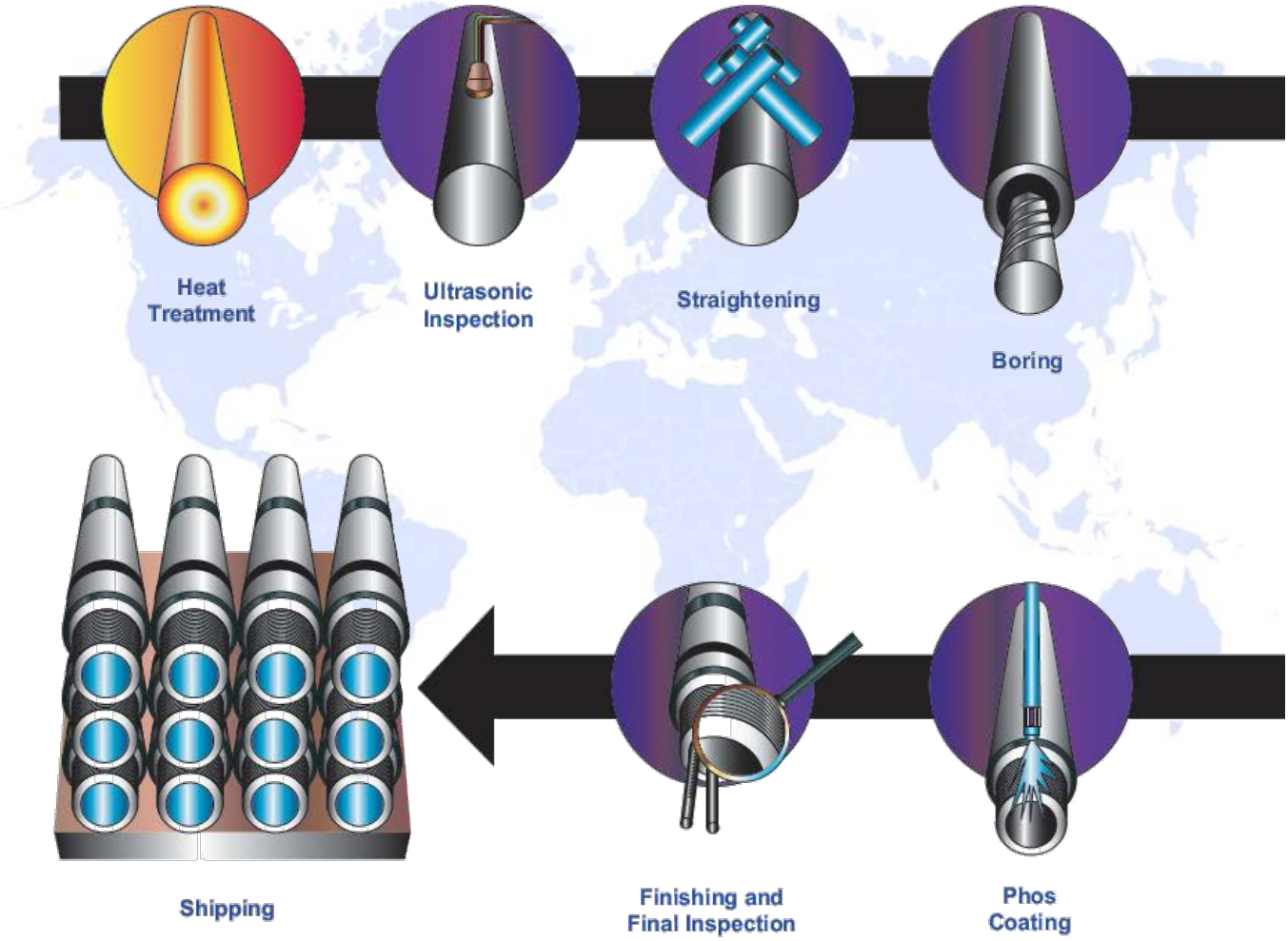
DRILL COLLAR MANUFACTURING FLOW CHART

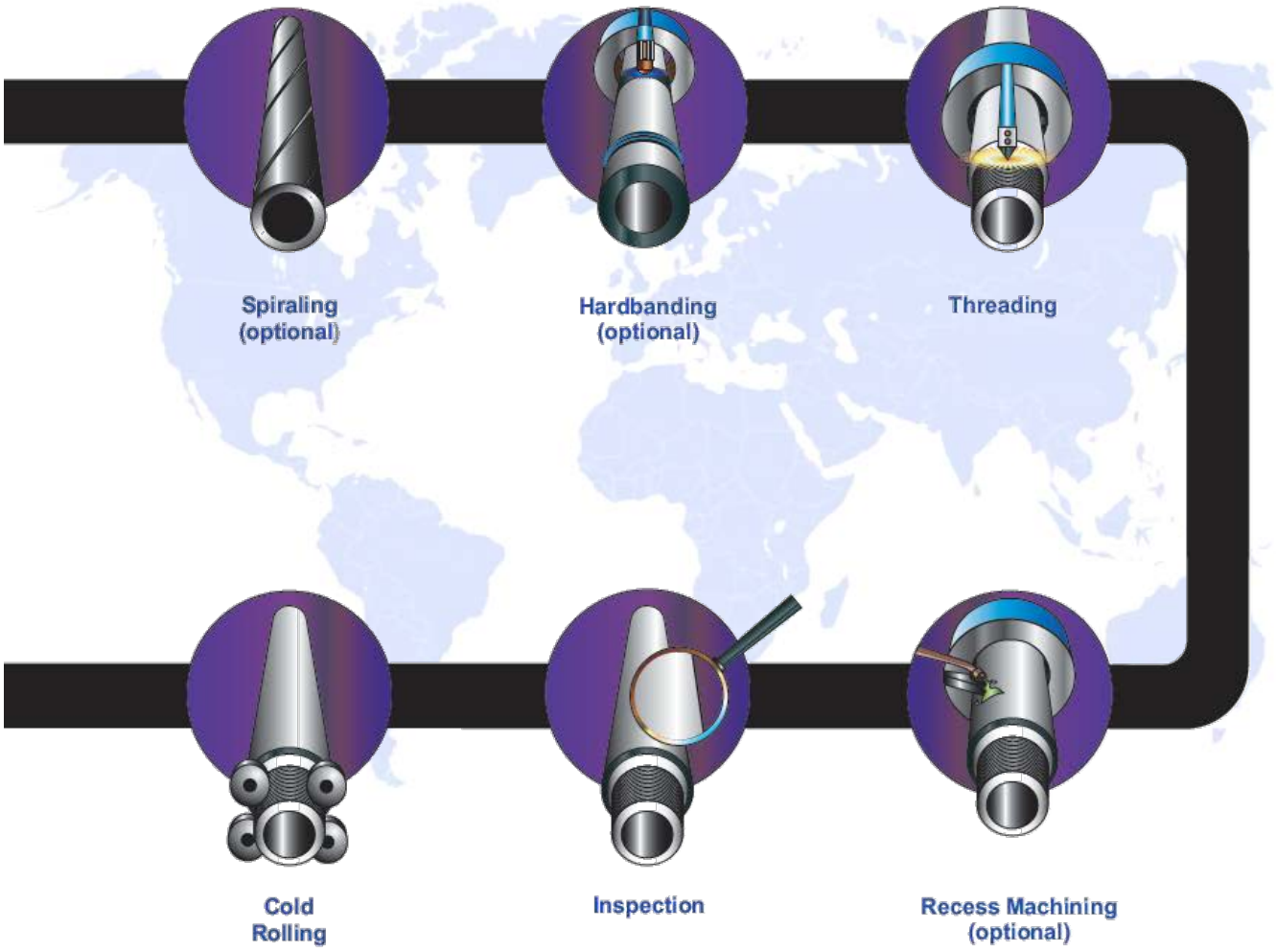
API Spec 7-1

DRILL COLLAR MANUFACTURING FLOW CHART

API Spec 7-1, Q1® (2nd edition)



Drill collars are manufactured to customer requirements and, where applicable, to specifications such as API, ISO, NS1, DS1, etc. and are inspected 100% after completion.



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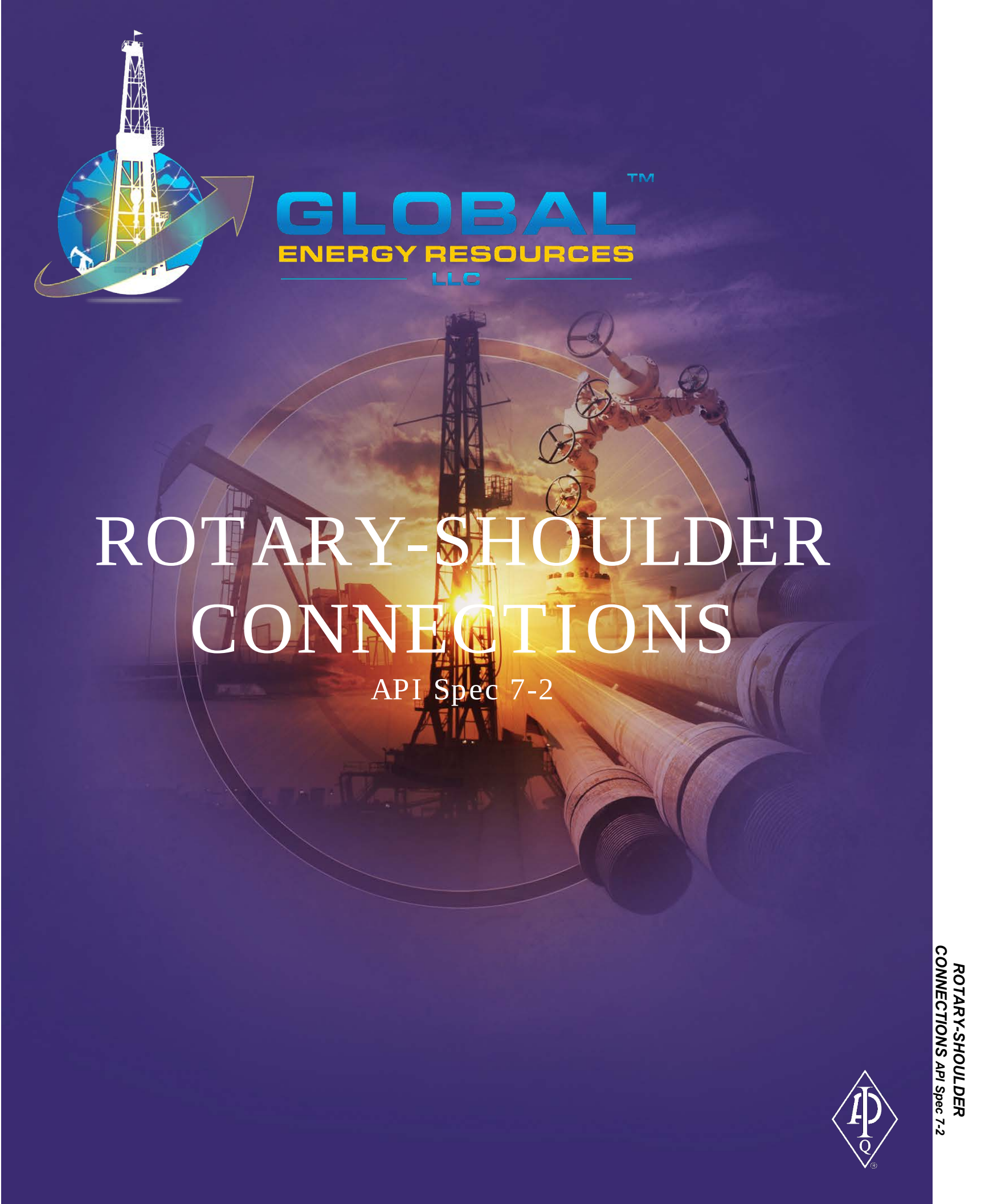


ROTARY-SHOULDER CONNECTIONS

API Spec 7-2

ROTARY-SHOULDER CONNECTIONS API Spec 7-2

ROTARY-SHOULDER CONNECTIONS

API, Premium & High-Performance

API Spec 7-2, Q1® (latest edition)

Secure Your Wellbore with Unmatched Connection Diversity

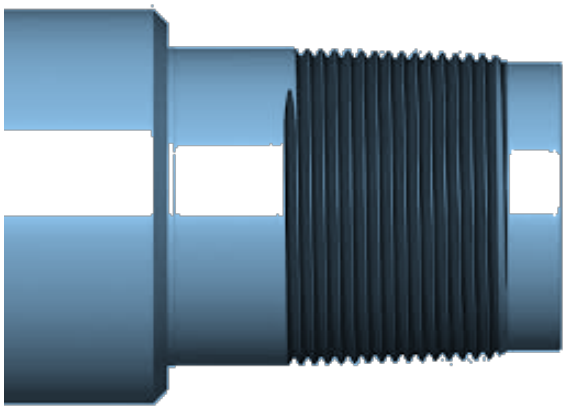
At Global Energy, we understand that every well has unique needs. That's why we offer the most comprehensive selection of drill pipe connections in the industry, ensuring you have the perfect fit for optimal performance and safety.

Uncompromising Choice:

- API Connections: We offer a full range of industry-standard API connections, guaranteeing seamless compatibility and adherence to established regulations.
- Premium Connections: Elevate your wellbore integrity with a vast array of premium thread profiles. Our partnerships with leading manufacturers grant you access to cutting-edge technologies that deliver superior strength, sealing, and fatigue resistance.
- High-Performance Options: Go beyond the ordinary with advanced connection solutions tailored for extreme environments and demanding applications. We cater to your specific requirements, whether it's tackling high pressure, corrosive fluids, or challenging wellbore geometries.

Expert Guidance:

Our Global Energy representatives are your trusted advisors, helping you navigate the complexities of connection selection. We understand the nuances of proprietary connections and can guide you towards the optimal solution that balances performance, compatibility, and cost.



Rest assured, with Global Energy, you'll never be limited by connection options. We empower you to drill with confidence, knowing you have the right connection for every challenge.

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API & Public Domain
Rotary-Shouldered Connections

Global Energy simplifies drilling with API and public domain rotary-shouldered connections for all Drill Pipe, HWDP, Drill Collar & Downhole Accessories.

Find common configurations in the date tables or request custom options. An interchange chart explains API connections, and data tables provide technical specs. Drill with confidence knowing you have the right tools for the job.

Interchange Chart for API Connections†

Common Name Style	Size	Pin Base Diameter (Tapered)	Threads per Inch	Taper	Thread Form	Same As or Interchangeable With
	in	in		in/ft		
Internal Flush[1] (IF)	2 3/8	2.876	4	2	V-0.065 (V-0.038 R)	2 7/8 Slim Hole NC 26
	2 7/8	3.391	4	2	V-0.065 (V-0.038 R)	3 1/2 Slim Hole NC 31
	3 1/2	4.016	4	2	V-0.065 (V-0.038 R)	4 1/2 Slim Hole NC 38
	4	4.834	4	2	V-0.065 (V-0.038 R)	4 1/2 Extra Hole NC 46
	4 1/2	5.250	4	2	V-0.065 (V-0.038 R)	5 Extra Hole NC 50 5 1/2 Double Streamline
Full Hole (FH)	4	4.280	4	2	V-0.065 (V-0.038 R)	4 1/2 Double Streamline NC 40
Extra Hole[1] (XH) (EH)	2 7/8	3.327	4	2	V-0.065 (V-0.038 R)	3 1/2 Double Streamline
	3 1/2	3.812	4	2	V-0.065 (V-0.038 R)	4 Slim Hole 4 1/2 Slim Hole
	4 1/2	4.834	4	2	V-0.065 (V-0.038 R)	4 Internal Flush NC 46
	5	5.250	4	2	V-0.065 (V-0.038 R)	4 1/2 Internal Flush NC 50 5 1/2 Double Streamline
Slim Hole[1] (SH)	2 7/8	2.876	4	2	V-0.065 (V-0.038 R)	2 3/8 Internal Flush NC 26
	3 1/2	3.391	4	2	V-0.065 (V-0.038 R)	2 7/8 Internal Flush NC 31
	4	3.812	4	2	V-0.065 (V-0.038 R)	3 1/2 Extra Hole 4 1/2 External Flush
	4 1/2	4.016	4	2	V-0.065 (V-0.038 R)	3 1/2 Internal Flush NC 38
Double Streamline (DSL)	3 1/2	3.327	4	2	V-0.065 (V-0.038 R)	2 7/8 Extra Hole
	4 1/2	4.280	4	2	V-0.065 (V-0.038 R)	4 Full Hole NC 40
	5 1/2	5.250	4	2	V-0.065 (V-0.038 R)	4 1/2 Internal Flush 5 Extra Hole NC 50
Numbered Connections[2] (NC)	26	2.876	4	2	V-0.038 R	2 3/8 Internal Flush 2 7/8 Slim Hole
	31	3.391	4	2	V-0.038 R	2 7/8 Internal Flush 3 1/2 Slim Hole
	38	4.016	4	2	V-0.038 R	3 1/2 Internal Flush 4 1/2 Slim Hole
	40	4.280	4	2	V-0.038 R	4 Full Hole 4 1/2 Double Streamline
	46	4.834	4	2	V-0.038 R	4 Internal Flush 4 1/2 Extra Hole
	50	5.250	4	2	V-0.038 R	4 1/2 Internal Flush 5 Extra Hole 5 1/2 Double Streamline
External Flush (EF)	4 1/2	3.812	4	2	V-0.065 (V-0.038 R)	4 Slim Hole 3 1/2 Extra Hole

Notes:

a. **Connections with two thread forms shown may be machined with either thread without affecting gauging or interchangeability.**

b. **Numbered connections (NC) may be machined only with V-0.038 radius thread form.**

Double Shoulder (DS) Connections

The Double Shoulder (DS) connection is a high-performance, rotary-shouldered connection available for 2-3/8 inch through 6-5/8 inch drill pipe. DS connections offer a versatile alternative to standard API connections where higher torsional strength is required and are interchangeable with API connections.

Double Shoulder Connection with Arnco 350-XT®

Increased Torsional Capacity

The double-shouldered design of DS provides increased torsional capacity when compared with similar sizes of API connections. A secondary internal shoulder on the nose of the pin offers an additional friction surface and mechanical stop. The primary external shoulder still serves as the connection's sealing surface.

Slimmer Profile

DS connections can be configured with a smaller OD and larger ID compared to standard API connections, improving fishability and hydraulic efficiency without sacrificing available connection torsional capacity.

True Flush ID

The DS double-shouldered design provides a true flush inside diameter throughout the mated tool joint assembly, thereby minimizing turbulent flow, improving ID tool passage, and eliminating opportunities for cement and solids to be trapped.

Increased Allowable Tool Joint Wear

DS connections offer higher torsional capacity than standard API connections of the same dimensions, thereby increasing permissible connection wear prior to downgrading the assembly.

eXtreme® Torque (XT®) Rotary-Shouldered Connections

The patented eXtreme® Torque (XT®) connection addresses the requirements of many extreme drilling applications, including extended reach drilling (ERD), horizontal drilling, deepwater, high temperature high pressure (HTHP) and ultra-deep wells.

eXtreme™ Torque (XT™) Connection with Arnco 350-XT®

High-Performance Design

The eXtreme Torque connection is a patented, high-performance, rotary-shouldered connection available in sizes from 2-3/8 inch through 6-5/8-inch drill pipe. The eXtreme Torque connection incorporates a second generation double-shouldered design. A secondary internal torque shoulder on the nose of the pin offers an additional friction surface and mechanical stop. The primary external shoulder still serves as the connection's sealing surface. The eXtreme Torque connection design has an extended pin base, pin nose and box counterbore. These sections are carefully engineered to provide additional elastic deformation during makeup, ensuring that the contact forces are properly proportioned between the two shoulder surfaces.

Increased Torque Capacity

The XT® connection offers significantly higher torsional capacity than standard API connections, for the most extreme drilling applications.

Premium & High-Performance Connections

Drill Pipe Manufactures	Connections
Command Energy	CDS CET
Complete Tubular	DUO
DP Masters	MT DS ST
Drilling Connections	PACDS
Grant Prideco	DSTJ GPDS HT XT XTM UXT DELTA
Global-DC-Elite Tubular	ELT-DS ELT-HT ELT-ET PACDS
Hilong	HLISD HLMT HLST HLIST
Hydril	PH6 PH4 CS WT (Wedge Thread)
NKK	DSTJ
Omsco	DS VX

Drill Pipe Manufactures	Connections
Tejas Tubular	TTWS TTS-6 TTS-8
Tenaris	WT (Wedge Thread)
Texas Steel Conversions	DS P-Tech TSC SSDS ATDS
Vallourec & Mannesmann (VAM)	VX DS EIS

Make the Right Connection, Every Time

Don't compromise on wellbore integrity. With Global Energy, you have more than just options - you have expert guidance. Whether you require seamless API compatibility, the superior strength of premium connections, or cutting-edge solutions for extreme environments, we have the connection you need.

Our Global Energy representatives are your trusted advisors, offering unparalleled expertise in navigating the complexities of connection selection. They understand the nuances of both industry-standard and proprietary options, ensuring you make the optimal choice that balances performance, compatibility, and cost.

Ready to experience the confidence of the right connection? **Contact your Global Energy Sales Representative today to discuss your specific API, Premium & High-Performance connection requirements.**

For more information on our advanced Rotary-Shoulder Connection solutions, visit our website at www.globalenergyusa.com.

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HARDBANDING SOLUTIONS

HARDBANDING

Unrelenting Performance: Hardbanding Fortifies Your Drilling Operations…

Combat Wear & Tear on your Downhole Tubulars:

Your drill string faces relentless wear. Global Energy's advanced hardbanding solutions fight back, extending component life, maximizing performance, and minimizing downtime.

Tailored Defense: We apply wear-resistant alloys to critical areas, protecting against abrasion, impact, and corrosion. From drill pipe tool joints to HWDP wear pads and drill collar elevator recesses, we configure hardbanding to your specific needs.

Invest in Your Future: Global Energy's hardbanding is your armor against wear. Extend component life, minimize downtime, improve wellbore stability, and enhance safety. Let hardbanding unlock the relentless performance of your drilling fleet.

Global Energy offers the following Casing-Friendly Hardbanding options…

Duraband® Hardbanding Solutions

Postalloy® Duraband® NC is a 100% crack-free hard band that provides maximum protection of the tool joint and casing. Its microstructure consists of a hard, but tough tool steel matrix with a high volume of tightly packed micro-constituents. This combination ensures excellent wear resistance in open hole drilling as well as being casing friendly.

Duraband® NC is unique. It is *Fearnley Procter NS-1™ certified for new applications to tool joints and certified for re-application over itself and other hard band products as specified in the NS-1™ re-application approval certificates. It is the only product for maximum protection that is applied crack-free.

Source: Duraband

Arnco® Hardbanding Solutions

Arnco's next generation hard banding products were designed to be non-cracking, high performance alloys that cover the spectrum of wear protection needs by end-users. Whether focused on casing wear reduction or drill string life extension, use of Arnco 150XT™ and 350XT™ produce real economic benefits for pipe owners and well operators. Easy initial and re-application combined with alloys designed to resist in-service damage result in reduced re-application costs over the drill pipe life cycle.

Source: Arnco

Armacor® Hardbanding Solutions

Nanocrystalline/amorphous alloy coatings are the foundation for Armacor products. They form a structure very different from crystalline alloy coatings used by other similar products. In the amorphous structure, atoms are randomly placed in a continuous coating, preventing corrosion-path grain boundaries. Armacor's low coefficient of friction amorphous metals:

- Deliver superior wear resistance from abrasive particles in metal-to-metal contact conditions.
- Provide excellent non work-hardening machineability and outstanding resistance to cavitation.
- Offer improved corrosion resistance to oxidation and sulfidation reactions at elevated temperatures.

Source: Armacor

Tuffband by Postalloy® Hardbanding Solutions

Postalloy® Tuffband® NC is applied crack free and prevents spalling even under the most extreme drilling conditions and is 100% rebuildable. It is *Fearnley Procter NS-1™ certified for new applications to tool joints and it is certified for re-application over itself and other hardband products as specified in the NS-1™ re-application approval certifications. It offers maximum protection of your tool joints and crack free application means no trapped abrasive materials so it also extends the life of your casing. Advantages of Tuffband NC include:

- Longer life of tool joints and casing.
- Minimization of sour gas problems at critical sites 100%.
- Rebuildable.

Source: Hardbanding Solutions

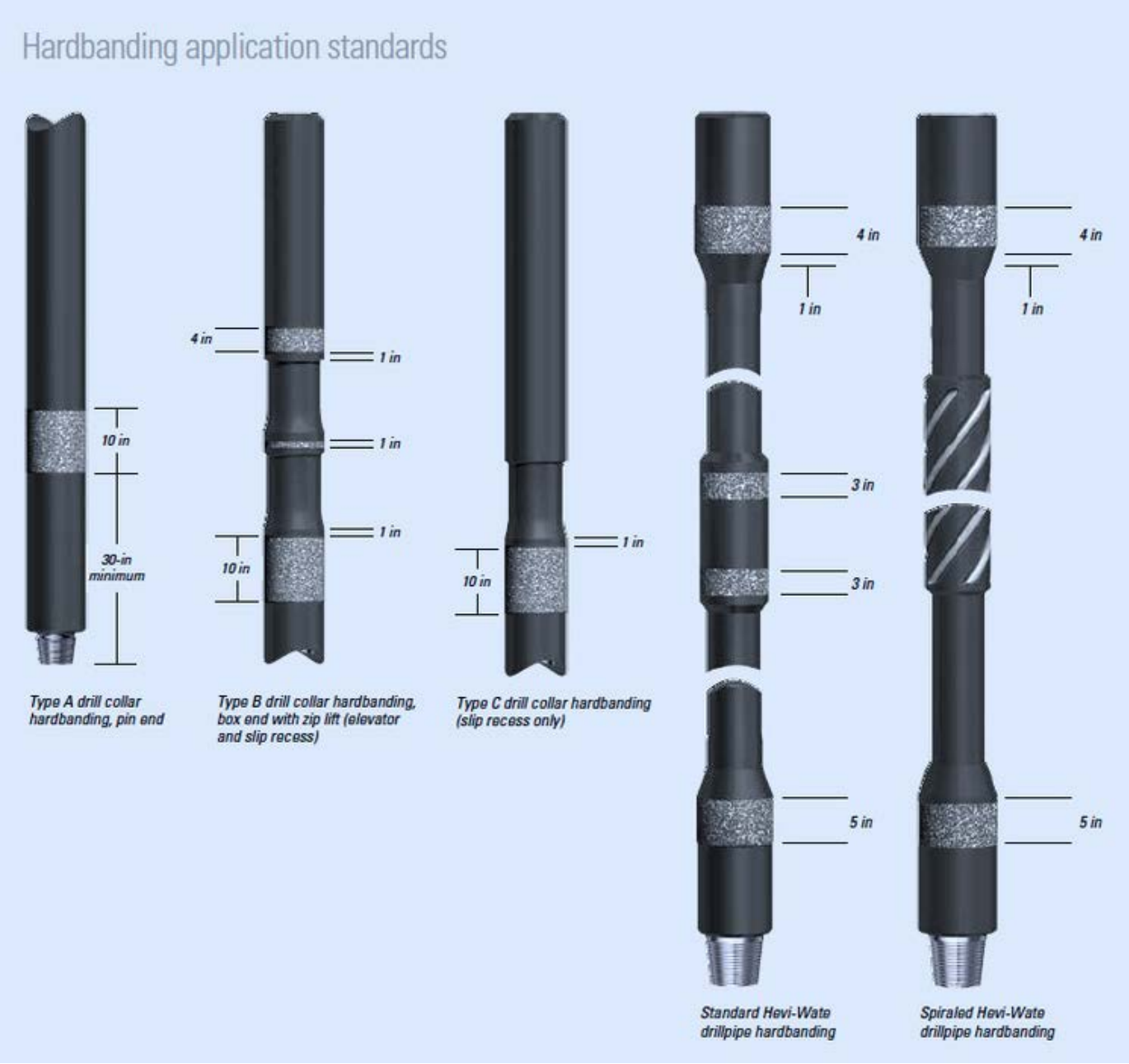
Casing-friendly Hardbanding, extends the life of drill strings…

Casing-friendly hardbanding can significantly extend the life of drill strings and save money on transportation costs.

Casing-friendly hardbanding is a type of hardbanding that is designed to minimize wear on the casing. This can reduce casing wear from 14% without hardbanding to as little as 5% with the application of the appropriate alloy. This can significantly extend the life of drill strings and reduce the need for replacement.

Mobile hardbanding units are portable welding units that can be used to apply hardbanding to drilling tubulars in the field. This eliminates the need to ship the tubulars back and forth to a service center, which can save time and money.

HARDBANDING DATA TABLE†



Here are some of the benefits of using casing-friendly hardbanding and mobile hardbanding units:

Extend the life of drill strings.
Reduce casing wear.
Reduce the need for tubular replacement.
Save time and money on transportation costs.
Keep drill strings in operation longer.

If you are looking for a way to extend the life of your drill strings and save money, casing-friendly hardbanding and mobile hardbanding units are a great option.

Example:

A drilling company uses casing-friendly hardbanding and mobile hardbanding units on its drill strings. As a result, the company is able to extend the life of its drill strings by 50%. This saves the company millions of dollars each year in replacement costs and transportation costs.

Contact your Global Energy Sales Representative today to discuss your specific Hardbanding needs and experience the power of Global Energy's Precision Tech® Hardbanding Solutions. Visit our website at www.globalenergyusa.com for more information.

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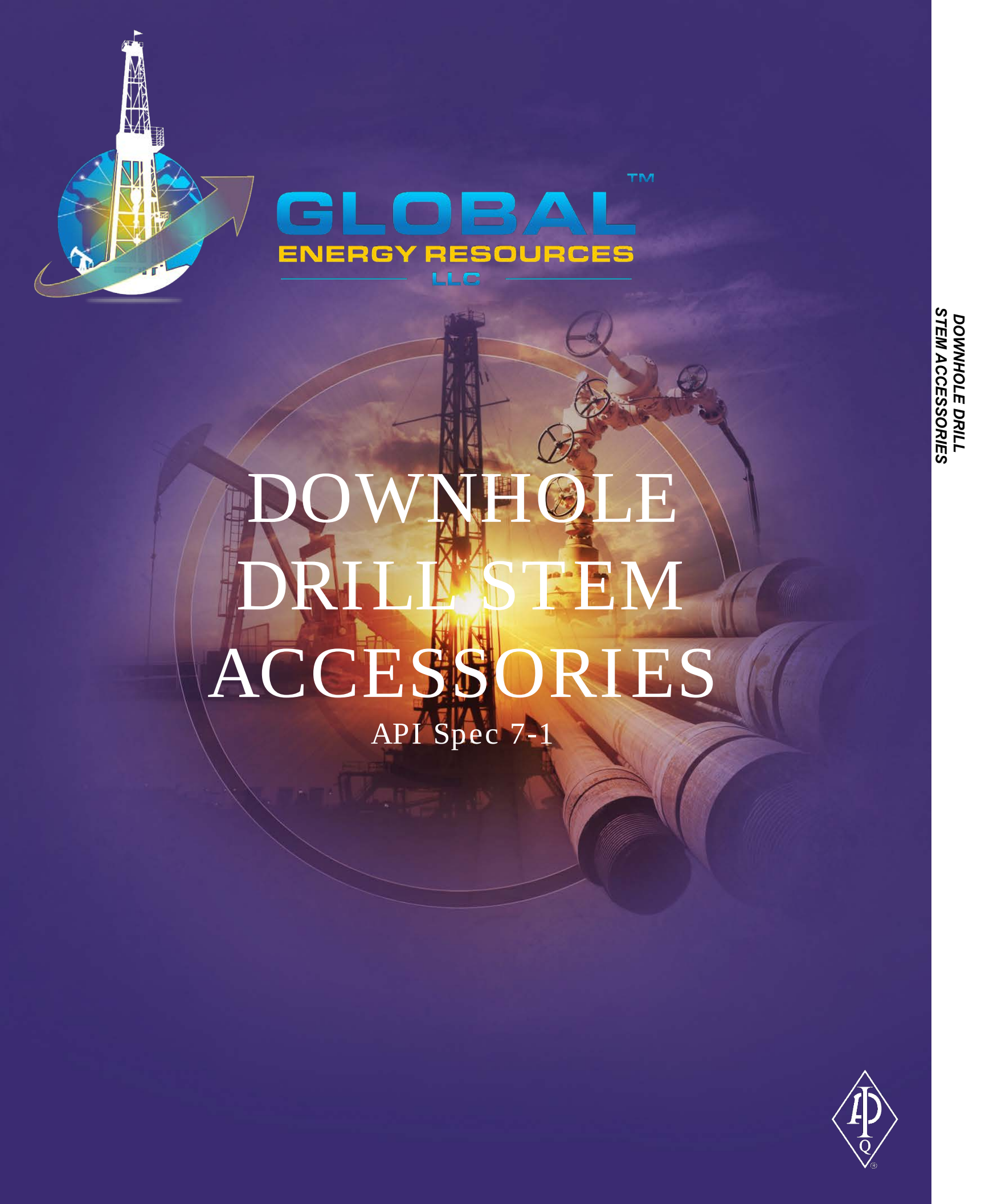


DOWNHOLE DRILL STEM ACCESSORIES

API Spec 7-1

DOWNHOLE DRILL STEM ACCESSORIES

API Spec 7-1, Q1® (2nd edition)

Drill with Confidence and Dominate with Global Energy's Downhole Drill Stem Accessories…

Built with American Muscle, Exceeding Global Standards:

At Global Energy, we don't just meet industry standards, we shatter them. Every downhole drill stem accessory we manufacture surpasses the rigorous demands of API Spec 7-1, Q1® (2nd edition), ensuring unparalleled performance and reliability in even the most challenging environments.

Unmatched Quality, Made in the USA & Canada:

We take pride in crafting each tool with American and Canadian ingenuity. Our commitment to domestic manufacturing guarantees the highest quality materials, exceptional workmanship, and rigorous quality control processes. You can drill with the confidence that comes from knowing your tools are built to last.

Speed and Value Delivered, anywhere in the World:

Time is money. That's why we're laser-focused on exceeding your expectations when it comes to delivery. Our industry-leading turnaround times minimize downtime and maximize your productivity. And when it comes to pricing, we're confident you won't find better value for your investment.

Experience the Global Energy Difference:

- API Spec 7-1, Q1® (2nd edition) certified for your peace of mind.
- Crafted with American and Canadian pride for unmatched quality
- Industry-leading delivery times to keep you drilling.
- Competitive pricing that delivers superior value.

Contact us today to discuss your specific needs and see how our downhole drill stem accessories can empower you to drill faster, smarter, and more profitably.

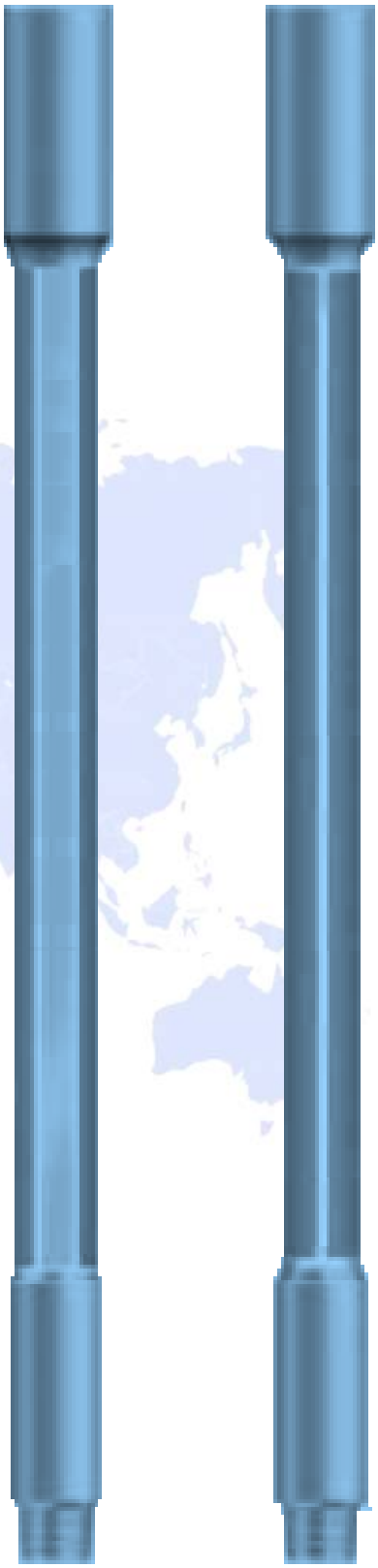
ROTARY KELLYS

Rotary Kellys… Square & Hexagonal

Global Energy's precision-machined heavy Square and/or Hexagonal Kellys. The Kelly is connected to the Swivel and through the Rotary Table, then connected to the first joint of Drill Pipe in the Drill String. Straightness is the key to the manufacturing process. Straightness is checked before, during and after each machining operation is completed. Flats are precision-milled to API specifications. All milling is performed on specially designed rigid Kelly mill.

Global Energy offers both Square and Hexagonal Kellys, from 40' up to 54' and features include the following:

- Manufactured from AISI 4145H-modified, fully heat-treated alloy steel with a Brinell hardness range of 285–341 and a minimum average Charpy impact value of 40 ft-lbs.
- Ends and drive sections, IDs and Connections machined and inspected to API specifications.
- Kelly bars are ultrasonically inspected over full length and sections.
- All Global Energy's Kellys, are shipped in a protective steel-cased scabbard… Note: A Rathole Scabbard can be provided upon request.

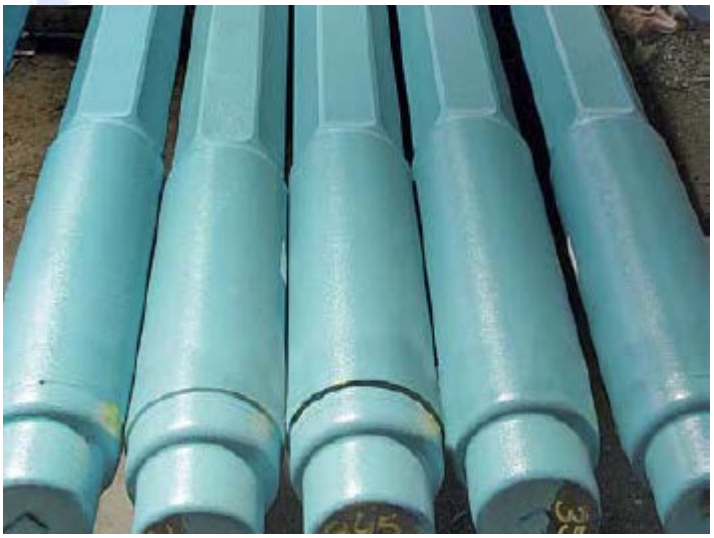


Hexagonal **Square**

GLOBAL™ ENERGY RESOURCES LLC

Square and Hexagonal Kellys Data Table†

		Length (ft)		Top Upset				Bottom Upset			Drive Section		Approximate Weight	
				Standard		Optional								
Type	Nominal Size (in)	Drive Section	Overall	LH Connection	Tool Joint OD (in)	LH Connection	Tool Joint OD (in)	RH Connection	Tool Joint OD (in)	Bore (in)	Across Corners	Across Flats	Standard (lbs)	Optional (lbs)
SQUARE ■	3	37	40	6-5/8 Reg	7-3/4	4-1/2 Reg	5-3/4	NC31	4-1/8	1-3/4	3.875	3	1,090	995
	3	43	46	6-5/8 Reg	7-3/4	4-1/2 Reg	5-3/4	NC31	4-1/8	1-3/4	3.875	3	1,225	1,125
	3-1/2	37	40	6-5/8 Reg	7-3/4	4-1/2 Reg	5-3/4	NC38	4-3/4	2-1/4	4.437	3-1/2	1,315	1,215
	3-1/2	43	46	6-5/8 Reg	7-3/4	4-1/2 Reg	5-3/4	NC38	4-3/4	2-1/4	4.437	3-1/2	1,475	1,380
	4-1/4	37	40	6-5/8 Reg	7-3/4	4-1/2 Reg	5-3/4	NC46 or NC50	6 – 6-1/4	2-13/16	5.500	4-1/4	1,810	1,710
	4-1/4	43	46	6-5/8 Reg	7-3/4	4-1/2 Reg	5-3/4	NC46 or NC50	6-3/8 – 6-1/2	2-13/16	5.500	4-1/4	2,050	1,950
	5-1/4	37	40	6-5/8 Reg	7-3/4	–	–	NC50 or 5-1/2 FH	7	3-1/4	6.750	5-1/4	2,745	–
	5-1/4	43	46	6-5/8 Reg	7-3/4	–	–	NC50 or 5-1/2 FH	7	3-1/4	6.750	5-1/4	3,140	–
	6	37	40	6-5/8 Reg	7-3/4	–	–	6-5/8 FH	8	3-1/2	7.625	6	3,680	–
	6	43	46	6-5/8 Reg	7-3/4	–	–	6-5/8 FH	8	3-1/2	7.625	6	4,220	–
HEXAGONAL ⬢	3	37	40	6-5/8 Reg	7-3/4	4-1/2 Reg	5-3/4	NC26	3-3/8	1-1/2	3.375	3	970	870
	3	43	46	6-5/8 Reg	7-3/4	4-1/2 Reg	5-3/4	NC26	3-3/8	1-1/2	3.375	3	1,090	995
	3-1/2	37	40	6-5/8 Reg	7-3/4	4-1/2 Reg	5-3/4	NC31	4-1/8	1-3/4	3.937	3-1/2	1,270	1,170
	3-1/2	43	46	6-5/8 Reg	7-3/4	4-1/2 Reg	5-3/4	NC31	4-1/8	1-3/4	3.937	3-1/2	1,465	1,365
	4-1/4	37	40	6-5/8 Reg	7-3/4	4-1/2 Reg	5-3/4	NC38	4-3/4	2-1/4	4.781	4-1/4	1,630	1,530
	4-1/4	43	46	6-5/8 Reg	7-3/4	4-1/2 Reg	5-3/4	NC38	4-3/4	2-1/4	4.781	4-1/4	1,850	1,755
	5-1/4	37	40	6-5/8 Reg	7-3/4	–	–	NC46 or NC50	6 – 6-1/4	2-13/16 or 3-1/4	5.900	5-1/4	2,250	–
	5-1/4	43	46	6-5/8 Reg	7-3/4	–	–	NC46 or NC50	6-3/8 – 6-1/2	2-13/16 or 3-1/4	5.900	5-1/4	2,570	–
	6	37	40	6-5/8 Reg	7-3/4	–	–	5-1/2 FH	7	3-1/2	6.812	6	2,900	–
	6	43	46	6-5/8 Reg	7-3/4	–	–	5-1/2 FH	7	3-1/2	6.812	6	3,320	–



UPPER & LOWER KELLY VALVES

Global Energy is a major manufacturer of drilling Safety Valves, including Kelly Valves, Retrievable Drop-In Check Valves and Inside BOP Valves. Each of these valves is available in three different versions.

IBOP Upper Top-Drive Valve

- **Standard**: Suitable for normal drilling conditions. The valve body is made of AISI 4145H-modified alloy steel, heat-treated to 285–341 Brinell hardness and a minimum impact strength value of 42J as per ASTM 370 Charpy V-Notch, at -10°C. Inner surfaces of bodies are treated to enhance mud corrosion resistance and maintenance operations.

- **H2S Trim**: This version has been designed for low H_2S concentrations. Internal parts are made of corrosion-resistant materials matching the NACE MR0175 standard, fitted in a standard body.

- **NACE Version**: The NACE version fully meets the NACE MR0175 standard to resist higher H_2S concentrations. The body is made of UNS S17400, heat-treated to meet both NACE standard and API Spec 7 (latest editions).

- PSI working pressure 10,000 and 15,000.

Global Energy provides the following Kelly Valves designed for maximum fluid circulation without pressure loss. Valves are supplied with either API or your choice of premium connections.

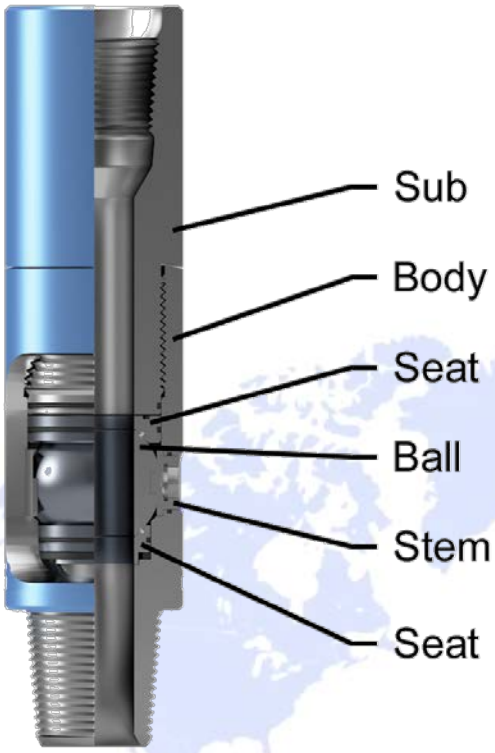
- One Piece (Upper) Kelly Valve.
- One Piece (Lower) Kelly Valve.
- Safety Valve.
- Drilling String (Drop-In) Check Valve.
- Float Valve.

Global Energy Safety Valves meet or exceed API 7.1 and ISO 10424:2004 minimum requirements.

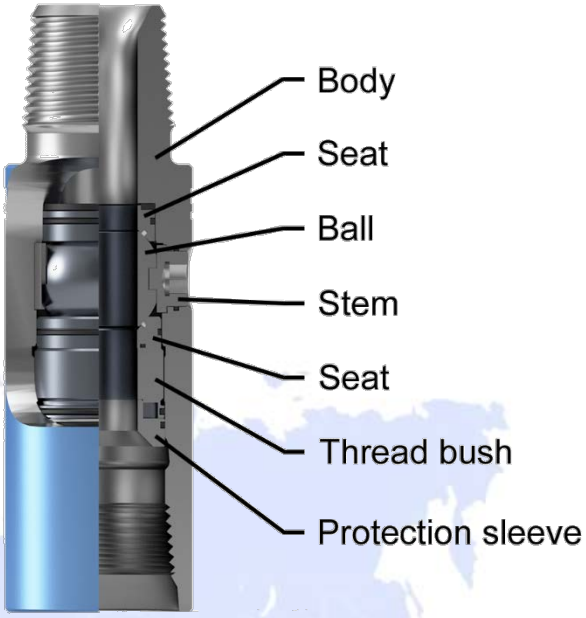
One-Piece Kelly Valve

Safety valve

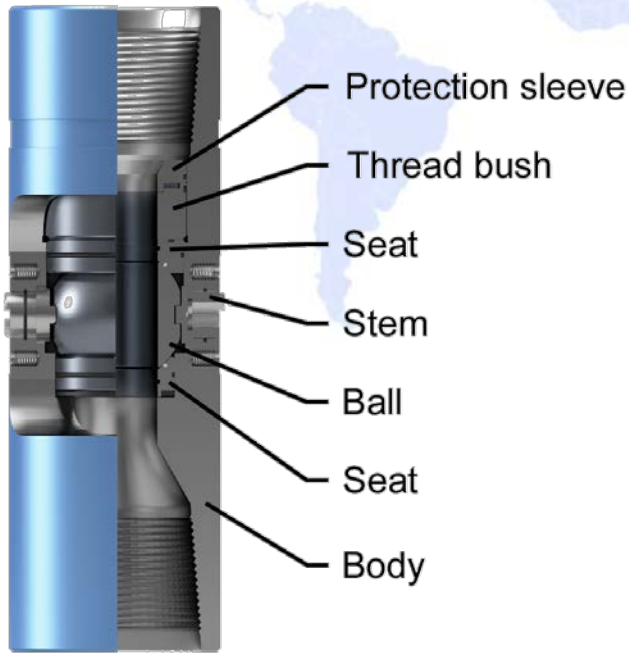
Global Energy manufactures Kelly Valves, Retrievable Drop-In Check Valves and Inside BOP Valves used throughout the world.



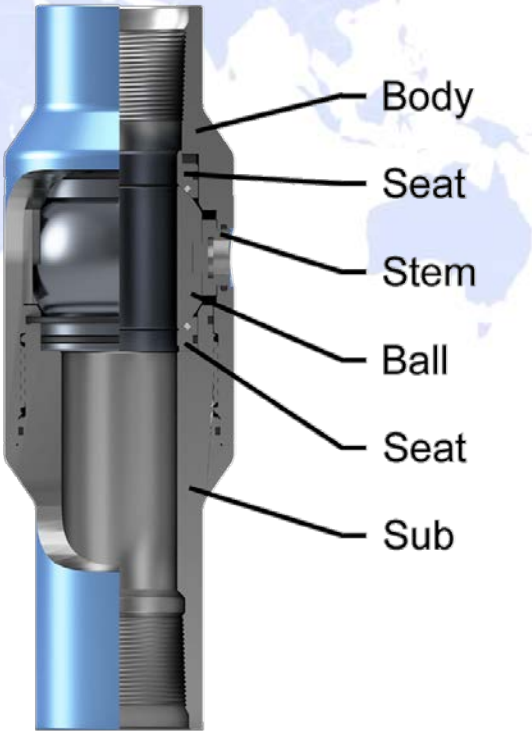
Two-piece valve



Lower top drive valve



Upper Top-Drive Valve



Safety Valve

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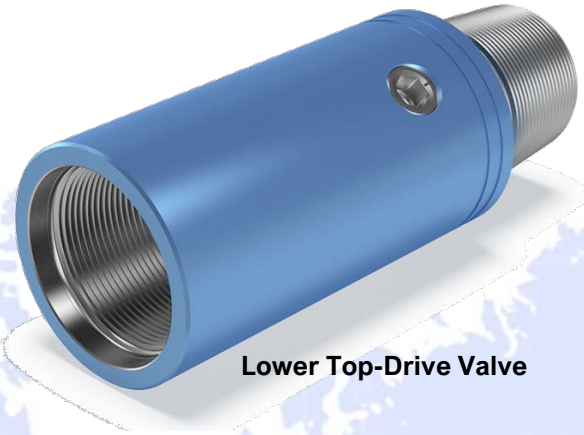
One-Piece Kelly Valve



Lower Top-Drive Valve

Two-Piece Kelly Valve

IBOP Top-Drive lower Kelly Valve

IBOP Upper Top-Drive Valve

INSIDE B.O.P. DART VALVES

Global Energy offers two different types of Check Valves, Inside BOP Valves and Retrievable Drop-In Check Valves.

The Inside BOP Valve (IBOP) is a heavy-duty Check Valve used in protecting against drill string kicks at the rig floor. It can be left in the drill string as long as necessary to re-establish well-pressure balance control.

Features include:

- O.D. sizes ranging from 3-3/8” to 9-1/2”.
- I.D. sizes ranging from 1-1/2” to 2-13/16”.
- PSI working pressure 10,000 and 15,000.

The Retrievable Drop-In Check Valve (RDCV) is used to control back flows from high-pressure formations. It also allows downward fluid circulation within the drill string. When the back flow is under control, the Drop-In Check Valve may be retrieved using a wire line.

Features include:

- OD sizes ranging from 1-9/32” to 3-7/64”;
- ID sizes ranging from 3/8” to 1-11/16
- PSI working pressure 10,000 and 15,000; an
- Optional features, including non-API connections, landing sub-ODs and landing sub lengths.

Global Energy Check Valves ensure rig safety by providing protection from kicks in high pressure formations.

DRILL PIPE PUP JOINTS

Global Energy Pup Joints are available in standard lengths of 5', 10', 15' and 20'. Other configurations are available upon request. Global Energy Pup Joints are made from modified alloy steel heat-treated to a Brinell Hardness range of 285–341 with a Charpy V-Notch minimum impact strength of 40 ft-lbs. at 70°F guaranteed to one inch below the surface. Connections can be cold rolled after machining, if requested. All connections are phos-coated to prevent galling during initial make-up and can be manufactured with API or your choice of premium connections.

Global Energy also offers integral Pup Joints for Sour Service H_2S applications. Global Energy's Sour Service H_2S Pup Joint material provides improved resistance to sulfide stress cracking with high yield strength.

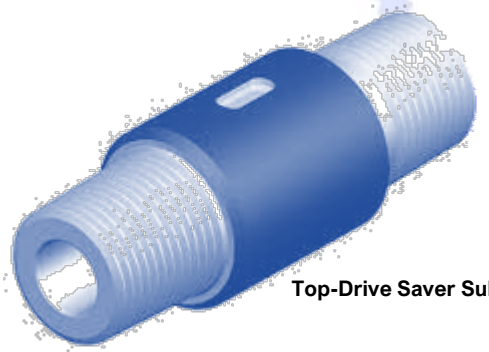
Pup-Joint

TOP-DRIVE & KELLY SAVER SUBS

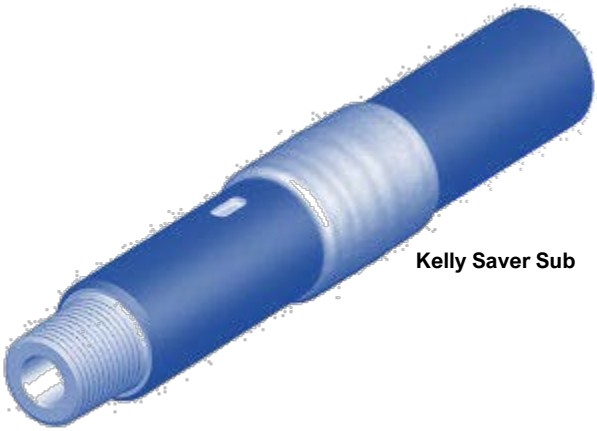
Global Energy's Saver Subs are available to suit all Top-Drive and Kelly applications and can be manufactured slick or with spline detail to suit the specific Top-Drive or Kelly requirements.

The Top-Drive Saver Subs serves as a sacrificial element between the drill string and Top-Drive or Kelly, reducing any unwanted repair and maintenance costs.

All Top-Drive & Kelly Saver Subs are made of AISI 4145H-modified alloy steel and manufactured to API Spec 7 (latest editions).



Top-Drive Saver Sub

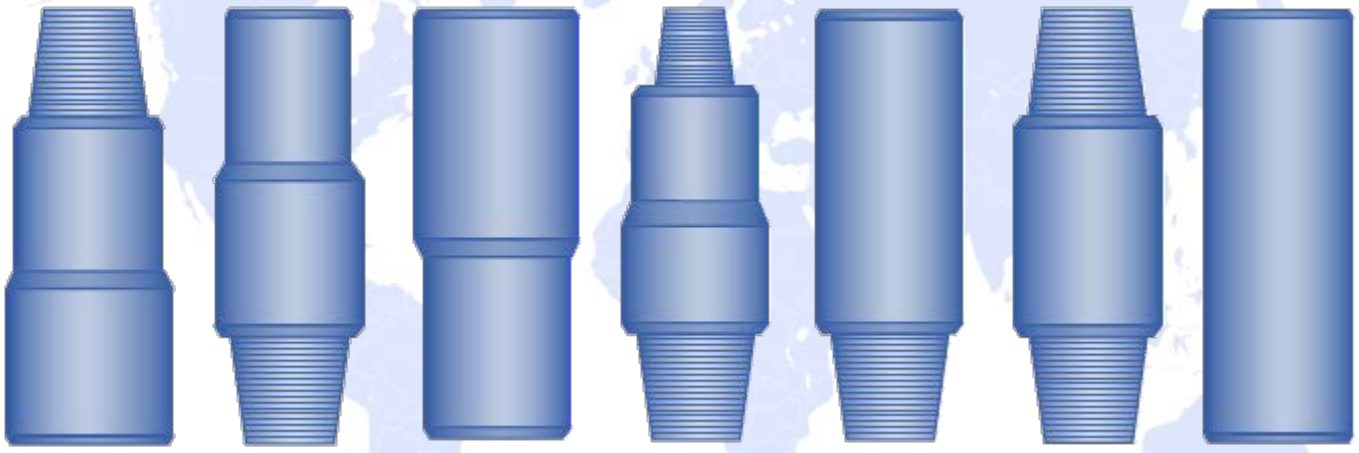


Kelly Saver Sub

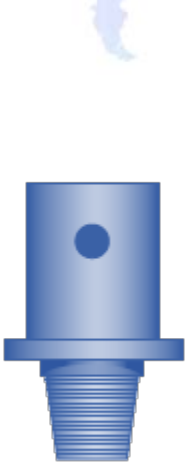
DRILL STEM ROTARY SUBS, LIFT SUBS & LIFT PLUGS

Global Energy Manufactures all types of drill stem subs, including Reduced Section Subs, Straight OD Subs, Bit Subs, Kelly Saver Subs and Lift Subs, as well as Pump-in Subs, Side-entry Subs and Circulating Subs.

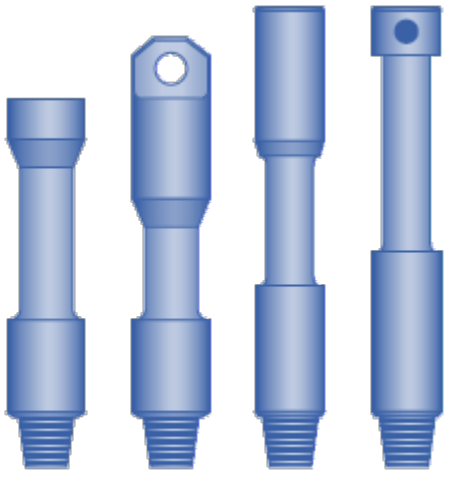
Drill stem subs are made of AISI 4145H-modified steel and manufactured to the same specifications used for Global Energy's drill collars. Global Energy's heat-treatment processes ensure a Brinell Hardness range of 285–341 with a Charpy V-Notch minimum impact strength of 40 ft-lbs. at 70°F guaranteed to one inch below the surface. Subs are heat-treated to 110,000 psi minimum yield strength. Connections can be cold rolled after machining, if requested. All connections are phos-coated to prevent galling during initial make-up.



Reduced Section/Bottleneck Subs **Straight OD Subs** **Bit Sub**

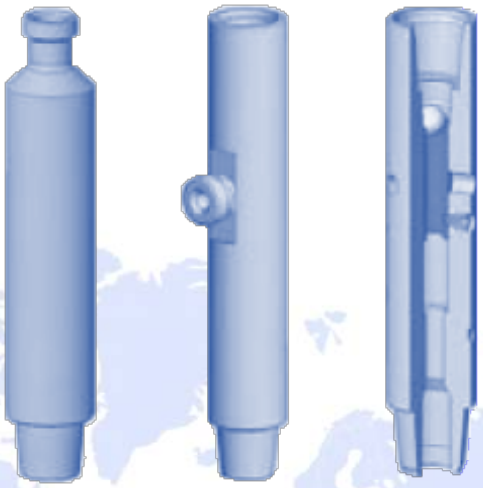


Lift Plug



Lift Subs

PUMP-IN & CIRCULATION SUBS

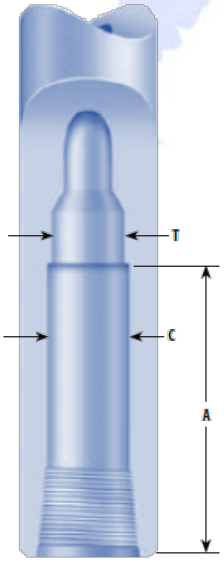


Pump-In Sub | Side-Entry Sub | Circulation Sub

Global Energy drill stem subs are available in sizes from 3-1/8” to 11-1/4” and in a full range of connection combinations and standard lengths. Global Energy’s heavy-duty Lift Subs and Lift Plugs are available in sizes from 3-1/8” to 11”.

Product Data Tables† are available upon request.

BIT-SUBS



Bit Sub Float

Bit Sub Float Bore Size†

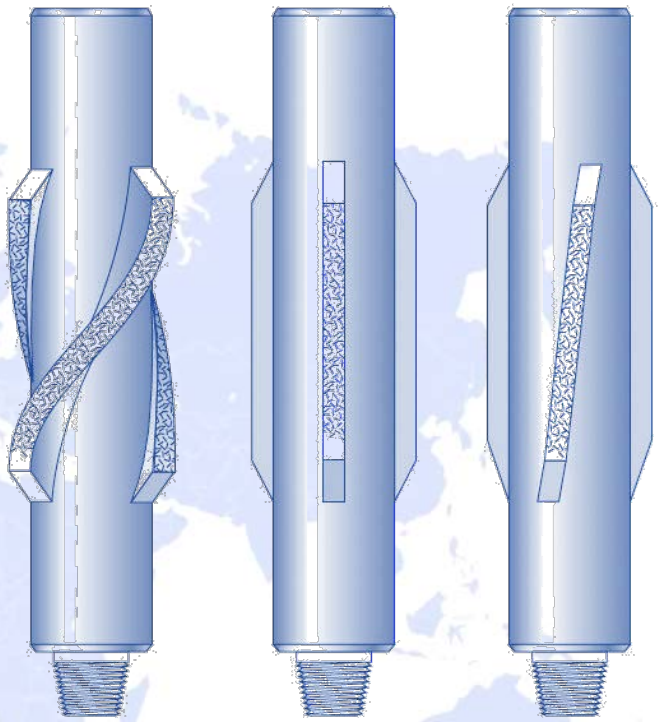
Connection	Baker Float Valve	A (+/- 1/16 in)	C (0; + 1/16 in)	T(1) (in max)
2 3/8 Reg	1R	9 1/8	1 11/16	1 5/16
2 7/8 Reg	1F-2R	10	1 15/16	1 1/2
3 1/2 Reg	2F-3R	10 1/2	2 7/8	1 29/32
4 1/2 Reg	4R	12 13/16	3 1/2	2 15/16
6 5/8 Reg	5F-6R	17	4 13/16	4 9/32
7 5/8 Reg	5F-6R	17 1/4	4 13/16	4 9/32
8 5/8 Reg	5F-6R	17 3/8	4 13/16	4 9/32
	6F	20 1/4	5 23/32	5 3/16

Note: † The ID of the sub shall not exceed T.

DRILLING STABILIZERS

Stabilizers are used to prevent buckling of drill collars and undesirable deviation of the drill string. Typically, one or two stabilizers are placed in the bottom hole assembly (BHA) to increase drill string stability. Additional stabilizers can be added to the drill string to further improve BHA solidness and minimize wellbore deviation.

Stabilizers are also used to avoid differential sticking of the drill string and to reduce vibration, drill pipe whirl and wellbore tortuosity. Whether you are drilling vertical, horizontal, or deviated wells, by using Global Energy stabilizers you maintain drilling trajectory to reach your drilling targets efficiently.



Drilling Stabilizers Data Table†

Dimensions	Fishing Neck		Wall Contact	Overall Length		Blade Angle		Blade Width	Approx Weight
Hole Size (in)	Length (in)	OD (in)	Length (in)	Near Bit (in)	String (in)	Open Design	Tight Design 360° Coverage	BW (in)	(lbs)
6	28	4-3/4	16	69	72	15°	15°	2-3/16	320
8-1/2	28	6-1/2	16	69	73	15°	23°	2-3/8	717
12-1/4	30	8	18	77	82	15°	27°	3-1/2	1,146
12-1/4	30	9-1/2	18	77	82	15°	27°	3-1/2	1,477
16	30	9-1/2	18	87	92	15°	35°	4-1/2	2,227
17-1/2	30	9-1/2	18	89	93	15°	38°	4-1/2	2,315
26	30	9-1/2	18	98	103	15°	43°	5	3,417

All Drilling Stabilizers are made of AISI 4145H-modified alloy steel and manufactured to API Spec 7 (latest editions).

TOP DRIVE PUMP-IN SUBS

Specifically designed for use with top drives, Global Energy's pump-in sub provides additional space (up to 3-1/2 feet) between the bottom of the top drive stabbing bell and the pump-in assembly. The added space allows for easier installation of your pump-in line assembly and for safer operations when moving of the drill string is required, such as landing a casing liner. For an integral lift sub, the top drive pump-in sub incorporates either a 1502 or 2202 Weco thread as its upper connection for the most common pump-in connections.

Top Drive
Pump-In Sub

LIFT NUBBINS

Global Energy's lift nubbins offer the ultimate in thread protection when it comes to the lifting of drill collars. These certified lifting devices ensure safe handling of tubular products during manufacturing, shipping or at the rig site. Lift nubbins are manufactured from steel castings with heavy-duty bails suitable for picking up and laying down a drill collar with the catline… manufactured in accordance to API specifications.

THREAD PROTECTORS

Far less expensive than the cost of re-cutting threads, Global Energy thread protectors offer guaranteed thread protection and are available for all standard oilfield connections. Global Energy products are generally shipped with high-impart plastic protectors, while cast-steel protectors are available as an option… additionally, your choice of premium connections are also available.

Global Energy's precision-machined cast steel thread protectors are ideal for handling and protecting swivels, drill collars, tool joints and wear subs. Global Energy is the name you can trust for all your Thread Protection requirements.

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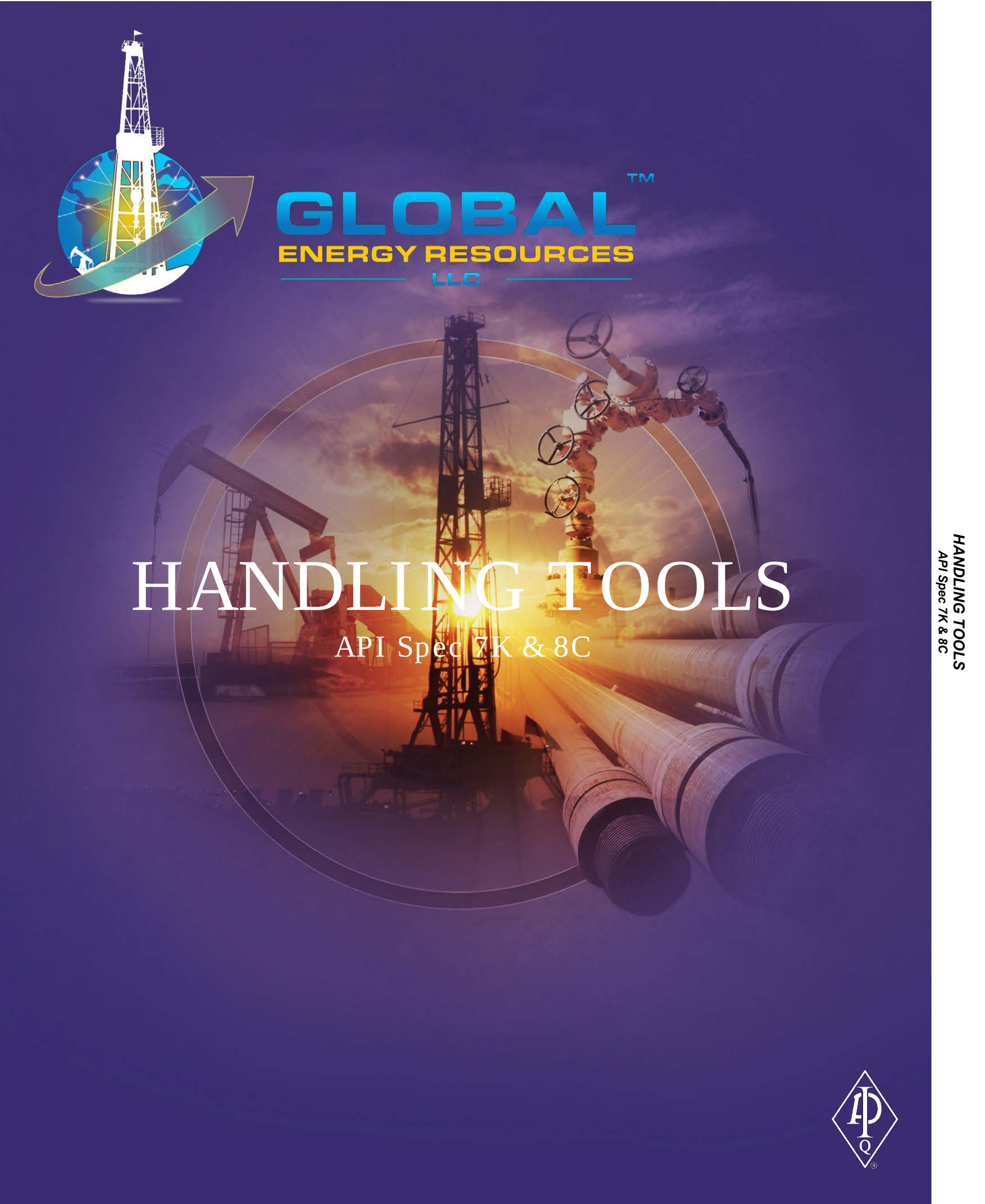


HANDLING TOOLS

API Spec 7K & 8C

HANDLING TOOLS
API Spec 7K & 8C

HANDLING TOOLS

API Spec 7K & 8C, Q1® (latest edition)

Keep Your Oilfield Operations Running Smoothly with Global Energy's Top-Tier API Premium Handing Tools Equipment…

Premium API Handling Tools

Elevators

An essential component to drilling ops, elevators are hinged clamps that lift and lower drill pipe, casing, and tubing into the drilling hole. Premium Tools carries a variety of styles including bottleneck, slimhole, single joint, bushing type, and slip type.

Becket & Bails Assembly

Bails are lifting rods with eyes on both ends while the U-shaped bails suspend pipe elevators. Premium Tools becks and bails come in a variety of sizes to best fit every specific need.

Bowl & Slip

Insert bowls have a cylindrical body with a tapered inner surface that supports the slips. Premium Tools' bowls can accommodate various size casings.

Slips

Rotary slips are used to grip the upper part of a drill string to the oil rig drill floor. Slips are designed as a set of hinged metal wedges that form a circular shape around the pipe, casing, or tubing.

Tongs

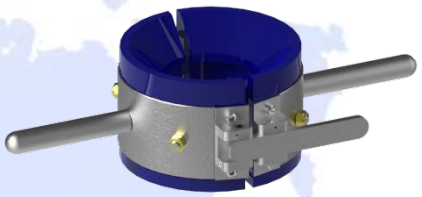
Manual tongs are rig tools used for turning drill pipe, casing, or other tubing. Premium Tools offers the HT-200 rotary tong, the type-C tong.

Stabbing Guides

Premium Tools' stabbing guides function to reduce damage to connections and are available in different styles.

Safety Clamps

Premium Tools' safety clamps are designed with flexibly hinged links with tapered slips that securely grip the pipe or collar. The taped mounting offers protection against pipe slippage by wedging against the surface if the pipe shifts. Safety clamps come in a variety of sizes.



- **Maximize uptime and efficiency:** At Global Energy, we understand the critical role reliable equipment plays in your oilfield operations. That's why we offer a comprehensive selection of high-quality, new, and refurbished oilfield tools and handling equipment, ensuring you have the right tools for the job, whenever you need them.

- **Diverse selection for every need:** Whether you require elevators, power tongs, power units, tong test stands, casing running tools, casing tools, or rotary tools, we have you covered. Our extensive inventory caters to a wide range of oilfield applications, allowing you to find the specific equipment you need to get the job done.

- **Unbeatable value:** We offer competitive prices on both sales and rentals, ensuring you get the most value for your investment. Additionally, our refurbished equipment undergoes rigorous testing and inspection, providing a cost-effective option without compromising on quality.

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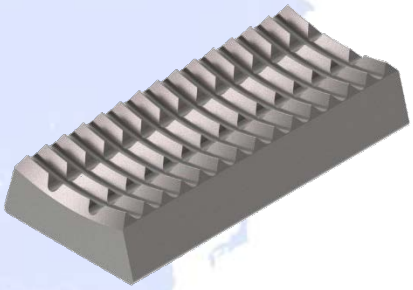
- **Trusted expertise:** Our team of experienced professionals is dedicated to understanding your specific needs and recommending the most suitable equipment for your operations. We offer exceptional customer service and are committed to providing ongoing support to ensure your complete satisfaction.

Contact Global Energy today to discuss your oilfield equipment requirements. Let us help you optimize your operations and achieve your production goals.

Visit our website at www.globalenergyusa.com to browse our complete inventory and learn more about our services.



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DRILLING EQUIPMENT

API Spec 6A, 7K, 16A & 16D

DRILLING EQUIPMENT
API Spec 6A, 7K, 16A & 16D

DRILLING EQUIPMENT

API Spec 6A, 7K, 16A & 16D, Q1® (latest edition)

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Global Energy Resources, the Drilling Equipment experts… *We have what you need when you need it!*

We have a wide selection of products to choose from, including AC Top-Drives, Drawworks, Tri-Plex Mud Pumps, Auto Cat-Walks, Iron Roughnecks, Rotary Tables, AC & DC Traction Motors, BOP's and more. Our knowledgeable staff can help you find the right equipment for your project, and we offer competitive prices and fast delivery. From the Crown to the Ground, get the drilling equipment you need, when you need it, from Global Energy Resources.

- Global Energy Resources is a one-stop shop for all drilling equipment needs.
- We have a wide selection of products to choose from.
- Our staff is knowledgeable and can help you find the right equipment for your project.
- We offer competitive prices and fast delivery.

API Blowout Preventers and Annular Preventers: A Safety Partnership!

Global Energy Resources is a leading supplier of API Blowout and Annular Preventers. We have a wide inventory of preventers to choose from, and we can customize a solution to meet your specific needs. Our preventers are made from high-quality materials and are rigorously tested to ensure safety and reliability. We also offer a wide range of services, including installation, repair, and maintenance. Contact us today to learn more about our API Blowout and Annular Preventers.

Blowout preventers (BOPs) are essential safety devices used in the oil and gas industry to prevent the uncontrolled release of well fluids. API Blowout Preventers are designed to meet or exceed API standards, and are manufactured to the highest quality standards. Global Energy Resources offers a wide range of API Blowout Preventers to meet the needs of any drilling operation.

Annular preventers are a type of BOP that is used to seal around the drill pipe or casing. They are typically used in conjunction with ram preventers to provide a more complete seal. Global Energy Resources offers a wide range of annular preventers to meet the needs of any drilling operation.

API AC VFD and/or DC SCR Traction Drilling Motors: Essential for Drilling Operations!

Global Energy Resources is a leading supplier of API AC VFD and/or DC SCR Traction Drilling Motors. We have a wide inventory of motors to choose from, and we can customize a solution to meet your specific needs. Our motors are made from high-quality materials and are rigorously tested to ensure safety and reliability. We also offer a wide range of services, including installation, repair, and maintenance. Contact us today to learn more about our traction drilling motors.

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Global Resources: Your One-Stop Shop for Tri-Plex Mud Pumps

Are you looking for a reliable and durable Tri-Plex Mud Pump? Look no further than Global Resources! We are a leading provider of API drilling equipment, and we have a wide selection of Tri-Plex Mud Pumps to choose from, including rebuilt and new pumps. Our pumps are made in the USA from high-quality materials and are built to the highest standards. We also offer a variety of financing options to make it easy for you to get the equipment you need.

Here are just a few of the benefits of buying a Tri-Plex Mud Pump from Global Resources:

- Reliable and durable: Our pumps are made from high-quality materials and are built to the highest standards. They are designed to withstand the rigors of the oil and gas industry.
- Wide selection: We have a wide selection of Tri-Plex Mud Pumps to choose from, so you can find the perfect one for your needs.

- Rebuilt or new: We offer both rebuilt and new Tri-Plex Mud Pumps, so you can choose the option that best fits your budget and needs.
- Financing options: We offer a variety of financing options to make it easy for you to get the equipment you need.
- Expert customer service: Our team of experts is available to answer your questions and help you choose the right pump for your needs.

Contact Global Resources today to learn more about our Tri-Plex Mud Pumps and how we can help you with your drilling needs.

AC Top-Drives

Global Resources: The Best Place to Buy your next AC Top Drive

Looking for a powerful and efficient AC Top Drive? Look no further than Global Resources! We are a leading provider of API drilling equipment, and we offer a wide selection of AC Top Drives to choose from. Our drives are made from high-quality materials and are built to the highest standards. We also offer a variety of financing options to make it easy for you to get the equipment you need.

Here are just a few of the benefits of buying an AC Top Drive from Global Resources:

- Powerful and efficient: Our drives are powered by AC motors, which provide the power and torque you need to drill efficiently.

- Wide selection: We have a wide selection of AC Top Drives to choose from, so you can find the perfect one for your needs.
- New or rebuilt: We offer both new and rebuilt AC Top Drives, so you can choose the option that best fits your budget and needs.
- Financing options: We offer a variety of financing options to make it easy for you to get the equipment you need.
- Expert customer service: Our team of experts is available to answer your questions and help you choose the right drive for your needs.

Contact Global Resources today to learn more about our AC Top Drives and how we can help you with your drilling needs.

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RENTAL of DRILL PIPE, HANDLING TOOLS & DRILLING EQUIPMENT

API Spec Q2®, ISO 9001, ISO 14001

RENTAL of DRILL PIPE, HANDLING TOOL & EQUIP.

DOWNHOLE TUBULARS & EQUIPMENT RENTAL

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GLOBAL ENERGY RESOURCES… Premium API® Oilfield Equipment for you upstream oilfield operations!

Global Energy provides comprehensive rental solutions to streamline your upstream Oil & Gas operations. Our vast selection of tools caters to every stage of your project, from land drilling equipment to deepwater solutions. We are committed to ensuring efficient project completion, on and offshore. Choose Global Energy and experience the difference.

Global Energy Rental Inventory

- DRILL PIPE
- HEAVY WEIGHT (HWDP) DRILL PIPE
- DRILL COLLARS
- DRILL STEM ACCESSORIES & HANDLING TOOLS
- BLOWOUT PREVENTERS & ACCESSORIES
- VALVE & MANIFOLD EQUIPMENT
- TUBING, TUBING ACCESSORIES & HANDLING EQUIPMENT
- STABILIZERS & ROLLER REAMERS

Global Energy Inspection Services

Global Energy is a leading provider of inspection and hardbanding services for drill pipe, tubing, bottom-hole assembly components, and handling equipment. We provide DS-1 Cat I-V inspection, re-facing or premium (double-shouldered) connections, and “casing-friendly” Hardbanding services.

Global Energy has in-house ASNT Level III, overseeing inspection operations. All NDT inspections are conducted by Level I and Level II ASNT-certified specialists who follow DS-1 specifications and are tested by the International Pipe Inspectors Association (IPIA) and/or ASNT-certified Level III instructor.

Our Oklahoma City, Oklahoma location performs the following inspection services:

- API RP7G-2
- DS-1
- CAT I-V
- EMI TYPE 2 & 4
- ULTRASONIC
- SHEAR WAVE
- FLUT 1
- FLUT 2
- WET & DRY MAG PARTICLE INSPECTIONS
- DRILL PIPE
- LANDING STRINGS
- HEAVY WEIGHT DRILL PIPE
- BOTTOM HOLE ASSEMBLY
- THREADED CONNECTIONS
- TUBING
- RANGE 3 TUBULARS

Downhole Tubular & Drilling Equipment Rental Solutions

API rental drill pipe that's built to last, even in the toughest conditions

Global Energy offers a wide range of API Standard Connections, as well as a variety of premium Hi-Torque and proprietary connections that we stock and can deliver quickly.

Reliable API rental drill pipe for demanding drilling operations

We always have a wide range of your most common sizes, weights, grades, and connections of drill pipe, but we also keep on-hand hard-to-find Downhole Tubulars for demanding drilling applications.

Downhole Tubular & Drilling Equipment Rental Solutions

API rental drill pipe that delivers superior performance and durability

Need HWDP, Drill Collars, or Handling Tools? Rent from Global Energy and get the equipment you need, when you need it, without the upfront investment.

Rental drilling equipment that's always available when you need it

Global Energy offers a wide range of Tri-Plex mud pump rentals and other drilling equipment, so you can get the power and performance you need to achieve your drilling goals.

Downhole Tubular & Drilling Equipment Rental Solutions

Rental drilling equipment
hat's as reliable as your own

Global Energy offers a comprehensive range of Top-Drive rentals and other drilling equipment, so you can get the productivity and efficiency you need to stay ahead of the competition.

Rental drilling equipment that gives you the power to drill deeper, faster, and more efficiently

Rent a BOP or other drilling equipment from Global Energy and get the safety and reliability you need to drill your wells with confidence.

Rent Your Downhole Tubulars from Global Energy Today!

Global Energy is the best source to rent all of your downhole tubulars. We have the best selection of drill collars, drill pipe, and HWDP to choose from, not to mention all the handling tools to complete your drilling package. We offer the best pricing and fastest delivery time, **backed by our industry-leading commitment to customer satisfaction**. We stock the hard-to-find boutique drill pipe that no one else has. We are here 365 days a year, 24 hours a day, around the clock, with **unmatched quality and service**, backed by our team of experienced professionals. We not only offer API Connection, but we also offer the full array of proprietary and premium connections to meet your specific needs. **Contact us today to learn more about our downhole tubular rental services and book your rental now!**

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SPECIALTY TUBING

API Spec 5CT

SPECIALTY TUBING

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API Spec 5CT, Q1® (6th edition)

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If you're looking for the best API 5CT, Q1 (latest edition) PH6™, PH4™ or CS® tubing on the market, then Global Energy is the only choice. Contact us today to learn more about our products and services. Manufactured in the USA and/or Canada.

- Our PH6™, PH4™ & CS® tubing is used by some of the largest and most demanding oil & gas companies in the world.
- We offer a variety of customization options to meet your specific needs.
- We are committed to providing you with the best possible value for your money.

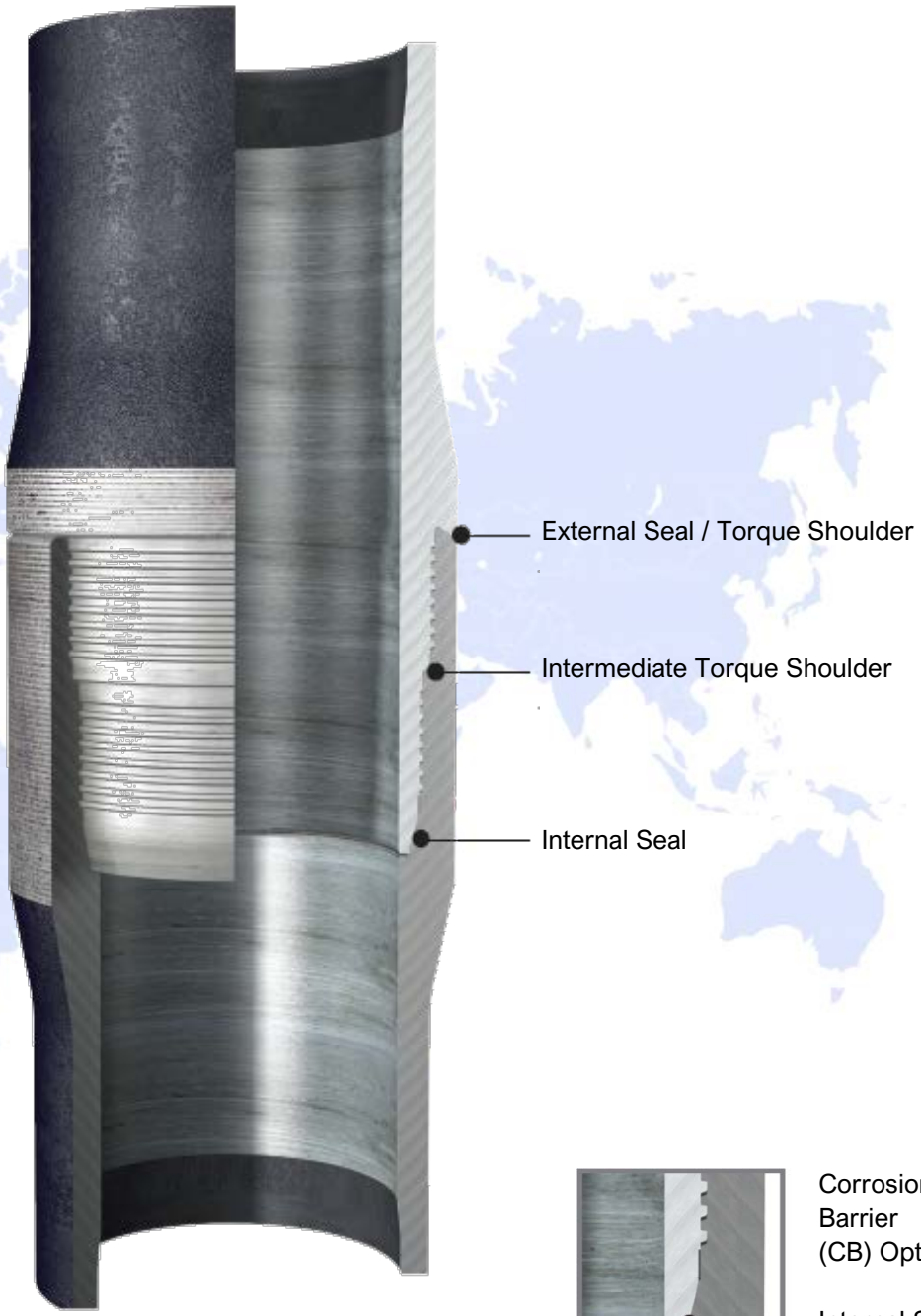
Budget your project with confidence: Global Energy's 'Used Premium' EMI 4-Point Inspected PH6™ & CS® (White Band) Tubing delivers reliable performance at a reduced cost, meeting the strictest safety standards with H2S and NORM-free materials. Contact us today to learn more and get a quote!

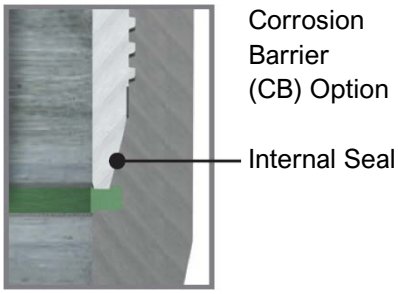
Streamlined, Cost-Effective Shipping Solutions: Global Energy Logistics Delivers

Global Energy's logistics department seamlessly connects your needs with both domestic and international in-land trucking and/or sea freight solutions. Our extensive network ensures quick and reliable transportation, whether you require CIF delivery directly to your doorsteps or competitive pricing options tailored to your budget. Experience the peace of mind that comes with entrusting your cargo to our dedicated team, committed to exceeding your expectations every step of the way.

PH6™ / PH4™ / CS® Configuration

PH6™ = 6 TPI
PH4™ = 4 TPI
CS® = 8 TPI ≤ 4 ½"
CS® = 4 TPI ≥ 5"

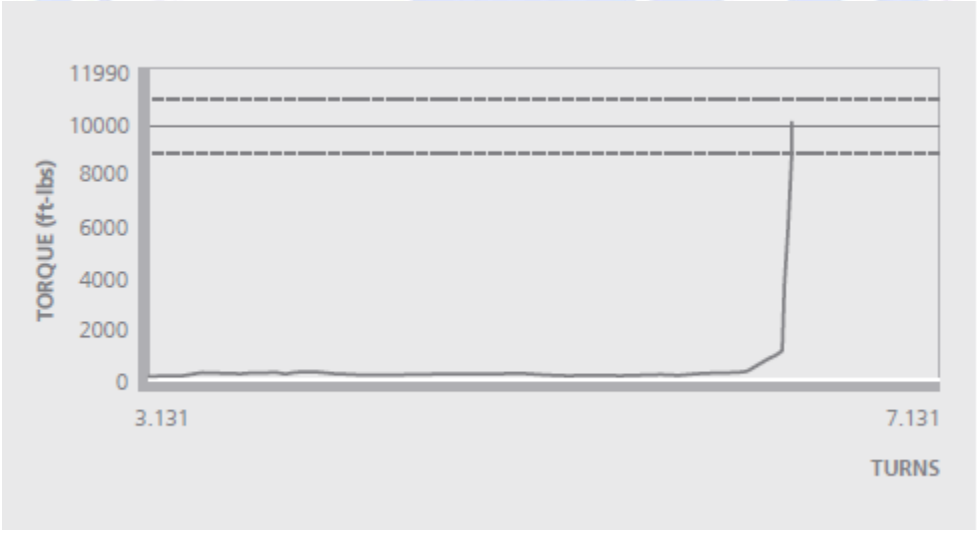




PH6™ Tubing Dimension Data Table†

DESIGNATION			PIN and BOX		PIN						BOX					
			GENERAL		REGULAR		SPECIAL CLEARANCE		GENERAL		REGULAR		SPECIAL CLEARANCE		GENERAL	
DIAMETER	WEIGHT	PRODUCT	MINIMUM LENGTH	ADD. LENGTH 1 RECUT	OUTSIDE DIAMETER min	OUTSIDE DIAMETER max	OUTSIDE DIAMETER min	OUTSIDE DIAMETER max	INSIDE DIAMETER min	INSIDE DIAMETER max	OUTSIDE DIAMETER min	OUTSIDE DIAMETER max	OUTSIDE DIAMETER min	OUTSIDE DIAMETER max	INSIDE DIAMETER min	INSIDE DIAMETER max
in.	lb/ft	---	inch (mm)	inch (mm)	inch (mm)	inch (mm)	inch (mm)	inch (mm)	inch (mm)	inch (mm)	inch (mm)	inch (mm)	inch (mm)	inch (mm)	inch (mm)	inch (mm)
2.375	5.95	TSH PH6	3.770 (95.76)	1.250 (31.75)	2.886 (73.30)	2.922 (74.22)	2.772 (70.41)	2.792 (70.92)	1.800 (45.72)	1.818 (46.18)	2.886 (73.30)	2.922 (74.22)	2.772 (70.41)	2.792 (70.92)	1.800 (45.72)	1.818 (46.18)
	6.20	TSH PH6	3.770 (95.76)	1.250 (31.75)	2.918 (74.12)	2.954 (75.03)	2.784 (70.71)	2.804 (71.22)	1.790 (45.47)	1.810 (45.97)	2.918 (74.12)	2.954 (75.03)	2.784 (70.71)	2.804 (71.22)	1.790 (45.47)	1.810 (45.97)
	6.60	TSH PH6	3.770 (95.76)	1.250 (31.75)	3.012 (76.50)	3.048 (77.42)	2.844 (72.24)	2.864 (72.75)	1.720 (43.69)	1.740 (44.20)	3.012 (76.50)	3.048 (77.42)	2.844 (72.24)	2.864 (72.75)	1.720 (43.69)	1.740 (44.20)
	7.70	TSH PH6	3.770 (95.76)	1.250 (31.75)	3.105 (78.87)	3.141 (79.78)	2.914 (74.02)	2.934 (74.52)	1.640 (41.66)	1.660 (42.16)	3.105 (78.87)	3.141 (79.78)	2.914 (74.02)	2.934 (74.52)	1.640 (41.66)	1.660 (42.16)
2.875	7.90	TSH PH6	3.780 (96.01)	1.250 (31.75)	3.418 (86.82)	3.454 (87.73)	3.302 (83.87)	3.322 (84.38)	2.260 (57.40)	2.280 (57.91)	3.418 (86.82)	3.454 (87.73)	3.302 (83.87)	3.322 (84.38)	2.260 (57.40)	2.280 (57.91)
	8.70	TSH PH6	3.780 (96.01)	1.250 (31.75)	3.480 (88.39)	3.516 (89.31)	3.355 (85.22)	3.375 (85.73)	2.195 (55.75)	2.215 (56.26)	3.480 (88.39)	3.516 (89.31)	3.355 (85.22)	3.375 (85.73)	2.195 (55.75)	2.215 (56.26)
	8.90	TSH PH6	3.780 (96.01)	1.250 (31.75)	3.480 (88.39)	3.516 (89.31)	3.370 (85.60)	3.390 (86.11)	2.175 (55.25)	2.195 (55.75)	3.480 (88.39)	3.516 (89.31)	3.370 (85.60)	3.390 (86.11)	2.175 (55.25)	2.195 (55.75)
	9.50	TSH PH6	3.780 (96.01)	1.250 (31.75)	3.605 (91.57)	3.641 (92.48)	3.409 (86.59)	3.429 (87.10)	2.125 (53.98)	2.145 (54.48)	3.605 (91.57)	3.641 (92.48)	3.409 (86.59)	3.429 (87.10)	2.125 (53.98)	2.145 (54.48)
	10.40	TSH PH6	3.780 (96.01)	1.250 (31.75)	3.636 (92.35)	3.672 (93.27)	3.447 (87.55)	3.467 (88.06)	2.085 (52.96)	2.105 (53.47)	3.636 (92.35)	3.672 (93.27)	3.447 (87.55)	3.467 (88.06)	2.085 (52.96)	2.105 (53.47)
	10.70	TSH PH6	3.780 (96.01)	1.250 (31.75)	3.668 (93.17)	3.704 (94.08)	3.499 (88.87)	3.519 (89.38)	2.025 (51.44)	2.045 (51.94)	3.668 (93.17)	3.704 (94.08)	3.499 (88.87)	3.519 (89.38)	2.025 (51.44)	2.045 (51.94)
3.500	12.80	TSH PH6	4.190 (106.43)	1.300 (33.02)	4.293 (109.04)	4.329 (109.96)	4.168 (105.87)	4.188 (106.38)	2.695 (68.45)	2.714 (68.94)	4.293 (109.04)	4.329 (109.96)	4.168 (105.87)	4.188 (106.38)	2.695 (68.45)	2.714 (68.94)
	12.95	TSH PH6	4.190 (106.43)	1.300 (33.02)	4.293 (109.04)	4.329 (109.96)	4.179 (106.15)	4.199 (106.65)	2.682 (68.12)	2.702 (68.63)	4.293 (109.04)	4.329 (109.96)	4.179 (106.15)	4.199 (106.65)	2.682 (68.12)	2.702 (68.63)
	14.30	TSH PH6	3.900 (99.06)	1.300 (33.02)	4.394 (111.61)	4.426 (112.42)	4.277 (108.64)	4.297 (109.14)	2.545 (64.64)	2.565 (65.15)	4.394 (111.61)	4.426 (112.42)	4.277 (108.64)	4.297 (109.14)	2.545 (64.64)	2.565 (65.15)
	15.80	TSH PH6	4.190 (106.43)	1.300 (33.02)	4.484 (113.89)	4.516 (114.71)	4.357 (110.67)	4.377 (111.18)	2.480 (62.99)	2.500 (63.50)	4.484 (113.89)	4.516 (114.71)	4.357 (110.67)	4.377 (111.18)	2.480 (62.99)	2.500 (63.50)
4.000	13.40	TSH PH6	4.190 (106.43)	1.300 (33.02)	4.605 (116.97)	4.641 (117.88)	4.504 (114.40)	4.524 (114.91)	3.270 (83.06)	3.282 (83.36)	4.605 (116.97)	4.641 (117.88)	4.504 (114.40)	4.524 (114.91)	3.270 (83.06)	3.282 (83.36)
4.500	15.50	TSH PH6	4.190 (106.43)	1.300 (33.02)	5.105 (129.67)	5.141 (130.58)	5.011 (127.28)	5.031 (127.79)	3.760 (95.50)	3.772 (95.81)	5.105 (129.67)	5.141 (130.58)	5.011 (127.28)	5.021 (127.53)	3.760 (95.50)	3.772 (95.81)
	17.00	TSH PH6	3.830 (97.28)	1.300 (33.02)	5.200 (132.08)	5.220 (132.59)	5.081 (129.06)	5.101 (129.57)	3.640 (92.46)	3.660 (92.96)	5.200 (132.08)	5.220 (132.59)	5.081 (129.06)	5.101 (129.57)	3.640 (92.46)	3.660 (92.96)
	19.20	TSH PH6	4.190 (106.43)	1.300 (33.02)	5.293 (134.44)	5.329 (135.36)	5.160 (131.06)	5.180 (131.57)	3.555 (90.30)	3.575 (90.81)	5.293 (134.44)	5.329 (135.36)	5.160 (131.06)	5.180 (131.57)	3.555 (90.30)	3.575 (90.81)

PH6™ Tubing Dimension Data Table†



Contact your Global Energy Sales Representative today to discuss your specific PH6™ and/or OCTG requirements… please visit our website at www.globalenergyusa.com for more information on all our advanced OCTG solutions!

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API Spec 5CT

TUBING & CASING

OCTG (Oil Country Tubular Goods)

API Spec 5CT, Q1® (6th edition)

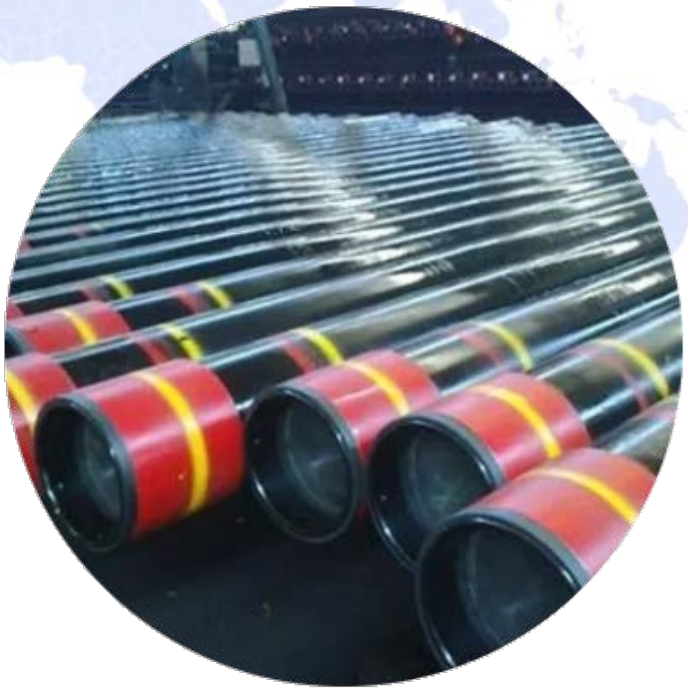
When you're thinking of New High-Quality OCTG Tubing & Casing, think Global Energy Resources

Global Energy Resources, Your One-Stop Shop for API Tubing & Casing

Global Energy Resources, LLC is the leading supplier of API 5CT, Q1 Tubing & Casing in the industry. Our Tubing & Casing is made from the highest quality materials and is manufactured to the strictest standards. We offer a wide range of sizes and lengths to meet your specific needs. Our Tubing & Casing is also backed by our industry-leading warranty, so you can be confident in your purchase.

Here are just a few of the benefits of buying API tubing and casing from Global Energy Resources:

- Made from the highest quality materials.
- Manufactured to the strictest standards.
- Wide range of sizes and lengths available.
- Industry-leading warranty.
- Competitive prices.
- Fast and reliable shipping.
- Excellent customer service.



American & Canadian Muscle: Power Your Project with Peak-Performing API 5CT, Q1 Tubing & Casing

Forged in the strength of North American manufacturing, Global Energy Resources delivers the undisputed champions of the API 5CT, Q1 (latest Edition) arena. Choose from USA or Canadian-made tubing and casing, each rigorously crafted to exceed your expectations.

Experience unmatched quality, unwavering reliability, and the peace of mind that comes with responsible sourcing practices. Our expert team provides tailored guidance to ensure you select the perfect solution for your toughest projects. Don't compromise on performance - unlock the full potential of your project with North American-made API 5CT, Q1 excellence from Global Energy Resources.

TUBING & CASING DESCRIPTION DATE TABLE†

Product Type: API Tubing, EUE Seamless Tubing: NU Seamless Tubing: Premium Tubing

Outer Diameter (OD): 48.26mm-114.30mm

Wall Thickness (WT): 3.18mm-16mm

Length: R1, R2, R3

Standard: API 5CT, Q1 J55, K55, N80-1, N80-Q, L80-1, L80-9Cr, L80-13Cr, C90, C95, T95, P110, and Q125.

Materials: H40, J55, K55, N80-1, N80-Q, L80-1, L80-9Cr, L80-13Cr, C90, C95, T95, P110, and Q125.

Thread Type: STC, LTC, BTC, VAM™ TOP equivalent, Tenaris® Top equivalent, TenarisHydril® PH6™, PH4™ or CS® equivalent, HSC™ equivalent, NUE, EUE, LTC, XC, or any other premium connections.

Application: OCTG is widely used for transporting live oil and/or natural gas to surface after completion of the well, which also bears high-pressure from well bore.

Production Technology: Plain Pipe-End Upsetting, Austenite Treatment, Quenching, Tempering, Straightening, (Non-Destructive Testing), Threading, Thread Inspection, Coupling MPI, Phosphating, Coupling Makeup, Drifting, Hydrostatic Testing, Measuring & Weight, Marking & Stenciling, Coating, Packing Tubing and Casing, Transportation.

Pipe Type: Oil Country Tubular Goods (OCTG), API 5CT, Q1 (latest Edition) Tubing and Casing, API Spec 5CT, Q1 J55, K55, N80, L80, C90, C95, T95, P110 and Q125 Casing Pipe; Seamless Steel OCTG Oil Well Tubing & Casing Pipe.

Outer diameter (OD): 114.30mm-508mm

Wall thickness (WT): 5.21mm-16.13mm

Length: R1; R2; R3

Grade: J55, K55, N80-1, N80-Q, L80-1, L80-9Cr, L80-13Cr, C90, C95, T95, P110, and Q125.

Standard: API 5CT, Q1 PSL1/PSL2 J55, K55, N80, L80, C90, C95, T95, P110 and Q125.

API 5CT PSL1/PSL2 J55, K55, N80-1, N80-Q, L80-1, L80-9Cr, L80-13Cr, C90, C95, T95, P110, and Q125.

Thread types: STC, LTC, BTC, VAM™ TOP equivalent, Tenaris® Top equivalent, TenarisHydril® PH6™, PH4™ or CS® equivalent, HSC™ equivalent, NUE, EUE, LTC, XC, or any other premium connections.

Thread: STC, LTC, BTC, VAM™ TOP equivalent, Tenaris® Top equivalent, TenarisHydril® PH6™, PH4™ or CS® equivalent, HSC™ equivalent, NUE, EUE, LTC, XC, or any other premium connections.

Application: Casing pipe plays a crucial role in wellbore integrity and stability during oil and gas exploration and production. Unlike tubing, which transports fluids within the wellbore, casing is installed with larger diameters (ranging from 4-1/2" thru 20") to reinforce the wellbore wall and prevent collapse. It serves several critical functions:

- Protecting from collapse: Casing resists the pressure of surrounding rock formations, ensuring the wellbore remains open and accessible for drilling and production.
- Isolation: Different casing strings isolate various zones within the wellbore, preventing fluid migration and ensuring targeted production from the desired reservoir.
- Well control: Casing provides a conduit for circulating drilling fluids and helps control wellbore pressure during drilling and production operations.

There are three main types of casing used in oil and gas wells:

- Surface casing: Provides initial structural support and protects shallow formations from drilling fluids.
- Intermediate casing: Installed in sections as drilling progresses, isolating shallower zones and providing additional support for deeper drilling.
- Production casing: Extends to the producing formation, allowing long-term access to hydrocarbons while isolating other zones.

GLOBAL™ ENERGY RESOURCES LLC

TUBING SPECIFICATION DATE TABLE†

API 5CT, Q1 Tubing Dimension[1]												
Label				OD (mm)	WT (mm)	Type of End-finish						
Inch	NU T&C	EU T&C	IJ			H40	J55	L80	N80	C90	T95	P110
1.9	2.75	2.9	2.76	48.26	3.68	PNUI	PNUI	PNUI	PNUI	PNUI	PNUI	-
1.9	3.65	3.73	-	48.26	5.08	PU	PU	PU	PU	PU	PU	PU
1.9	4.42	-	-	48.26	6.35	-	-	P	-	P	P	-
2 3/8	4	-	-	60.32	4.24	PU	PN	PN	PN	PN	PN	-
2 3/8	4.6	4.7	-	60.32	4.83	PNU	PNU	PNU	PNU	PNU	PNU	PNU
2 3/8	5.8	5.95	-	60.32	6.45	-	-	PNU	PNU	PNU	PNU	PNU
2 3/8	6.6	-	-	60.32	7.49	-	-	P	-	P	P	-
2 3/8	7.35	7.45	-	60.32	8.53	-	-	PU	-	PU	PU	-
2 7/8	6.4	6.5	-	73.02	5.51	PNU	PNU	PNU	PNU	PNU	PNU	PNU
2 7/8	7.8	7.9	-	73.02	7.01	-	-	PNU	PNU	PNU	PNU	PNU
2 7/8	8.6	8.7	-	73.02	7.82	-	-	PNU	PNU	PNU	PNU	PNU
2 7/8	9.35	9.45	-	73.02	8.64	-	-	PU	-	PU	PU	-
2 7/8	10.5	-	-	73.02	9.96	-	-	P	-	P	P	-
3 1/2	7.7	-	-	88.9	5.49	PN	PN	PN	PN	PN	PN	-
3 1/2	9.2	9.3	-	88.9	6.45	PNU	PNU	PNU	PNU	PNU	PNU	PNU
3 1/2	10.2	-	-	88.9	7.34	PN	PN	PN	PN	PN	PN	-
3 1/2	12.7	12.95	-	88.9	9.52	-	-	PNU	PNU	PNU	PNU	PNU
3 1/2	14.3	-	-	88.9	10.92	-	-	P	-	P	P	-
3 1/2	15.5	-	-	88.9	12.09	-	-	P	-	P	P	-
4	9.5	-	-	101.6	5.74	PN	PN	PN	PN	PN	PN	-
4	10.7	11	-	101.6	6.65	PU	PU	PU	PU	PU	PU	-
4	13.2	-	-	101.6	8.38	-	-	P	-	P	P	-
4	16.1	-	-	101.6	10.54	-	-	P	-	P	P	-
4 1/2	12.6	12.75	-	114.3	6.88	PNU	PNU	PNU	PNU	PNU	PNU	-
4 1/2	15.2	-	-	114.3	8.56	-	-	P	-	P	P	-
P-Plain end; N-Non Upset;U-External upset;T&C-Threaded and coupled												

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CASING SPECIFICATION DATE TABLE†

API 5CT, Q1 Casing Dimension[1-4]

DN	O. D.		Weight		W. T.		End Machining Form					
							Steel Grade					
	in	mm	lb/ft	kg/m	in	mm	H40	J55 K55	L80	N80	C90 T95	P110
4-1/2	4.500	114.3	9.50	14.14	0.205	5.21	PS	PS	–	–	–	–
			10.50	15.63	0.224	5.69	–	PSB	–	–	–	–
			11.60	17.26	0.250	6.35	–	PSLB	PLB	PLB	PLB	PLB
			13.50	20.09	0.290	7.37	–	–	PLB	PLB	PLB	PLB
			15.10	22.47	0.337	9.56	–	–	–	–	–	PLB
5	5.000	127	11.50	17.11	0.220	5.59	–	PS	–	–	–	–
			13.00	19.35	0.253	6.43	–	PSLB	–	–	–	–
			15.00	22.32	0.296	7.52	–	PSLB	PLB	PLB	PLBE	PLB
			18.00	26.79	0.362	9.19	–	–	PLB	PLB	PLBE	PLB
			21.40	31.85	0.437	11.10	–	–	PLB	PLB	PLB	PLB
			23.20	34.53	0.478	12.14	–	–	–	–	PLB	–
			24.10	35.86	0.500	12.70	–	–	–	–	PLB	–
5-1/2	5.500	139.7	14.00	20.83	0.244	6.20	PS	PS	–	–	–	–
			15.50	23.07	0.275	6.98	–	PSLB	–	–	–	–
			17.00	25.30	0.304	7.72	–	PSLB	PLB	PLB	PLBE	PLB
			20.00	29.76	0.361	9.17	–	–	PLB	PLB	PLBE	PLB
			23.00	34.23	0.415	10.54	–	–	PLB	PLB	PLBE	PLB
			26.80	39.88	0.500	12.70	–	–	–	–	–	–
			29.70	44.20	0.562	14.27	–	–	–	–	–	–
			32.60	48.51	0.625	15.88	–	–	–	–	–	–
			35.30	52.53	0.687	17.45	–	–	–	–	–	–
			38.00	56.55	0.750	19.05	–	–	–	–	–	–
			40.50	60.27	0.812	20.62	–	–	–	–	–	–
			43.10	64.14	0.875	22.22	–	–	–	–	–	–
6-5/8	6.625	168.28	20.00	29.76	0.288	7.32	PS	PSLB	–	–	–	–
			24.00	35.72	0.352	8.94	–	PSLB	PLB	PLB	PLBE	PLB
			28.00	41.67	0.417	10.59	–	–	PLB	PLB	PLBE	PLB
			32.00	47.62	0.475	12.06	–	–	PLB	PLB	PLBE	PLB

CASING SPECIFICATION DATE TABLE†

API 5CT, Q1 Casing Dimension[2-4]

7	7.000	177.8	17.00	25.30	0.231	5.87	PS	–	–	–	–	–
			20.00	29.76	0.272	6.91	PS	PS	–	–	–	–
			23.00	34.23	0.317	8.05	–	PSLB	PLB	PLB	PLBE	–
			26.00	38.69	0.362	9.19	–	PSLB	PLB	PLB	PLBE	PLB
			29.00	43.16	0.408	10.36	–	–	PLB	PLB	PLBE	PLB
			32.00	47.62	0.453	11.51	–	–	PLB	PLB	PLBE	PLB
			35.00	52.09	0.498	12.65	–	–	PLB	PLB	PLBE	PLB
			38.00	56.55	0.540	13.72	–	–	PLB	PLB	PLBE	PLB
			42.70	63.54	0.625	15.88	–	–	–	–	–	–
			46.40	69.05	0.687	17.45	–	–	–	–	–	–
			50.10	74.56	0.750	19.05	–	–	–	–	–	–
			53.60	79.77	0.812	20.62	–	–	–	–	–	–
			57.10	84.97	0.875	22.22	–	–	–	–	–	–
7-5/8	7.625	193.68	24.00	35.72	0.300	7.62	PS	–	–	–	–	–
			26.40	39.29	0.328	8.33	–	PSLB	PLB	PLB	PLBE	PLB
			29.70	44.20	0.375	9.52	–	–	PLB	PLB	PLBE	PLB
			33.70	50.15	0.430	10.92	–	–	PLB	PLB	PLBE	PLB
			39.00	58.05	0.500	12.70	–	–	PLB	PLB	PLBE	PLB
			42.80	63.69	0.562	14.27	–	–	PLB	PLB	PLB	PLB
			45.30	67.41	0.595	15.11	–	–	PLB	PLB	PLB	PLB
			47.10	70.09	0.625	15.88	–	–	PLB	PLB	PLB	PLB
			51.20	76.19	0.687	17.45	–	–	–	–	–	–
			55.30	80.30	0.750	19.05	–	–	–	–	–	–
8-5/8	8.625	219.08	24.00	35.72	0.264	6.71	–	PS	–	–	–	–
			28.00	41.62	0.304	7.72	PS	–	–	–	–	–
			32.00	47.62	0.352	8.94	PS	PSLB	–	–	–	–
			36.00	53.57	0.400	10.16	–	PSLB	PLB	PLB	PLBE	PLB
			40.00	59.53	0.450	11.43	–	–	PLB	PLB	PLBE	PLB
			44.00	65.48	0.500	12.70	–	–	PLB	PLB	PLBE	PLB
			49.00	72.92	0.557	14.15	–	–	PLB	PLB	PLBE	PLB
			32.30	48.07	0.312	7.92	PS	–	–	–	–	–
			36.00	53.57	0.352	8.94	PS	PSLB	–	–	–	–

GLOBAL™ ENERGY RESOURCES LLC

CASING SPECIFICATION DATE TABLE†

API 5CT, Q1 Casing Dimension[3-4]

9-5/8	9.625	244.48	40.00	59.53	0.395	10.03	–	PSLB	PLB	PLB	PLBE	–
			43.50	64.73	0.435	11.05	–	–	PLB	PLB	PLBE	PLB
			47.00	69.94	0.472	11.99	–	–	PLB	PLB	PLBE	PLB
			53.50	79.62	0.545	13.84	–	–	PLB	PLB	PLBE	PLB
			58.40	86.91	0.595	15.11	–	–	PLB	PLB	PLB	PLB
			59.40	88.40	0.609	15.47	–	–	–	–	–	–
			64.90	96.58	0.672	17.07	–	–	–	–	–	–
			70.30	104.62	0.734	18.64	–	–	–	–	–	–
			75.60	112.50	0.797	20.24	–	–	–	–	–	–
10-3/4	10.750	273.05	32.75	48.74	0.279	7.09	PS	–	–	–	–	–
			40.50	60.27	0.350	8.89	PS	PSB	–	–	–	–
			15.50	67.71	0.400	10.16	–	PSB	–	–	–	–
			51.00	75.90	0.450	11.43	–	PSB	PSB	PSB	PSBE	PSB
			55.50	82.59	0.495	12.57	–	–	PSB	PSB	PSBE	PSB
			60.70	90.33	0.545	13.84	–	–	–	–	PSBE	PSB
			65.70	97.77	0.595	15.11	–	–	–	–	PSB	PSB
			73.20	108.93	0.672	17.07	–	–	–	–	–	–
			79.20	117.86	0.734	18.64	–	–	–	–	–	–
			85.30	126.94	0.797	20.24	–	–	–	–	–	–
11-3/4	11.750		42.00	62.50	0.333	8.46	PS	–	–	–	–	–
			47.00	69.94	0.375	20.24	–	–	–	–	–	–
			54.00	80.36	0.435	8.46	–	–	–	–	–	–
			60.00	89.29	0.489	9.53	–	–	–	–	–	–
			65.00	96.73	0.534	11.05	–	–	–	–	–	–
			71.00	105.66	0.582	14.42	–	–	–	–	–	–
13-3/8	13.375	339.73	48.00	71.43	0.330	8.38	PS	–	–	–	–	–
			54.50	81.10	0.380	9.65	–	PSB	–	–	–	–
			61.00	90.78	0.430	10.92	–	PSB	–	–	–	–
			68.00	101.19	0.480	12.19	–	PSB	PSB	PSB	PSB	PSB
			72.00	107.15	0.514	13.06	–	–	PSB	PSB	PSB	PSB
			65.00	96.73	0.375	9.53	PS	–	–	–	–	–
			75.00	111.61	0.438	11.13	–	PSB	–	–	–	–

CASING SPECIFICATION DATE TABLE†

API 5CT, Q1 Casing Dimension[4-4]

16	16.000	406.4	84.00	125.01	0.495	12.57	–	PSB	–	–	–	–
			109.00	162.21	0.656	16.66	–	P	P	P	–	P
18-5/8	18.625	473.08	87.50	130.21	0.435	11.05	PS	PSB	–	–	–	–
20	20.000	508	94.00	139.89	0.438	11.13	PSL	PSLB	–	–	–	–
			106.50	158.49	0.500	12.70	–	PSLB	–	–	–	–
			133.00	197.93	0.635	16.13	–	PSLB	–	–	–	–
P——Plain; S——Short-thread; L——Long-thread; B——Buttress thread; E——Extreme thread												

TUBING & CASING TOLERANCES DATE TABLE†

API 5CT, Q1 Tubing & Casing Tolerances[1-3]

Pipe Types	Pipe Size (mm)		Tolerances
Hot Rolled	OD	≤159	±1.0%
		>159	±1.20%
	WT	≤20	±12.5%
		>20	±10.0%
Cold Drawn	OD	≤30	±0.20mm
		30-50	±0.30mm
		>50	±0.8%
	WT	≤3	+12% -10%
		>3	±10%

TUBING & CASING CHEMICAL COMPOSITIONS DATE TABLE†

API 5CT, Q1 Tubing & Casing Chemical Compositions[2-3]

Standard	Grade	Chemical compositions (%)									
API SPEC 5CT	J55	C	Si	Mn	P	S	Cr	Ni	Cu	Mo	V
	K55	0.34 ~ 0.39	0.20 ~ 0.35	1.25 ~ 1.50	≤0.020	≤0.015	≤0.15	≤0.20	≤0.20	/	/
	N80	0.34 ~ 0.38	0.20 ~ 0.35	1.45 ~ 1.70	≤0.020	≤0.015	≤0.15	/	/	/	0.11 ~ 0.16
	L80	0.15 ~ 0.22	≤1.00	0.25 ~ 1.00	≤0.020	≤0.010	12.0 ~ 14.0	≤0.20	≤0.20	/	/
	P110	0.26 ~ 0.395	0.17 ~ 0.37	0.40 ~ 0.70	≤0.020	≤0.010	0.80 ~ 1.10	≤0.20	≤0.20	0.15 ~ 0.25	≤0.08

TUBING & CASING MECHANICAL PROPERTIES DATE TABLE†

API 5CT, Q1 Tubing & Casing Mechanical Properties[3-3]

Grade	Type	Total elongation under load (%)	Yield strength (min)	Yield strength (max)	Tensile strength min Mpa	Hardness Max (HRC)	Hardness Max(HBW)
J55	-	0.5	379	552	517	-	-
K55	-	0.5	379	552	655	-	-
N80	1	0.5	552	758	689	-	-
N80	Q	0.5	552	758	689	-	-
L80	1	0.5	552	655	655	23	241
L80	9Cr	0.5	552	655	655	23	241
L80	13Cr	0.5	552	655	655	23	241
C90	-	0.5	621	724	689	25.4	255
C95	-	0.5	655	758	724	-	-
T95	-	0.5	655	758	724	25.4	255
P110	-	0.6	758	965	862	-	-
Q125	All	0.65	862	1034	931	-	-

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API TUBING DIMENSIONS & WEIGHT DATE TABLE†

API 5CT, Q1 OCTG Tubing Weight & Dimensions Chart[1-1]

Lables				Outside dia.	Nominal linear masses			Wall thickness	Inside dia.	Mass gain or loss due to end finishing lb				
										Plain end	External upset			Intergral joint
1	2				Non-upset	Ext.upset T&C	Ontergral joint				Non upset	Regular	Special clearance	
	NU T&C	EU T&C	IJ	D (in)	lb/ft	lb/ft	lb/ft	t (in)	d (in)					
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1.050	1.14	1.20		1.050	1.14	1.20		0.113	0.824	1.13	0.20	1.40		
1.050	1.48	1.54		1.050	1.48	1.54		0.154	0.742	1.48		1.32		
1.315	1.70	1.80	1.72	1.315	1.70	1.80	1.72	0.133	1.049	1.68	0.40	1.40		0.20
1.315	2.19	2.24		1.315	2.19	2.24		0.179	0.957	2.17		1.35		
1.660	2.09		2.10	1.660			2.10	0.125	1.410	2.05				0.20
1.660	2.30	2.40	2.33	1.660	2.30	2.40	2.33	0.140	1.380	2.27	0.80	1.60		0.20
1.660	3.03	3.07		1.660	3.03	3.07		0.191	1.278	3.00		1.50		
1.900	2.40		2.40	1.990			2.40	0.125	1.650	2.37				0.20
1.900	2.75	2.90	2.76	1.990	2.75	2.90	2.76	0.145	1.610	2.72	0.60	2.00		0.20
1.900	3.65	3.73		1.990	3.65	3.73		0.200	1.500	3.63		2.03		
1.900	4.42			1.990	4.42			0.250	1.400	4.41				
1.900	5.15			1.990	5.15			0.300	1.300	5.13				
2.063	3.24			2.063			3.25	0.156	1.751	3.18				0.20
2.063	4.50			2.063				0.225	1.613	4.42				
2 3/8	4.00			2.375	4.00			0.167	2.041	3.94	1.60			
2 3/8	4.60	4.70		2.375	4.60	4.70		0.190	1.995	4.44	1.60	4.00	2.96	
2 3/8	5.80	5.95		2.375	5.80	5.95		0.254	1.867	5.76	1.40	3.60	2.56	
2 3/8	6.60			2.375	6.60			0.295	1.785	6.56				
2 3/8	7.35	7.45		2.375	7.35	7.45		0.336	1.703	7.32				
2 7/8	6.40	6.50		2.875	6.40	6.50		0.217	2.441	6.17	3.20	5.60	3.76	
2 7/8	7.80	7.90		2.875	7.80	7.90		0.276	2.323	7.67	0.80	5.80	3.92	
2 7/8	8.60	8.70		2.875	8.60	8.70		0.308	2.259	8.45	2.60	5.00	3.16	
2 7/8	9.35	9.45		2.875	9.35	9.45		0.340	2.195	9.21				
2 7/8	10.50			2.875	10.50			0.392	2.091	10.40				
2 7/8	11.50			2.875	11.50			0.440	1.995	11.45				
3 1/2	7.70			3.500	7.70			0.216	3.068	7.58	5.40			
3 1/2	9.20	9.30		3.500	9.20	9.30		0.254	2.992	8.81	5.00	9.20	5.40	
3 1/2	10.20			3.500	10.20			0.289	2.992	9.92	4.80			
3 1/2	12.70	12.95		3.500	12.70	12.95		0.375	2.750	12.53	4.00	8.20	4.40	
3 1/2	14.30			3.500	14.30			0.430	2.640	14.11				
3 1/2	15.50			3.500	15.50			0.476	2.548	15.39				
3 1/2	17.00			3.500	17.00			0.530	2.440	16.83				
4	9.50			4.000	9.50			0.226	3.548	9.12	6.20			
4	10.70	11.00		4.000		11.00		0.262	3.476	10.47		10.60		
4	13.20			4.000	13.20			0.330	3.340	12.95				
4	16.10			4.000	16.10			0.415	3.170	15.90				
4	18.90			4.000	18.90			0.500	3.000	18.71				
4	22.20			4.000	22.20			0.610	2.780	22.11				
4 1/2	12.60	12.75		4.500	12.60	12.75		0.271	3.958	12.25	6.00	13.20		
4 1/2	15.20			4.500	15.20			0.337	3.826	15.00				
4 1/2	17.00			4.500	17.00			0.380	3.740	16.77				
4 1/2	18.90			4.500	18.90			0.430	3.640	18.71				
4 1/2	21.50			4.500	21.50			0.500	3.500	21.38				
4 1/2	23.70			4.500	23.70			0.560	3.380	23.59				
4 1/2	26.10			4.500	26.10			0.630	3.240	26.06				

GLOBAL™ ENERGY RESOURCES LLC

API CASING DIMENSIONS & WEIGHT DATE TABLE†

API 5CT, Q1 OCTG Casing Weight & Dimensions Chart[1-3]

Lables		Outside diameter	Nominal linear mass T&C	Wall thickness	Inside diameter	Drift diameter	Calculated mass C				
							Plain end	Mass gain or loss due to end finishing (lb)			
								Round thread		Buttress thread	
1	2.00	D (in)	lb/ft	t (in)	d (in)	in	lb/ft	Short	Long	RC	SCC
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*
4 1/2	9.50	4.500	9.50	0.205	4.090	3.965	9.41	4.20			
4 1/2	10.50	4.500	10.50	0.224	4.052	3.927	10.24	3.80		5.00	2.56
4 1/2	11.60	4.500	11.60	0.250	4.000	3.875	11.36	3.40	3.80	4.60	2.16
4 1/2	13.50	4.500	13.50	0.290	3.920	3.795	13.05		3.20	4.00	1.56
4 1/2	15.10	4.500	15.10	0.337	3.826	3.701	15.00		2.80	3.20	0.76
5	11.50	5.000	11.50	0.220	4.560	4.435	11.24	5.40			
5	13.00	5.000	13.00	0.253	4.494	4.369	12.84	4.80	5.80	6.60	2.42
5	15.00	5.000	15.00	0.296	4.408	4.283	14.88	4.20	5.20	5.80	1.62
5	18.00	5.000	18.00	0.362	4.276	4.151	17.95		4.20	4.40	0.22
5	21.40	5.000	21.40	0.437	4.126	4.001	21.32		2.95	2.46	-1.72
5	23.20	5.000	23.20	0.478	4.044	3.919	23.11		2.30	2.05	-2.09
5	24.10	5.000	24.10	0.500	4.000	3.875	24.05		1.95	1.24	-2.94
5 1/2	14.00	5.500	14.00	0.244	5.015	4.887	13.71	5.40			
5 1/2	15.50	5.500	15.50	0.275	4.950	4.825	15.36	4.80	5.80	6.40	2.10
5 1/2	17.00	5.500	17.00	0.304	4.892	4.767	16.89	4.40	5.40	5.80	1.50
5 1/2	20.00	5.500	20.00	0.361	4.778	4.653	19.83		4.40	4.60	0.30
5 1/2	23.00	5.500	23.00	0.415	4.670	4.545	22.56		3.20	3.40	0.90
5 1/2	26.80	5.500	26.80	0.500	4.500	4.375	26.72				
5 1/2	29.70	5.500	29.70	0.562	4.376	4.251	29.67				
5 1/2	32.60	5.500	32.60	0.625	4.250	4.125	32.57				
5 1/2	35.30	5.500	35.30	0.687	4.126	4.001	35.35				
5 1/2	38.00	5.500	38.00	0.750	4.000	3.875	38.08				
5 1/2	40.50	5.500	40.50	0.812	3.876	3.751	40.69				
5 1/2	43.10	5.500	43.10	0.875	3.750	3.625	43.26				
6 5/8	20.00	6.625	20.00	0.288	6.049	5.924	19.51	11.00	13.60	14.40	2.38
6 5/8	24.00	6.625	24.00	0.352	5.921	5.796	23.60	9.60	12.00	12.60	0.58
6 5/8	28.00	6.625	28.00	0.417	5.791	5.666	27.67		10.20	10.60	-1.42
6 5/8	32.00	6.625	32.00	0.475	5.675	5.550	31.23		8.80	9.00	-3.02
7	17.00	7.000	17.00	0.231	6.538	6.413	16.72	10.00			
7	20.00	7.000	20.00	0.272	6.456	6.331	19.56	9.40			
7	23.00	7.000	23.00	0.317	6.366	6.250	22.65	8.00	10.40	11.00	1.60
7	23.00	7.000	23.00	0.317	6.366	6.241	22.65	8.00	10.40	11.00	1.60
7	26.00	7.000	26.00	0.362	6.276	6.151	25.69	7.20	9.40	9.60	0.20
7	29.00	7.000	29.00	0.408	6.184	6.059	28.75		8.00	8.20	1.20
7	32.00	7.000	32.00	0.453	6.094	6.000	31.70		6.60	6.80	2.60
7	32.00	7.000	32.00	0.453	6.094	5.969	31.70		6.60	6.80	2.60
7	35.00	7.000	35.00	0.498	6.004	5.879	34.61		5.60	5.60	3.80
7	38.00	7.000	38.00	0.540	5.920	5.795	37.29		4.40	4.20	5.20
7	42.70	7.000	42.70	0.625	5.750	5.625	42.59				
7	46.40	7.000	46.40	0.687	5.625	5.500	46.36				
7	50.10	7.000	50.10	0.750	5.500	5.375	50.11				
7	53.60	7.000	53.60	0.812	5.376	5.251	53.71				

GLOBAL™ ENERGY RESOURCES LLC

API CASING DIMENSIONS & WEIGHT DATE TABLE†

API 5CT, Q1 OCTG Casing Weight & Dimensions Chart[2-3]

Lables		Outside diameter	Nominal linear mass T&C	Wall thickness	Inside diameter	Drift diameter	Calculated mass C				
							Plain end	Mass gain or loss due to end finishing (lb)			
								Round thread		Buttress thread	
1	2.00	D (in)	lb/ft	t (in)	d (in)	in	lb/ft	Short	Long	RC	SCC
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*
7 5/8	24.00	7.625	24.00	0.300	7.025	6.900	23.49	15.80			
7 5/8	26.40	7.625	26.40	0.328	6.969	6.844	25.59	15.20	19.00	20.60	6.21
7 5/8	29.70	7.625	29.70	0.375	6.875	6.750	29.06		17.40	18.80	4.41
7 5/8	33.70	7.625	33.70	0.430	6.765	6.640	33.07		15.80	17.00	2.61
7 5/8	39.00	7.625	39.00	0.500	6.625	6.500	38.08		13.60	14.60	0.21
7 5/8	42.80	7.625	42.80	0.562	6.501	6.376	42.43		12.01	11.39	-3.01
7 5/8	45.30	7.625	45.30	0.595	6.435	6.310	44.71		11.04	11.04	-3.36
7 5/8	47.10	7.625	47.10	0.625	6.375	6.250	46.77		10.16	9.23	-5.17
7 5/8	51.20	7.625	51.20	0.687	6.251	6.126	50.95				
7 5/8	55.30	7.625	55.30	0.750	6.125	6.000	55.12				
7 3/4	46.10	7.750	46.10	0.595	6.560	6.500	45.51				
7 3/4	46.10	7.750	46.10	0.595	6.560	6.435	45.51				
8 5/8	24.00	8.625	24.00	0.264	8.097	7.972	23.60	23.60			
8 5/8	28.00	8.625	28.00	0.304	8.017	7.892	27.04	22.20			
8 5/8	32.00	8.625	32.00	0.352	7.921	7.875	31.13	20.80	27.60	28.30	6.03
8 5/8	32.00	8.625	32.00	0.352	7.921	7.796	31.13	20.80	27.60	28.20	6.03
8 5/8	36.00	8.625	36.00	0.400	7.825	7.700	35.17	19.40	25.60	26.20	4.03
8 5/8	40.00	8.625	40.00	0.450	7.725	7.625	39.33		23.80	24.20	2.03
8 5/8	40.00	8.625	40.00	0.450	7.725	7.600	39.33		23.80	24.20	2.03
8 5/8	44.00	8.625	44.00	0.500	7.625	7.500	43.43		21.80	22.20	0.03
8 5/8	49.00	8.625	49.00	0.557	7.511	7.286	48.04		19.60	19.80	-2.37
9 5/8	32.30	9.625	32.30	0.312	9.001	8.845	31.06	24.40			
9 5/8	36.00	9.625	36.00	0.352	8.921	8.876	34.89	23.00	32.00	31.00	6.48
9 5/8	40.00	9.625	40.00	0.395	8.835	8.750	38.97	21.40	30.00	29.00	4.48
9 5/8	40.00	9.625	40.00	0.395	8.835	8.679	38.97	21.40	30.00	29.00	4.48
9 5/8	43.50	9.625	43.50	0.435	8.755	8.599	42.73		28.20	27.20	2.68
9 5/8	47.00	9.625	47.00	0.472	8.681	8.525	46.18		26.60	25.60	1.08
9 5/8	53.50	9.625	53.50	0.545	8.535	8.500	52.90		23.40	22.40	-2.12
9 5/8	53.50	9.625	53.50	0.545	8.535	8.379	52.90		23.40	22.40	-2.12
9 5/8	58.40	9.625	58.40	0.595	8.435	8.375	57.44		21.50	20.13	-4.40
9 5/8	58.40	9.625	58.40	0.595	8.435	8.279	57.44		21.50	20.13	-4.40
9 5/8	59.40	9.625	59.40	0.609	8.407	8.251	58.70				
9 5/8	64.90	9.625	64.90	0.672	8.281	8.125	64.32				
9 5/8	70.30	9.625	70.30	0.734	8.157	8.001	69.76				
9 5/8	75.60	9.625	75.60	0.797	8.031	7.875	75.21				
10 3/4	32.75	10.750	32.75	0.279	10.192	10.036	31.23	29.00			
10 3/4	40.50	10.750	40.50	0.350	10.050	9.894	38.91	26.40		34.40	7.21
10 3/4	45.50	10.750	45.50	0.400	9.950	9.875	44.26	24.40		31.80	4.61
10 3/4	45.50	10.750	45.50	0.400	9.950	9.794	44.26	24.40		31.80	4.61
10 3/4	51.00	10.750	51.00	0.450	9.850	9.694	49.55	22.60		29.40	2.21
10 3/4	55.50	10.750	55.50	0.495	9.760	9.625	54.26	20.80		27.00	-0.19
10 3/4	55.50	10.750	55.50	0.495	9.760	9.604	54.26	20.80		27.00	-0.19

API CASING DIMENSIONS & WEIGHT DATE TABLE†

API 5CT, Q1 OCTG Casing Weight & Dimensions Chart[2-3]

10 3/4	60.70	10.750	60.70	0.545	9.660	9.504	59.45	18.80		24.40	
10 3/4	65.70	10.750	65.70	0.595	9.560	9.404	64.59	16.80		22.00	
10 3/4	73.20	10.750	73.20	0.672	9.406	9.250	72.40				
10 3/4	79.20	10.750	79.20	0.734	9.282	9.126	78.59				
10 3/4	85.30	10.750	85.30	0.797	9.156	9.000	84.80				

Lables		Outside diameter	Nominal linear mass T&C	Wall thickness	Inside diameter	Drift diameter	Calculated mass C				
							Plain end	Mass gain or loss due to end finishing (lb)			
								Round thread		Buttress thread	
1	2.00	D (in)	lb/ft	t (in)	d (in)	in	lb/ft	Short	Long	RC	SCC
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*
11 3/4	42.00	11.750	42.00	0.333	11.084	11.000	40.64	29.60			
11 3/4	42.00	11.750	42.00	0.333	11.084	10.928	40.64	29.60			
11 3/4	47.00	11.750	47.00	0.375	11.000	10.844	45.60	27.60		35.80	
11 3/4	54.00	11.750	54.00	0.435	10.880	10.724	52.62	25.00		32.40	
11 3/4	60.00	11.750	60.00	0.489	10.772	10.625	58.87	22.60		29.60	
11 3/4	60.00	11.750	60.00	0.489	10.772	10.616	58.87	22.60		29.60	
11 3/4	65.00	11.750	65.00	0.534	10.682	10.625	64.03				
11 3/4	65.00	11.750	65.00	0.534	10.682	10.625	64.03				
11 3/4	71.00	11.750	71.00	0.582	10.586	10.430	69.48				
13 3/8	48.00	13.375	48.00	0.330	12.715	12.559	46.02	33.20			
13 3/8	54.50	13.375	54.50	0.380	12.615	12.459	52.79	30.80		40.20	
13 3/8	61.00	13.375	61.00	0.430	12.515	12.359	59.50	28.40		36.80	
13 3/8	68.00	13.375	68.00	0.480	12.415	12.259	66.17	25.80		33.60	
13 3/8	72.00	13.375	72.00	0.514	12.347	12.250	70.67	24.20		31.60	
13 3/8	72.00	13.375	72.00	0.514	12.347	12.191	70.67	24.20		31.60	
16	65.00	16.000	65.00	0.375	15.250	15.062	62.64	42.60			
16	75.00	16.000	75.00	0.438	15.124	14.936	72.86	38.20		45.60	
16	84.00	16.000	84.00	0.495	15.010	14.822	82.05	34.20		39.60	
16	109.00	16.000	109.00	0.656	14.688	14.500	107.60				
18 5/8	87.50	18.625	87.50	0.435	17.755	17.567	84.59	73.60		86.40	
20	94.00	20.000	94.00	0.438	19.124	18.936	91.59	47.00	61.20	54.80	
20	106.50	20.000	106.50	0.500	19.000	18.812	104.23	41.60	54.80	48.40	
20	133.00	20.000	133.00	0.635	18.730	18.542	131.45	30.00	40.60	35.20	

Contact us today to learn more about how our Oil Country Tubular Goods can help you achieve your goals and reach new depths. Please give us a call 1-866-375-7473 for immediate service... we may also be contacted at sales@globalenergyusa.com.

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OCTG “USED”
PREMIUM EMI Inspected
TUBING & CASING

USED/SURPLUS TUBING & CASING

EMI “Premium” Inspected OCTG (Oil Country Tubular Goods)

API Spec 5CT, Q1® (6th edition)

Global Energy Resources: Your Partner for Used Premium EMI 4-Point Inspected Tubing and Casing

Global Energy Resources is a leading provider of high-quality used premium EMI 4-point inspected Tubing & Casing. We have a large inventory of products on hand, ready to ship at a moment's notice. With over 40 years of experience in the industry, we are committed to meeting the needs of our customers and providing them with the best solutions. Our team of experts is dedicated to ensuring that our customers receive the highest level of service and support.

- **Variety of sizes and specifications:** Find the perfect tubing & casing for your project.
- **Immediate availability:** Skip waiting times for new production.
- **Variety of used options:** Find boutique and/or hard to find sizes, weights, grades, and end finishes, rarely found new.
- **Expert support:** Our team can help you choose the right used tubing for your project.

Budget your project with confidence: Save up to 45% on reliable tubing solutions with Global Energy's 'Used Premium' EMI 4-Point Inspected (White Band) Tubing & Casing… also including specialty PH6™ Tubing. Meeting the strictest safety standards with H_2S and NORM-free materials, this option delivers exceptional performance without compromising your budget. Contact our sales team today for a free quote and discuss your project needs!

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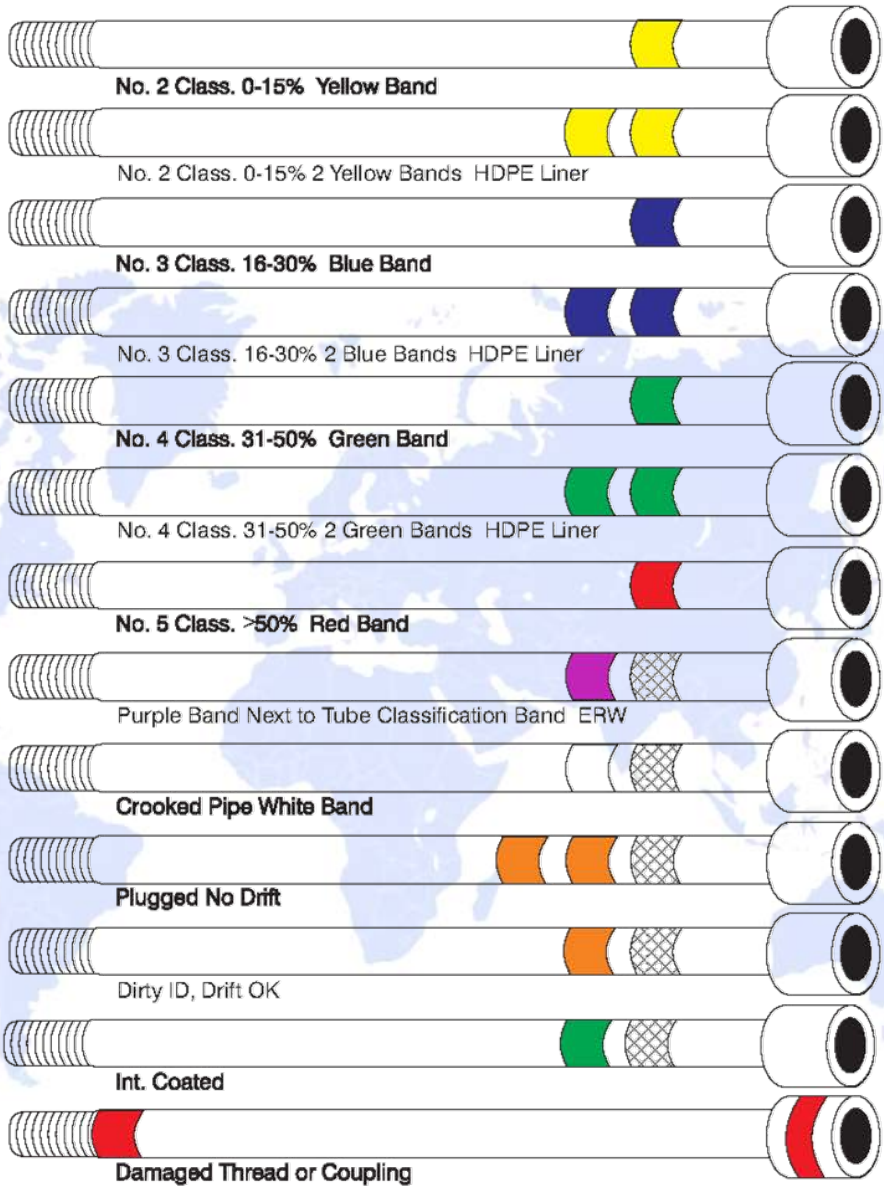
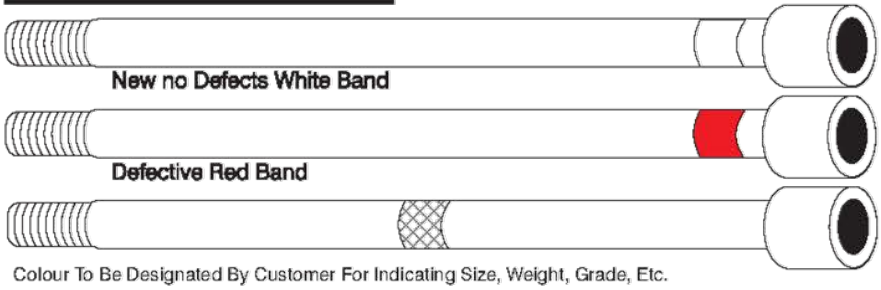
USED TUBING AND CASING CLASSIFICATION



NEW TUBING AND CASING



Colour To Be Designated By Customer For Indicating Size, Weight, Grade, Etc.

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GEOTHERMAL (VIT)

Vacuum Insulated

TUBING

API Spec 5CT

GEOTHERMAL (VIT)
Vacuum Insulated TUBING
API 5CT

GEOTHERMAL *(Extreme-Temperature)*
(VIT) VACUUM INSULATED TUBING

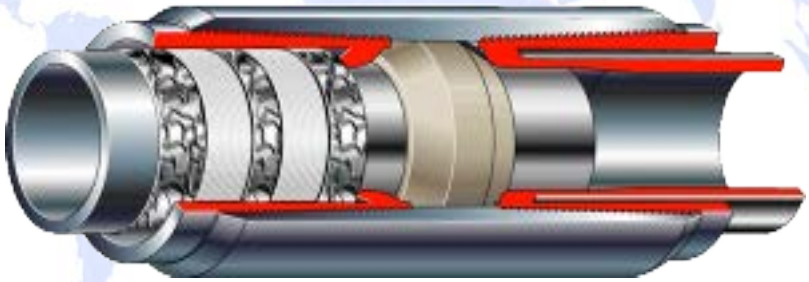
API Spec 5CT, Q1® (6th edition)

Harness Geothermal Power Efficiently with Global Energy's VIT

Unlocking the full potential of your geothermal project demands **exceptional thermal insulation**. That's where Global Energy's Precision Tech® **Geothermal (extreme-temperature) Vacuum Insulated Tubing (VIT)** comes in. Engineered for **maximum heat retention and unparalleled performance**, our VIT is the perfect solution for your most demanding needs.

Global Energy's Precision Tech® proprietary Vacuum Insulated Tubing (VIT) can reduce steam heat loss, maintain steam quality, decrease casing deformation, and protect cemented casing. VIT is suitable for the following operating conditions with the heat carrier temperature below 380°C.

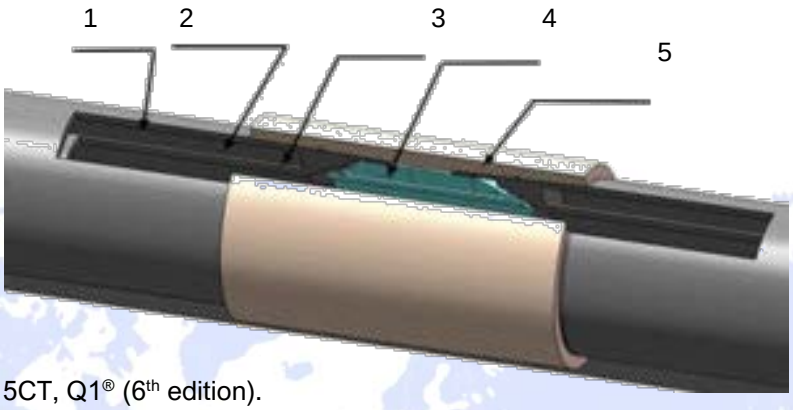
Precision Tech® Tubing (VIT) is a Multilayered high vacuum insulated dual wall tubing for thermal enhanced oil recovery, annular pressure buildup control and well stem testing.



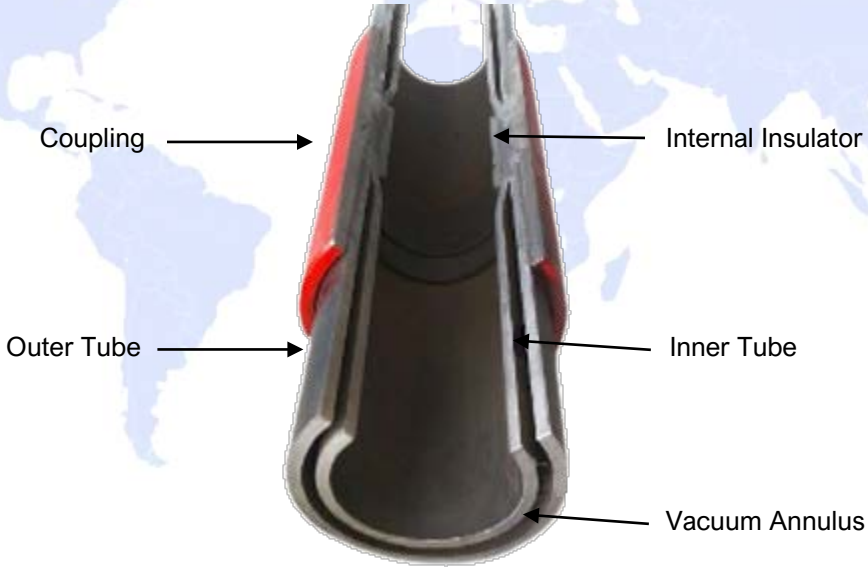
Why Choose Global Energy's VIT?

- **Unmatched Expertise:** Our **in-house design and engineering team** possess in-depth knowledge of geothermal applications. We **custom-design** your VIT to optimize heat transfer in your specific well, ensuring **maximum energy extraction and efficiency**.
- **Unwavering Agility:** We understand the importance of timeliness. Our **rapid turnaround times and efficient manufacturing** ensure you receive your **high-quality VIT quickly**, minimizing project delays and keeping you on schedule.
- **Unbeatable Value:** Get the most out of your investment with our **competitive pricing**. We deliver **exceptional value** without compromising on **performance or durability**.

Choose Global Energy's VIT for unparalleled efficiency, agility, and value. Contact us today to discuss your specific needs and experience the difference!



1. Outer Tube – API 5CT, Q1® (6th edition).
2. Thermal Insulation Material.
3. Inner Tube – API 5CT, Q1® (6th edition).
4. Internal Insulation.
5. Coupling.



The chemistry that is used to manufacture this Tubing is a US Steel® Proprietary chemistry. This chemistry was designed by US Steel® chemical and mechanical engineers for a clean steel with low phosphorous and Sulfur that allows for good charpy impact testing. The steel can be heat treated to higher grades and still will be good against high pressures, higher temperatures, H_2S and some corrosion.

Contact your Global Energy Sales Representative and/or visit our website www.globalenergyusa.com today to learn more.

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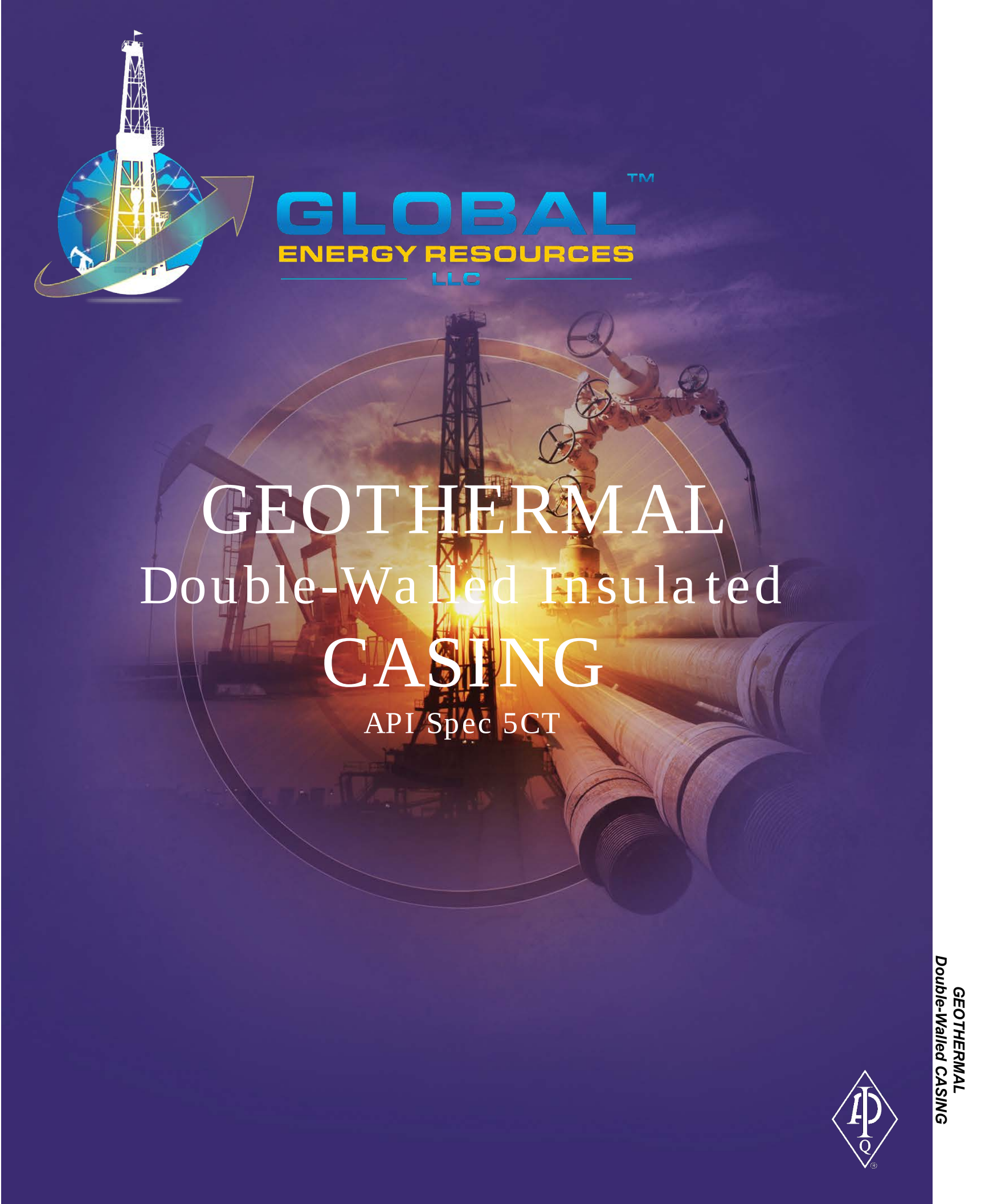


GEOTHERMAL
Double-Walled Insulated
CASING
API Spec 5CT

GEOTHERMAL
Double-Walled CASING

GEOTHERMAL *(Extreme-Temperature)*
DOUBLE-WALLED INSULATED CASING

API Spec 5CT, Q1® (6th edition)

Harness Earth's Heat with Confidence… when Global Energy's Geothermal Casing is on the job!

When it comes to unlocking the immense potential of geothermal energy, **reliable, high-performance casing** is critical. At Global Energy, we understand the unique challenges of **extreme-temperature environments** and have engineered the **optimal solution**: **geothermal (extreme-temperature) double-walled insulated casing**.

Global Energy's Precision Tech® proprietary Geothermal (extreme-temperature) double-walled insulated casing is a type of piping used in geothermal wells to transport hot fluids from deep underground to the surface. It is made up of two concentric pipes, with an insulating material in between. The inner pipe is made of a material that can withstand the high temperatures of geothermal fluids, while the outer pipe is made of a material that is resistant to corrosion and other downhole conditions.

The insulating material between the two pipes helps to keep the geothermal fluids hot as they are transported to the surface. This is important because the efficiency of geothermal power plants is directly related to the temperature of the fluids that they use.

Double-walled insulated casing is also used to protect the environment from harmful emissions that can be released from geothermal wells. The insulating material helps to prevent the fluids from cooling down too quickly, which can cause them to release gases such as hydrogen sulfide and methane into the atmosphere.

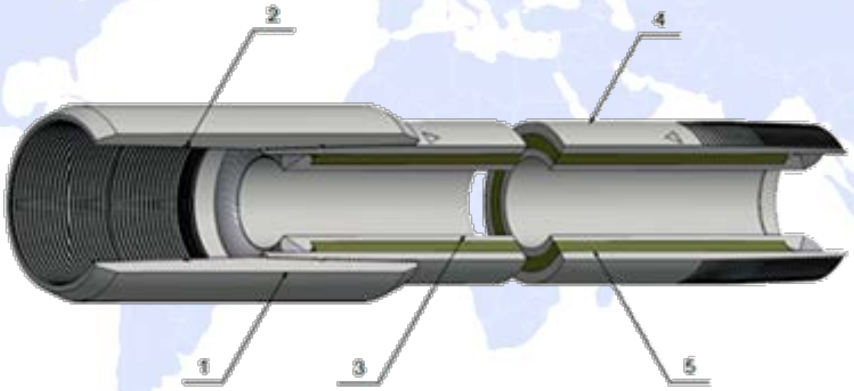
Here are some of the benefits of using geothermal (extreme-temperature) double-walled insulated casing:

- **Increased efficiency of geothermal power plants:** By keeping the geothermal fluids hot, double-walled insulated casing can help to improve the efficiency of geothermal power plants.
- **Reduced environmental impact:** Double-walled insulated casing can help to protect the environment from harmful emissions that can be released from geothermal wells.

- **Improved safety:** Double-walled insulated casing can help to protect workers from being exposed to hot fluids and other downhole hazards.

Why Choose Global Energy?

- **Unmatched Expertise:** Our **in-house design and engineering team** possesses industry-leading knowledge of geothermal applications. We collaborate closely with you to **custom-design** casing that perfectly suits your project's specific needs, ensuring **maximum efficiency and safety**.
- **Unwavering Agility:** We prioritize **rapid turnaround times and efficient manufacturing**, minimizing project delays and keeping you on schedule. No more waiting months for critical equipment - your **high-quality casing arrives quickly**.
- **Unbeatable Value:** Get the most out of your budget with our **competitive pricing**. We deliver **exceptional value** without compromising on **performance or durability**.



1. Coupling for Outer Tube Threads.
2. Seal Ring.
3. Inner Tube – API 5CT, Q1® (6th edition).
4. Outer Tube – API 5CT, Q1® (6th edition).
5. Thermal Insulation Material.

The chemistry that is used to manufacture this Tubing is a US Steel® Proprietary chemistry. This chemistry was designed by US Steel® chemical and mechanical engineers for a clean steel with low phosphorous and Sulfur that allows for good charpy impact testing. The steel can be heat treated to higher grades and still will be good against high pressures, higher temperatures, H_2S and some corrosion.

Contact your Global Energy Sales Representative and/or visit our website www.globalenergyusa.com today to learn more.

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TUBING & CASING COUPLINGS

API Spec 5CT

TUBING & CASING COUPLINGS

API Spec 5CT, Q1® (6th edition)

Tubing Coupling API Spec 5CT

- **Size for Tubing: 1.9”, 2-3/8”, 2-7/8”, 3-1/2”, 4.0”, 4-1/2”**
- **Grade: H-40, J-55, L-80/R-95, N-80, N-80-Q, C-90/T-95, P-110**
- **Thread: NUE, EUE, SCC… and other Premium and High-Performance special thread connections are available upon request.**

API Non-Upset Tubing Coupling-Dimensions, Tolerances and Masses†

Label 1	Size[a] Outside Diameter D mm	Outside diameter W[b] mm	Minimum length N_L mm	Diameter of recess Q mm	Width of bearing face b mm	Max bearing face diameter special bevel Bf mm	Mass kg
1	2	3	4	5	6	7	8
1.900	48.26	55.88	95.25	49.86	1.59	52.07	0.56
2–3/8	60.32	73.02	107.95	61.93	4.76	66.68	1.28
2–7/8	73.02	88.90	130.18	74.63	4.76	80.98	2.34
3–1/2	88.90	107.95	142.88	90.50	4.76	98.42	3.71
4	101.60	120.65	146.05	103.20	4.76	111.12	4.35
4–1/2	114.30	132.08	155.58	115.90	4.76	123.19	4.89

a The size designation for the coupling is the same size designation for the pipe on which the coupling is used.
b Tolerance on outside diameter W, ± 1%

API Non-Upset Tubing Couplings

Production Facilities

API External-Upset Tubing Coupling-Dimensions, Tolerances and Masses†

Label1	Size[a]	Outside diameter		Min length	Diameter of recess	Width of bearing face	Max bearing face diameter Bf		Mass kg	
	Outside diameter	Regular& Special bevel	Special clearance				Special bevel	Special clearance		
	D mm	W[b] mm	W_c[c] mm	N_L mm	Q mm	b mm	mm	mm	Regular	Special clearance
1	2	3	4	5	6	7	8	9	10	11
1.900	48.26	63.50	–	98.42	54.76	3.18	58.34	–	0.84	–
2–3/8	60.32	77.80	73.91	123.82	67.46	3.97	71.83	69.90	1.55	1.07
2–7/8	73.02	93.17	87.88	133.35	80.16	5.56	85.88	83.24	2.40	1.55
3–1/2	88.90	114.30	106.17	146.05	96.85	6.35	104.78	100.71	4.10	2.38
4	101.60	127.00	–	152.40	109.55	6.35	117.48	–	4.82	–
4–1/2	114.30	141.30	–	158.75	122.25	6.35	130.96	–	6.05	–

a The size designation for the coupling is the same size designation for the pipe on which the coupling is used.
b Tolerance on outside diameter W, ± 1%
c Tolerance on outside diameter Wc, ± 0.38mm

In-House Testing

API Non-Upset Tubing Couplings

Production Facilities

Casing Coupling API Spec 5CT

- **Size for Casing: 4-1/2”, 5.0”, 5-1/2”, 6-5/8”, 7.0”, 7-5/8”, 7-3/4”, 8-5/8”, 9-5/8”, 10-3/4”, 11-3/4”, 13-3/8”, 16.0”, 18-5/8”, 20.0”**
- **Grade: H-40, J-55/K-55, M-65, L-80/R-95, N-80-1, N-80-Q, C-90/T-95, P-110, Q-125**
- **Thread: STC, LTC, BTC… and other Premium and High-Performance special thread connections are available upon request.**

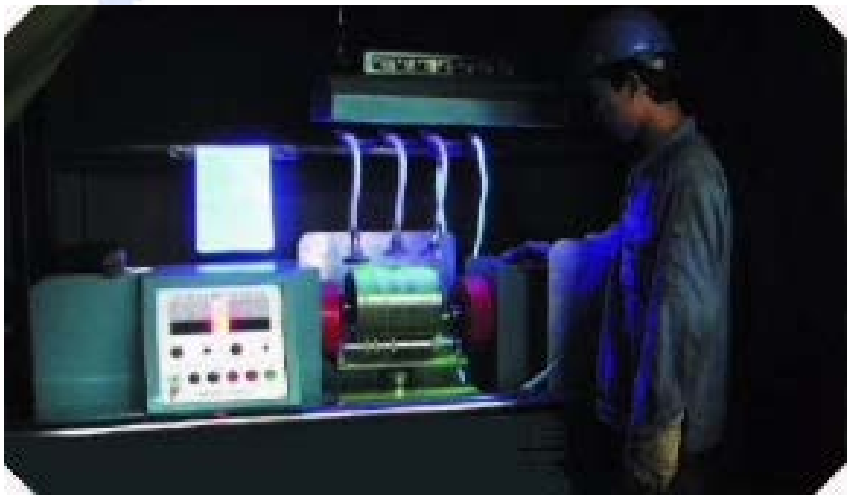
API Round Thread Coupling-Dimensions, Tolerances and Masses†

Label 1	Size[a]	outside diameter	Min length mm		Diameter of recess	Width of bearing face	Mass kg	
	OD mm	W[b,c] mm	Short N_L	Long N_L	Q[d] mm	b mm	Short	Long
1	2	3	4	5	6	7	8	9
4–1/2	114.30	127.00	158.75	177.80	116.68	3.97	3.62	4.15
5	127.00	141.30	165.10	196.85	129.38	4.76	4.66	5.75
5–1/2	139.70	153.67	171.45	203.20	142.08	3.18	5.23	6.42
6–5/8	168.28	187.71	184.15	222.25	170.66	6.35	9.12	11.34
7	177.80	200.03	184.15	228.60	180.18	4.76	10.88	13.92
7–5/8	193.70	215.90	190.50	234.95	197.64	5.56	12.30	15.63
8–5/8	219.08	244.48	196.85	254.00	223.04	6.35	16.23	21.67
9–5/8	244.48	269.88	196.85	266.70	248.44	6.35	18.03	25.45
10–3/4	273.05	298.45	203.20	–	277.02	6.35	20.78	–
11–3/4	298.45	323.85	203.20	–	302.42	6.35	22.64	–
13–3/8	339.72	365.12	203.20	–	343.69	5.56	25.66	–
16	406.40	431.80	228.60	–	411.96	5.56	34.91	–
18–5/8	473.08	508.00	228.60	–	478.63	5.56	54.01	–
20	508.00	533.40	228.60	292.10	513.56	5.56	43.42	57.04

a The size designation for the coupling is the same size designation for the pipe on which the coupling is used.
b Groups1,2 and 3–Tolerance on outside diameter W, ± 1% but not greater than ± 0.38mm
c Group4–Tolerance on outside diameter W, ± 1% but not greater than+3.18 - 1.59mm。
d Tolerance on diameter of recess Q ,for all groups is+0.79 0mm。

API Round Thread Casing Couplings

In-House Testing



API Buttress Thread Coupling-Dimensions, Tolerances and Masses†

Label 1	Size[a]	outside diameter		Min length	Diameter of recess	Width of bearing face	Mass kg	
	OD	Regular	Special clearance[d]					
	D mm	W[b,c] mm	W_c mm	N_L mm	Q mm	B mm	Regular	Special clearance
1	2	3	4	5	6	7	8	9
4–1/2	114.30	127.00	123.82	225.42	117.86	3.18	4.55	3.48
5	127.00	141.30	136.52	231.78	130.56	3.97	5.85	4.00
5–1/2	139.70	153.67	149.22	234.95	143.26	3.97	6.36	4.47
6–5/8	168.28	187.71	177.80	244.48	171.83	6.35	11.01	5.65
7	177.80	200.03	187.32	254.00	181.36	5.56	13.98	6.28
7–5/8	193.68	215.90	206.38	263.52	197.23	7.94	15.82	9.29
8–5/8	219.08	244.48	231.78	269.88	222.63	9.52	20.86	10.80
9–5/8	244.48	269.88	257.18	269.88	248.03	9.52	23.16	12.02
10–3/4	273.05	298.45	285.75	269.88	276.61	9.52	25.74	13.39
11–3/4	298.45	323.85	–	269.88	302.01	9.52	28.03	–
13–3/8	339.72	365.12	–	269.88	343.28	9.52	31.77	–
16	406.40	431.80	–	269.88	410.31	9.52	40.28	–
18–5/8	473.08	508.00	–	269.88	476.99	9.52	62.68	–
20	508.00	533.4	–	269.88	511.91	9.52	50.10	–

a The size designation for the coupling is the same size designation for the pipe on which the coupling is used.
b Groups1,2 and 3 –Tolerance on outside diameter W, ± 1% but not greater than ± 0.38mm
c Group4–Tolerance on outside diameter W, ± 1% but not greater than+3.18 – 1.59mm。

API Couplings

API Buttress Thread Casing Couplings




In-House Testing

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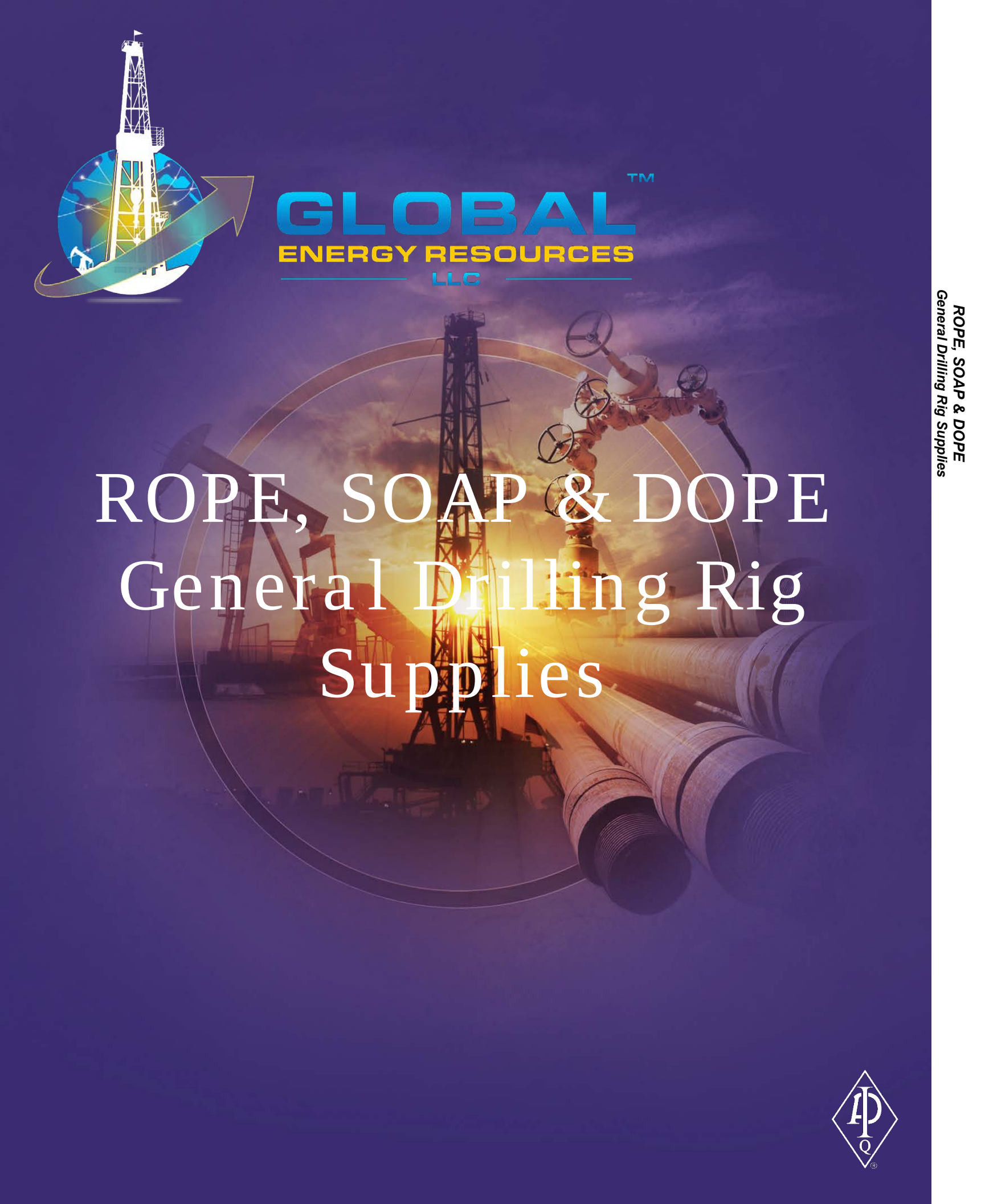


ROPE, SOAP & DOPE
General Drilling Rig Supplies

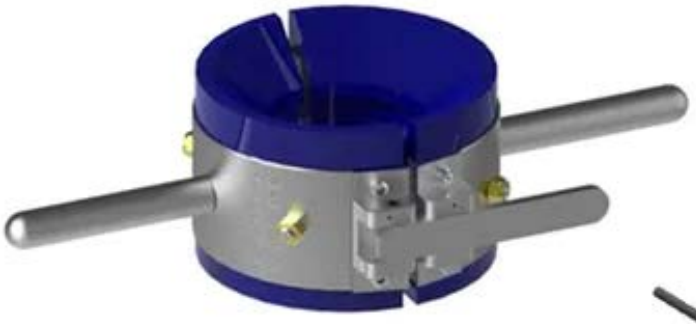
RIG ACCESSORIES & SUPPLIES

Rope, Soap & Dope… General Oilfield

Global Energy is your Wholesale Supplier of High-Quality Oilfield Products…

When you're in need of a dependable vendor for all your Rig Accessories & Supplies, look no further than Global Energy Resources.

From drill pipe screens to stabbing guides and everything in between, Global Energy is your complete source for high-quality oilfield rig supplies. We understand the importance of efficiency and uptime in your operations, and that's why we offer:



DRILL PIPE STABBING GUIDE

HEAVY-DUTY THREAD PROTECTORS

DRILL PIPE JACK'S

API-MODIFIED PIPE DOPE

TUBING & CASING STABBING GUIDE

- Comprehensive selection: Mud Pump Consumables, Mud Handling, Top Drive and Iron Roughneck Parts.
- Drill Pipe Screens, Hammer Unions, Centrifugal Pumps, Mud Valves and more - all in one place.
- Reliable performance: Trustworthy brands you know and rely on.
- Competitive prices: Keep your budget on track without compromising quality.

Don't waste time searching for multiple suppliers. Get what you need, when you need it, with Global Energy.

Contact your Global Energy Sales Representative today to discuss your specific oilfield rig supply needs and experience the power of Global Energy's Solutions. Visit our website at www.globalenergyusa.com for more information.

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GLOBAL ENERGY'S IN-FIELD SERVICES

GLOBAL ENERGY IN-FIELD SERVICES

GLOBAL ENERGY'S "REFACING" IN-FIELD SERVICES

Global Energy's Precision Tech® Refacing for all your Premium Connections

In-Field Refacing Tools for Premium & Hi-Torque Double-Shouldered Tool Joint Connections
Precision Tech® Refacing: The Future of In-Field Refacing…

Precision Tech® Refacing is a revolutionary new in-field refacing technology for all types of drill pipe, heavy weight drill pipe, drill collars, and subs, including premium and Hi-Torque double-shouldered tool joint connections, both proprietary and nonproprietary.

Our proprietary process removes only a minimal amount of material from the pipe face, allowing the connection to be refaced up to 6 times, extending pipe life and saving you thousands of dollars per year.

In addition to its cost-saving benefits, Precision Tech® Refacing is also much faster and more convenient than traditional methods. Our refacing units can be brought directly to your rig site, and we can typically complete all refacing work within 24 hours. This means that you can get your pipe back in service quickly and minimize downtime.

Here are just a few of the benefits of Precision Tech® Refacing:

- Extends the life of your pipe.
- Saves you money on refacing and re-cutting costs.
- Faster and more convenient than traditional methods
- Performed on-site to minimize downtime.
- Provides a high-quality, leak-free connection.
- Can be performed on any and all Drill Pipe, Heavy Weight Drill Pipe, Drill Collars and Subs, etc. and on all the Sizes and on any premium and Hi-Torque double-shouldered tool joint connections, both proprietary and nonproprietary.

GLOBAL ENERGY'S "HARDBANDING" IN-FIELD SERVICES

Precision Tech® Casing-friendly Hardbanding Solutions

Precision Tech® In-Field Hardbanding Services, offering Armacor®, Arnco®, Duraband® & Postalloy® OEM Genuine Products…

Advanced Hardbanding Solutions

Hardbanding is a process of applying a layer of wear-resistant material to the surface of drill pipe, drill collars, and other drilling tubulars. This is typically done using a welding process, and the hardbanding material can be made from a variety of materials, including tungsten carbide, chromium carbide, and nickel-based alloys.

Hardbanding is used to extend the useful life of drilling tubulars and protect them from abrasion and wear. This is especially important in challenging drilling environments, such as those with hard formations or corrosive fluids.

Mobile hardbanding units are portable welding units that can be used to apply hardbanding to drilling tubulars in the field. This can save time and money, as it eliminates the need to ship the tubulars back and forth to a service center.

Here are some of the benefits of hardbanding:

- Extends the useful life of drilling tubulars.
- Protects against abrasion and wear.
- Reduces downtime and costs associated with tubular replacement.
- Improves drilling performance.
- Can be applied to a variety of tubular types and materials.

Casing-friendly Hardbanding extends the life of drill strings

Casing-friendly hardbanding can significantly extend the life of drill strings and save money on transportation costs…

Casing-friendly hardbanding is a type of hardbanding that is designed to minimize wear on the casing. This can reduce casing wear from 14% without hardbanding to as little as 5% with the application of the appropriate alloy. This can significantly extend the life of drill strings and reduce the need for replacement.

If you are looking for a way to extend the life of your drill strings and save money, casing-friendly hardbanding is a great option.

Global Energy offers the following Casing-Friendly Hardbanding options…

Duraband® Hardbanding Solutions

Postalloy® Duraband® NC is a 100% crack-free hard band that provides maximum protection of the tool joint and casing. Its microstructure consists of a hard, but tough tool steel matrix with a high volume of tightly packed micro-constituents. This combination ensures excellent wear resistance in open hole drilling as well as being casing friendly.

Duraband® NC is unique. It is *Fearnley Procter NS-1™ certified for new applications to tool joints and certified for re-application over itself and other hard band products as specified in the NS-1™ re-application approval certificates. It is the only product for maximum protection that is applied crack-free.

Source: Duraband

Arnco® Hardbanding Solutions

Arnco's next generation hard banding products were designed to be non-cracking, high performance alloys that cover the spectrum of wear protection needs by end-users. Whether focused on casing wear reduction or drill string life extension, use of Arnco 150XT™ and 350XT™ produce real economic benefits for pipe owners and well operators. Easy initial and re-application combined with alloys designed to resist in-service damage result in reduced re-application costs over the drill pipe life cycle.

Source: Arnco

Armacor® Hardbanding Solutions

Nanocrystalline/amorphous alloy coatings are the foundation for Armacor products. They form a structure very different from crystalline alloy coatings used by other similar products. In the amorphous structure, atoms are randomly placed in a continuous coating, preventing corrosion-path grain boundaries. Armacor' low coefficient of friction amorphous metals:

- Deliver superior wear resistance from abrasive particles in metal-to-metal contact conditions.
- Provide excellent non-work hardening machineability and outstanding resistance to cavitation.
- Offer improved corrosion resistance to oxidation and sulfidation reactions at elevated temperatures.

Source: Armacor

Tuffband® by Postalloy® Hardbanding Solutions

Postalloy® Tuffband® NC is applied crack free and prevents spalling even under the most extreme drilling conditions and is 100% rebuildable. It is *Fearnley Procter NS-1™ certified for new applications to tool joints and it is certified for re-application over itself and other hardband products as specified in the NS-1™ re-application approval certifications. It offers maximum protection of your tool joints and crack free application means no trapped abrasive materials, so it also extends the life of your casing. Advantages of Tuffband® NC include:

- Longer life of tool joints and casing.
- Minimization of sour gas problems at critical sites 100%.
- Rebuildable.

Source: Hardbanding Solutions

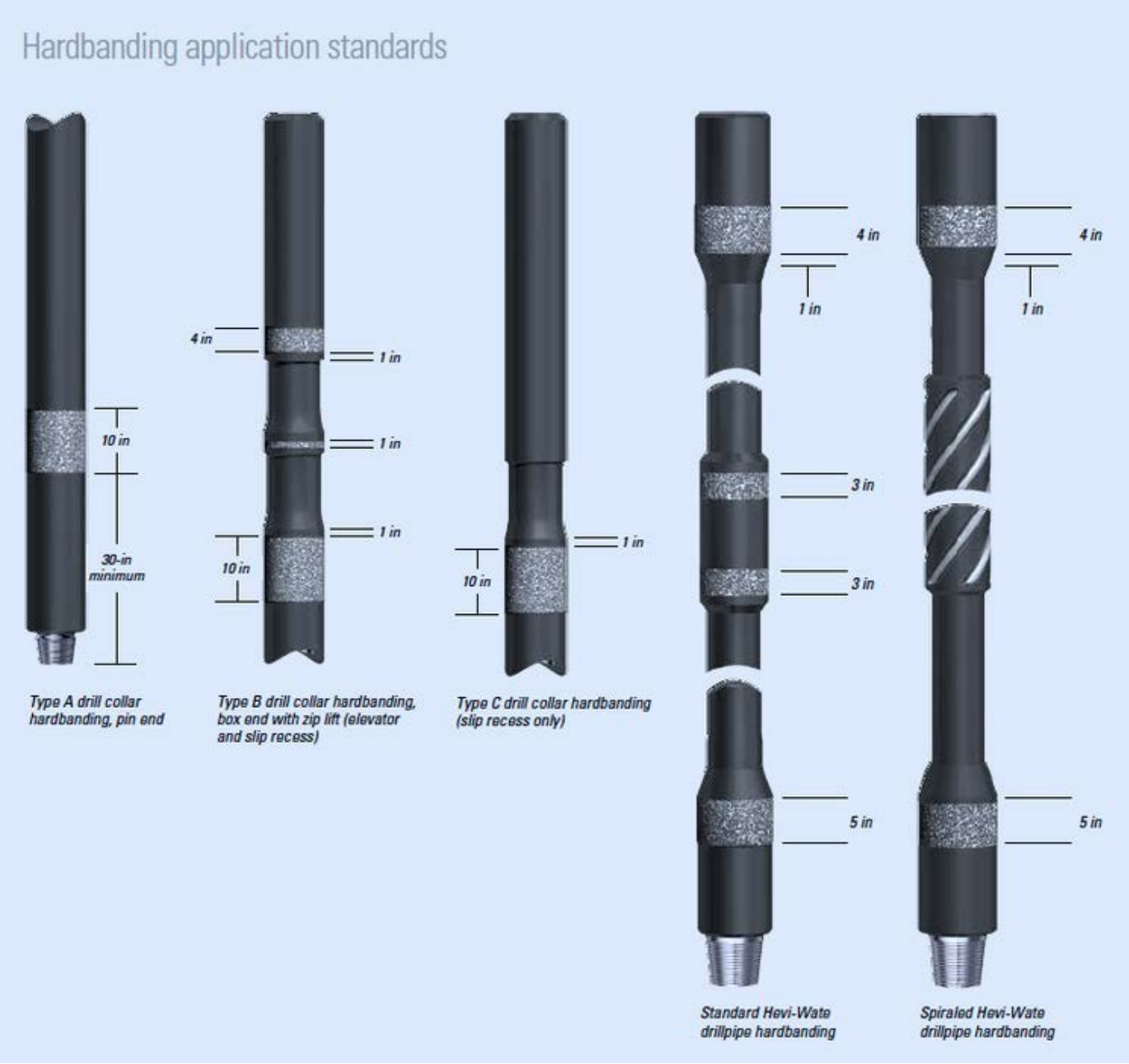
Casing-friendly Hardbanding, extends the life of drill strings…

Casing-friendly hardbanding can significantly extend the life of drill strings and save money on transportation costs.

Casing-friendly hardbanding is a type of hardbanding that is designed to minimize wear on the casing. This can reduce casing wear from 14% without hardbanding to as little as 5% with the application of the appropriate alloy. This can significantly extend the life of drill strings and reduce the need for replacement.

Mobile hardbanding units are portable welding units that can be used to apply hardbanding to drilling tubulars in the field. This eliminates the need to ship the tubulars back and forth to a service center, which can save time and money.

HARDBANDING DATA TABLE†



Contact your Global Energy Sales Representative today to discuss your specific needs and experience the power of Global Energy's Solutions. Visit our website at www.globalenergyusa.com for more information.

GLOBAL ENERGY'S "NDT 3rd PARTY INSPECTION" IN-FIELD SERVICE

Precision Tech® NDT Third-Party Inspection Services

Global Energy Resources, LLC: Your Trusted Third-Party Inspection Partner

Global Energy Resources, LLC (GER) is proud to announce its new third-party inspection services, providing a comprehensive solution for all your NDT requirements. Whether you need a single weld inspection or a full-on rig inspection, GER has the team and expertise to handle your specific needs.

In today's competitive oil and gas market, it's essential to have a trusted partner who can provide you with the third-party inspection services you need to ensure the safety and reliability of your operations. That's where GER comes in.

GER only employs ASNT SNT-TC-1A Level II & Level III inspectors, all with over 20+ years of experience in multiple NDT inspection methods. GER covers a wide range of inspection services, including:

- Penetrant Testing (PT)
- Magnetic Particle Inspection (MPI/MT)
- Liquid Penetrant Inspection (LPI/PT)
- Electro-Magnetic Testing (ET)
- Eddy Current Testing (ECT)
- Ultrasonic Testing (UT)
- Ultrasonic Testing Thickness Gauging (UTTG)
- Visual Testing (VT)
- Hardness Testing

GER's certified inspectors are equipped with advanced and calibrated non-destructive testing (NDT) equipment, and are able to provide analysis, maintenance, and repair services to Bottom Hole Assembly (BHA) components and rig equipment to ensure that industry standards and customer specifications (TH Hill DS-1, API RP7G-2, etc.) are met or exceeded.

GER's third-party inspection services are ideal for a variety of applications, including:

- Drill Pipe Inspection (EMI)
- Bottom Hole Assembly Inspection
- Casing & Tubing (EMI)
- Handling Tools
- Drilling Rig Inspection
- Weld Inspection
- Double Shouldered In-Field Refacing Capabilities for all your Premium Connection

Why Choose GER for Your Third-Party Inspection Needs?

- GER has a proven track record of excellence in the oil and gas industry.
- GER only employs highly qualified and experienced inspectors.
- GER uses the latest and most advanced NDT equipment.
- GER is committed to providing its customers with the highest quality inspection services at competitive prices.
- GER offers a wide range of inspection services to meet the specific needs of its customers.

Ensure the safety and reliability of your oil and gas operations with Global Energy Resources' (GER) new third-party inspection services.

GER's team of highly qualified and experienced inspectors can give you peace of mind knowing that your downhole tubulars, OCTG, handling tools, and overall drilling location is safe as possible.

From the crown to the ground, GER's comprehensive inspection services cover it all. With GER on your side, you can be confident that your equipment is meeting the highest industry standards, and the inspection service provider is doing an overall correct and precise job.

Contact your Global Energy Sales Representative today to discuss your specific needs and experience the power of Global Energy's Solutions. Visit our website at www.globalenergyusa.com for more information.

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GLOBAL ENERGY and TEJAS TUBULAR Exclusive JV Partnership

Global Energy & Tejas Tubular Exclusive JV Partnership

Attention Drillers: An Exclusive Partnership Ushers in a Downhole Revolution!

Global Energy Resources and Premier Drill Products/Tejas Tubular Products join forces and forge an exclusive partnership, unlocking unparalleled downhole solutions.

Get ready to witness API Downhole Tubulars and Drilling Equipment excellence redefined through an exclusive union:

- Exclusive access to API 5DP, Q1-certified downhole tubulars and accessories - the industry's gold standard for quality and performance.
- Unmatched distribution across North, Central, and South America - ensuring timely deliveries wherever you operate.
- Seamless collaboration between Global Energy's engineering expertise and Tejas manufacturing prowess - guaranteeing solutions that exceed your expectations in every dimension.
- Unrivaled cost efficiency and lead times - leaving your competitors in the dust.
- Flexibility and a stress-free purchasing experience you never thought possible in our industry.

This is more than just a partnership; it's a game-changer.

Stop settling for mediocrity. Experience the power of:

- Superior products: Built to exceed your toughest downhole challenges.
- Expert guidance: Global Energy's engineers working hand-in-hand with you to optimize every project.
- Streamlined logistics: Seamless distribution across the Americas, minimizing downtime.
- Easy In-House Financing, with a small downpayment and NET Terms after delivery.
- Unbeatable value: Cost-effective solutions that maximize your ROI.
- Peace of mind: Knowing you have a reliable partner committed to your success.

Don't just drill, dominate.

Contact Global Energy Resources today and unlock the downhole advantage you deserve.

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Global Headquarters ● Oklahoma City, Oklahoma USA

Tejas Tubular Announces Joint Venture Partnership with Global Energy

Certificate of Authority to use the Official API Monogram

License Number: 5DP-0024 **ORIGINAL**

The American Petroleum Institute hereby grants to

TEJAS TUBULAR PRODUCTS, INC.
8640 North Green River Drive
Houston, TX
United States

the right to use the Official API Monogram® on manufactured products under the conditions in the official publications of the American Petroleum Institute entitled API Spec Q1® and **API-5DP** and in accordance with the provisions of the License Agreement.

In all cases where the Official API Monogram is applied, the API Monogram shall be used in conjunction with this certificate number: **5DP-0024**

The American Petroleum Institute reserves the right to revoke this authorization to use the Official API Monogram for any reason satisfactory to the Board of Directors of the American Petroleum Institute.

The scope of this license includes the following: Drill Pipe Body at PSL 2, Grade E, Grade G, Grade S and Grade X; Tool Joint at PSL 2

QMS Exclusions: Design and Development; Servicing

Effective Date: DECEMBER 23, 2021
Expiration Date: DECEMBER 23, 2024

To verify the authenticity of this license, go to www.api.org/compositelist.

Senior Vice President of Global Industry Services

American Petroleum Institute

2018-151 | Digital

1-866-375-7473 ● sales@globalenergyusa.com ● www.globalenergyusa.com
Global Headquarters ● Oklahoma City, Oklahoma USA

Certificate of Authority to use the Official API Monogram

License Number: 5CT-0287 **ORIGINAL**

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Houston, TX
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the right to use the Official API Monogram® on manufactured products under the conditions in the official publications of the American Petroleum Institute entitled API Spec Q1® and **API-5CT** and in accordance with the provisions of the License Agreement.

In all cases where the Official API Monogram is applied, the API Monogram shall be used in conjunction with this certificate number: **5CT-0287**

The American Petroleum Institute reserves the right to revoke this authorization to use the Official API Monogram for any reason satisfactory to the Board of Directors of the American Petroleum Institute.

The scope of this license includes the following: Manufacturer of Casing or Tubing Couplings, Manufacturer of Casing or Tubing Pup Joints, Processor of Casing or Tubing (Threaded and Coupled) - C110, PSL 1, - C90, PSL 3, - J55, PSL 3, - K55, PSL 3, - L80(1), PSL 3, - L80(13Cr), PSL 2, - N80(1), PSL 2, - N80(Q), PSL 3, - P110, PSL 3, - Q125, PSL 3, - T95, PSL 3; Processor of Casing, Tubing, Coupling Stock, or Accessory Material (Plain End) - J55, PSL 3, - K55, PSL 3, - L80(1), PSL 3, - L80(13Cr), PSL 2, - N80(1), PSL 2, - N80(Q), PSL 3, - P110, PSL 3, - Q125, PSL 3; Pipe Threader

QMS Exclusions: Design and Development; Servicing

Effective Date: FEBRUARY 8, 2022
Expiration Date: DECEMBER 23, 2024

Anchal Liddar

Senior Vice President of Global Industry Services

American Petroleum Institute

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Global Headquarters ● Oklahoma City, Oklahoma USA

Certificate of Authority to use the Official API Monogram

License Number: 7-1-1510 **ORIGINAL**

The American Petroleum Institute hereby grants to

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8640 North Green River Drive
Houston, TX
United States

the right to use the Official API Monogram® on manufactured products under the conditions in the official publications of the American Petroleum Institute entitled API Spec Q1® and **API-7-1** and in accordance with the provisions of the License Agreement.

In all cases where the Official API Monogram is applied, the API Monogram shall be used in conjunction with this certificate number: **7-1-1510**

The American Petroleum Institute reserves the right to revoke this authorization to use the Official API Monogram for any reason satisfactory to the Board of Directors of the American Petroleum Institute.

The scope of this license includes the following: Threading for Rotary Shouldered Connections

QMS Exclusions: Design and Development; Servicing

Effective Date: DECEMBER 23, 2021
Expiration Date: DECEMBER 23, 2024

Anchal Liddar

Senior Vice President of Global Industry Services

To verify the authenticity of this license, go to www.api.org/compositelist.

American Petroleum Institute

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International Association of Oil & Gas Producers

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SERVICE & SUPPORT

SERVICE & SUPPORT

ABOUT US

Global Energy Resources, LLC, provides our customers with a comprehensive range of API Downhole Tubulars and Oilfield Equipment for both Land & Offshore Oil & Gas Drilling Operations. We offer a vast selection of products to help meet your needs, from Drilling and Production Equipment to essential safety gear and tools. We even supply OCTG API Tubing & Casing.

Our experienced team is dedicated to providing exceptional customer service, and we work closely with each of our clients to ensure they receive the right equipment for their specific project. Browse our website to learn more about our products and services and contact us today to see how we can help you succeed in the oil & gas industry!

COMPANY HISTORY

Global Energy Resources, LLC was founded in 2006 by a group of seasoned oilfield professionals with many years of experience. Seeing the need for a company that could supply not only the common everyday downhole tubulars and drilling equipment, but also the more boutique hard-to-find tubulars and equipment, the company started out small but quickly grew to become a major supplier to the Oil & Gas industry. The company's commitment to customer service and its willingness to go the extra mile for its customers helped it to succeed.

Throughout the years, Global Energy Resources, LLC has weathered the storms of the ups and down cycles of the oil industry and made it through. The company is proud of its humble beginnings and the hard work that has helped it to achieve success.

Today, Global Energy Resources, LLC is a leading supplier of Downhole Tubulars, OCTG & Oilfield Drilling Equipment. The company offers a wide range of products and services, including:

- Downhole tubulars
- Drilling equipment
- Rental services
- Repair and maintenance services
- Oilfield consulting services

The company's team members are experienced professionals who are dedicated to providing customers with the best possible service. Global Energy Resources, LLC is committed to continuing to grow and innovate, and the company looks forward to serving its customers for many years to come.

CORPORATE TERMS & POLICIES

At Global Energy Resources, LLC, transparency and trust are paramount. To ensure you have all the information you need, we encourage you to explore our comprehensive Corporate Terms & Policies, readily available on our website at www.globalenergyusa.com. Simply navigate to the "Corporate Governance" section, and you'll find all the details outlined clearly and conveniently.

PRODUCT WARRANTY TERMS & CONDITIONS

At Global Energy Resources, LLC, we stand behind the quality and performance of our products. For complete details on our product warranties, please visit our website at www.globalenergyusa.com. Simply navigate to the "Corporate Governance" section and explore the "Product Warranty Terms & Conditions" document for comprehensive information.

REGIONS SERVICED

Global Energy Resources, LLC… Spanning the Globe with Expertise

Domestic & International Reach:

Global Energy Resources, LLC extends its expertise across a diverse tapestry of oilfield regions, bridging the gap between established centers and emerging frontiers.

From the shale-rich heartlands of North America (USA, Canada, Mexico, Latin America & Caribbean) to the established giants of the North Sea and Europe. We navigate the dynamic landscape of the Middle East, unlock the burgeoning potential of Asia-Pacific and Africa, and embrace the cutting-edge technologies shaping the future of this vital industry. No matter where the energy flows, Global Energy Resources, LLC is there.

365 AROUND THE WORLD ● 24/7 AROUND THE CLOCK SERVICE

At Global Energy, 24/7 is our middle name, No Matter Where You Are, We're Here for You!

Global Energy is committed to providing our customers with the best possible service, no matter where they are in the world. We offer 365 days a year, 24 hours a day, around-the-clock service, and have a global network of warehouses and equipment yards to get you the drilling equipment you need, when you need it. Our team of experienced professionals are always available to answer your questions and troubleshoot problems. So don't hesitate to reach out to us, you can always get the help you need, when you need it.

CONTACT US

Contact us today to learn more about our comprehensive range of energy services, from Downhole Tubulars and Drilling Equipment to in-field Refacing, Hardbanding and NDT third-party inspection. We are here to help you achieve your energy goals, whatever they may be.

Global Energy Resources, The Drill Pipe, OCTG & Oilfield Equipment Experts!

We are always happy to see our customers, but we ask that you please schedule an appointment in advance.

Please advise us, if possible, exactly what you would like to address and accomplish. during our time together. This will help us to better prepare for your appointment and ensure. that we can address your needs as efficiently as possible.

Contact us today to schedule an appointment online or give us a call… we look forward to seeing you soon!

Global Energy Resources, LLC™

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Tuesday	09:00 am – 06:00 pm
Wednesday	09:00 am – 06:00 pm
Thursday	09:00 am – 06:00 pm
Friday	09:00 am – 02:00 pm
Saturday	By Appointment Only
Sunday	By Appointment Only

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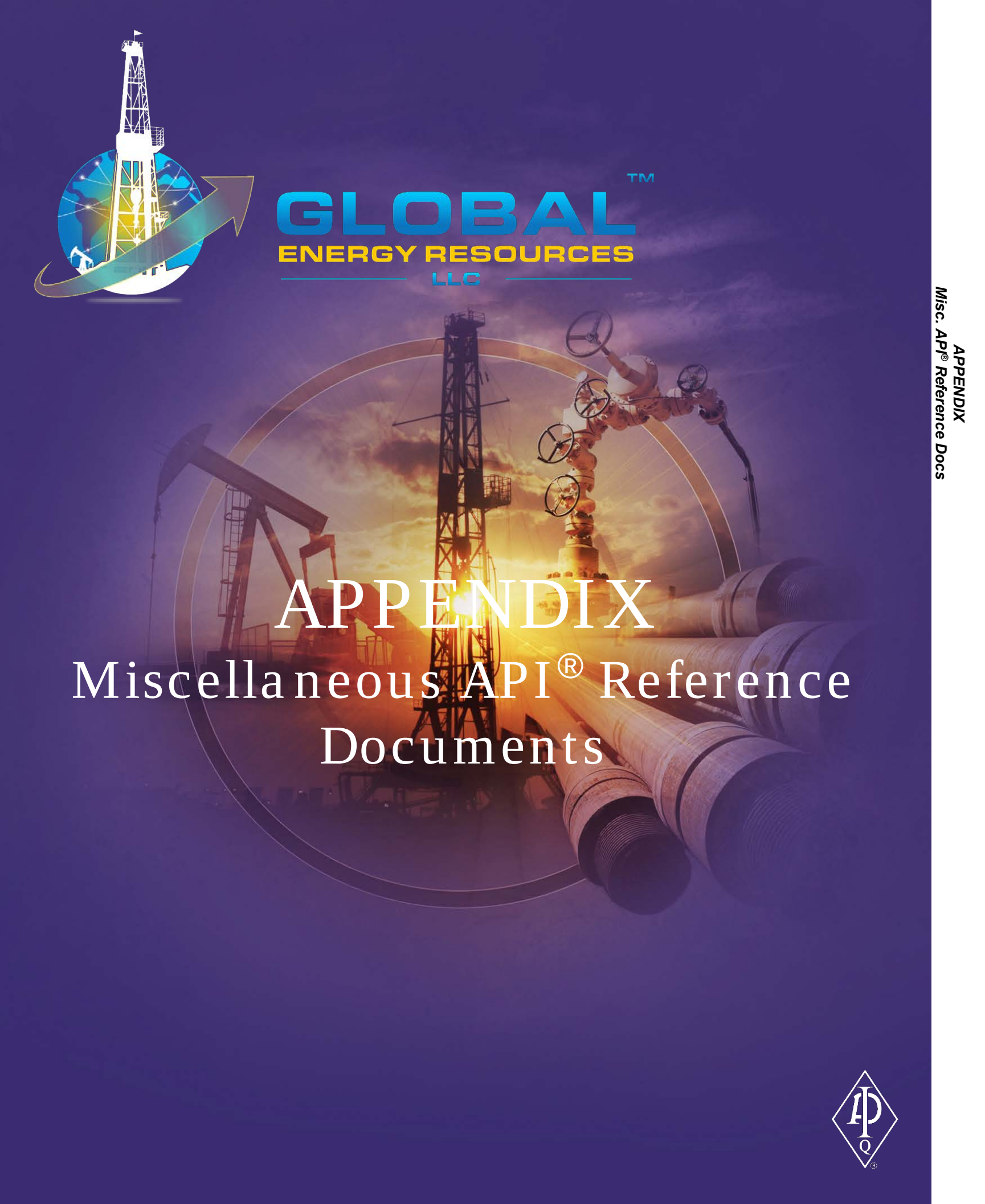

APPENDIX
Miscellaneous API® Reference Documents

Overview of Industry

API Spec 4F	Drilling and Well Servicing Structures
API RP 4G	Drilling and Well Servicing Structure (Inspection and Maintenance)
API Spec 6A	Wellhead and Christmas Tree Equipment
API Spec 7K	Drilling Equipment
API RP 8B	Hoisting equipment (Inspection and Maintenance)
API Spec 8C	Hoisting Equipment
API Spec 16A	Drill-through Equipment
API Spec 16C	Choke and Kill Systems
API Spec 16D	Control Systems for Drilling Well Control Equipment
API RP 16ST	Coiled Tubing Well Control Equipment Systems
API Std 53	Blowout Prevention Equipment Systems
API RP 92U	Underbalanced Drilling Operations
API Std 689	Reliability/Maintenance Data
API Spec Q2	QMS Requirements for Service Organizations for the Petroleum and Natural Gas Industry
API Spec 12B	Production Liquid Storage Tanks (Bolted)
API Spec 12D	Production Liquid Storage Tanks (Field welded)
API Spec 12F	Production Liquid Storage Tanks (Shop welded)
API Spec 12J	Oil and Gas Separators
API Spec 12K	Indirect Type Oilfield Heaters
API Spec 12L	Vertical and Horizontal Emulsion Treaters
API RP 12N	Flame Arresters Operations, Testing and Maintenance

API Spec 12P	Fiberglass Reinforced Plastic Tanks
API RP 12R1	Production Service Tanks (Inspection and Maintenance)
API RP 2350	Storage Tanks Overfill Protection
API Pub 4663	Remediation of Salt-Affected Soils
API Bull D16	Spill Prevention Control and Countermeasure Plan
API RP 49	Drilling and Servicing Involving Hydrogen Sulfide
API RP 54	Drilling and Servicing Operations Occupational Safety
API RP 55	Gas Processing Involving Hydrogen Sulfide
API RP 59	Well Control Operations
API RP 64	Diverter Systems Equipment and Operations
API RP 67	Oilfield Explosives Safety
API RP 68	Oil and Well Servicing and Workover Operations Involving Hydrogen Sulfide
API RP 74	Production Operations Occupational Safety
API RP 75L	Safety and Environmental Management Systems
API RP 76	Contractor Safety Management
API Std 65-2	Isolating Potential Flow Zones
API RP 90-2	Annular Casing Pressure for Onshore Wells
API RP 100-1	Well Integrity and Fracture Containment
API RP 100-2	Environmental Aspects Related to Onshore Operations
API RP 50	Environmental Protection Natural Gas Processing Plant Practices
API RP 51R	Environmental Protection for Operations

API RP 52	Environmental Protection Land Drilling Practices
API Bull E2	NORM Management
API Bull E3	Well Abandonment and Inactive Wells
API Bull E5	Waste Management
API Bull HF4	Community Engagement
API Spec 5L	Line Pipe
API Spec 6D	Pipeline Valves
API RP 6DR	Repair and Remanufacture of Pipeline Valves
API 6FA	Fire Testing for Valves
API Std 1104	Pipeline Welding
API RP 1110	Steel Pipeline Pressure Testing
API RP 1133	Guidelines for Onshore Hydrocarbon Pipelines Affecting High Consequence Floodplains
API RP 1160	Managing System Integrity
API RP 1162	Public Awareness Programs
API RP 1169	Pipeline Inspection – New Construction
API RP 1173	Pipeline SMS
API Spec 11B	Sucker Rods
API Spec 11E	Pumping Units
API RP 11ER	Guarding Pumping Units

API RP 5A3	Thread Compounds
API RP 5A5	Casing, Tubing, Drill Pipe Field Inspection
API Spec 5B	Threading, Gauges and Thread Inspection
API RP 5B1	Thread Gauging and Inspection Practices
API RP 5C1	Casing and Tubing Care and Use
API TR 5C3	Tubular Performance property calculations
API RP 5C5	Casing and Tubing Connections Testing
API RP 5C6	Welding Connections to Pipe
API Spec 5CRA	Corrosion Resistant Alloy Pipe
API Spec 5CT	Casing and Tubing
API Spec 5DP	Drill Pipe
API Spec 7-1	Drill Stem Elements
API Spec 7-2	Rotary Shouldered Connection Threading and Gauges
API RP 7G	Drill Stem Design
API RP 7G-2	Drill Stem Elements (Inspection and Classification)
API Spec 10A	Well Cements
API RP 10B-2	Well Cement Testing
API RP 10B-4	Foamed Cement Testing
API RP 10B-5	Well Cement Shrinkage and Expansion Determination
API RP 10B-6	Cement Static Gel Strength Determination
API Spec 10D	Bow Spring Casing Centralizers
API RP 10D-2	Centralizer Placement and Stop-Collar Testing
API RP 10F	Cement Float Equipment
API TR 10TR1	Cement Sheath Evaluation
API TR 10TR2	Cement Shrinkage and Expansion

API TR 10TR3	Cement Thickening Time Tests
API TR 10TR4	Selection of Centralizers
API TR 10TR5	Solid and Rigid Centralizer Testing
API Spec 13A	Drilling Fluids
API RP 13B-1	Water-based Drilling Fluids Testing
API RP 13B-2	Oil-Based Drilling Fluids Testing
API RP 13C	Drilling Fluids Processing System Evaluation
API RP 13D	Drilling Fluids Rheology
API RP 13I	Drilling Fluids Lab Testing
API RP 13J	Heavy Brines Testing
API RP 13M	Completion Fluids Viscous Properties
API RP 13M-4	Gravel-pack Fluid Leak-off
API RP 19B	Well Perforator Evaluation
API RP 19C	Proppants Properties
API RP 19D	Long-term Conductivity of Proppants
API Spec 11D1	Packers and Bridge Plugs
API Std 11D2	Progressing Cavity Pump Systems
API Std 11D3	Progressing Cavity Pump Surface Drive Systems
API Spec 14A	Subsurface Safety Valves
API RP 14B	Subsurface Safety Valves (Inspection and Maintenance)
API Spec 14L	Lock Mandrels and Landing Nipples
API Spec 19G1	Side-Pocket Mandrels
API Spec 19G2	Side-Pocket Mandrel Flow Control Devices
API Spec 19G3	Side-Pocket Mandrel Latches and Seals
API RP 19G4	Side-Pocket Mandrel Related Equipment
API Spec 19V	Barrier Valves

API is the world's leading standard-developing organization for the oil and natural gas industry.

Since 1924, API has developed standards for oil and natural gas operations.

API's formal consensus process is accredited by the American National Standards Institute (ANSI), the same institute that accredits U.S. national laboratories for their science and technology processes.

API standards are developed in an open process that requires regular review of its more than 600 standards covering all segments of the industry.

Nearly 200 API standards are cited over 3300 times in state regulations, and more than 100 standards are cited 270 times in federal regulations.

energy API

www.api.org

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GLOSSARY

Oilfield Equipment Definitions

OILFIELD GLOSSARY… Oilfield Terms & Definitions

The complexities of the oil and gas industry can make keeping up with all the terms and definitions related to drilling difficult. To simplify things, we've compiled a glossary of the most important terms related to drilling and to the oil and gas industry.

A

Abandon:

To pause or stop drilling operations or production from a well. Reasons for abandoning are if a well is a dry hole or if it's not producing enough to be kept active.

Absentee Bid:

This process allows a bidder to participate in an auction without being present. An absentee bidder will usually submit their offer before the auction, and they need to follow the guidelines set in place by the auctioneer.

Absolute Auction:

Also known as an auction without reserve, absolute auctions don't have any limiting conditions or amounts. The property under auction will be sold to the highest qualified bidder.

Abstract of Title:

The historical ownership records for a property. These records include surface rights and mineral rights among other details.

Accredited Investor:

When a person or institution is considered capable of understanding and affording the financial risks of unregistered securities, they are known as an accredited investor. The federal securities laws have more specific guidelines for who qualifies as an accredited investor in Rule 501 of Regulation D:

1. The institution is a bank, insurance company, registered investment company, business development company, or small business investment company.

2. An accredited investor can be an employee benefit plan if a qualified individual or organization (as identified above) makes the decision, or the plan has assets over $5 million.

3. The institution is a charitable organization, corporation, or other partnership with assets over $5 million.

4. The person is an executive or partner of the company selling the unregistered securities.

5. The institution has equity owners that are accredited investors.

6. The individual has a personal, or joint net worth of over $1 million.

7. The individual has had a personal income of at least $200,000 for the past two years, or a joint income of at least $300,000. The income expectation for the next year must also be the same.

8. A trust with over $5 million in assets managed by a person capable of understanding the risks of unregistered securities is qualified. The trust's original intent must not have been to purchase the securities offered.

Adsorption:

A surface-based process where a substance's atoms, ions, or molecules adhere to the adsorbent.

Adsorption Oil:

Also known as wash oil, this light liquid hydrocarbon is used in wet gas streams to absorb or remove heavier liquid hydrocarbons.

Acidizing:

To increase the flow of oil or gas in drilling, hydrochloric acid can be pumped into the well. The acid works to break down limestone, reducing the restrictions the oil or gas was previously facing to increase flow.

AESC Association of Energy Service Companies:

This association provides training materials and represents the interests of energy service employees within the oil and gas industry.

Alkaline Flooding:

Also known as caustic flooding, the alkaline flooding process involves injecting alkaline chemicals during polymer flooding or water-flood. Sodium hydroxide, sodium

carbonate, or other alkaline chemicals react with specific types of oils, and this reaction results in surfactants. These surfactants then increase oil production by reducing interfacial tension between oil and water. Alkaline flooding shouldn't be used in carbonate reservoirs.

Aluminum Stearate:

A salt mixture of aluminum hydroxide and stearic acid typically mixed with oil. The resulting solution is sprayed on foamy water mud to release gas bubbles from the mud.

Aniline Point Test:

A test of oil mud to determine if the aniline point temperature (aniline point) of the oil will damage elastomers (rubber compounds). The aniline point corresponds to the amount and type of hydrocarbons found in an oil sample, so a low aniline point indicates higher aromatics, and vice versa.

Annular Velocity:

Speed of drilling fluid or cement movement in a well column (typically measured in feet/minute or meters/minute)

Annulus:

An area between two concentric objects where fluid can flow. An example is the space between the wellbore and casing or the space between casing and tubing.

Anticlines:

Anticlines are folds in the earth's surface where at least 80% of the world's oil and gas has been found. An anticline has strata that slope downward on both sides and usually has surface formations like hills, knobs, and ridges.

API American Petroleum Institute:

This oil and gas industry trade organization publishes standards and best practices related to the industry.

API – Monogram:

The logo of the American Petroleum Institute (API) is added to equipment that meets their minimum standards. API also provides industry-related publications about recommended practices and standards.

Aromatic Content Test:

A quantitative test for measuring aromatic content of base oils used in oil mud.

Artificial Lift:

Used to describe any method for retrieving oil from a well and bringing it to the surface after the well ceases to produce.

Asphaltic Mud Additive:

Solid or high-viscosity hydrocarbons found in natural deposits or in petroleum refining residue that are used as additives of oil- and water-based muds (drilling fluids).

"As Is":

Also known as "As Is, Where Is" and "In Its Present Condition", "As Is" states there are no guarantees about the condition or usage of the property. The buyer is responsible for determining its condition and use cases.

Assignee:

The person who has property interests, like a working interest, royalty, or net profits interest, are assigned to.

Assignor:

The person who expresses interest in a particular assignment.

Associated Gas:

Natural gas that's created with crude oil from the same reservoir.

Auction With Reserve:

The opposite of an absolute auction, auctions with reserves have minimum buying prices that may not be disclosed to the bidders. The seller also has the ability to deny a bid for any reason.

Authorization for Expenditure:

Abbreviated as an AFE, this is a proposal given to each stakeholder that estimates the cost of drilling and completing a proposed well. The proposal will contain dry hole costs, completion costs, and the total cost. Dry hole costs are the spend needed to drill to the casing point, while completion costs are the funds needed to complete the well.

B

Back In:

Typically used to describe the payout to investors for their initial well investment, a back in is a type of interest in a well or property that becomes effective at a future time or after a future event.

Baffle:

The part of a separation vessel used to temporarily slow the flow of fluids; needed when attempting to separate oil and water.

Bail:

A steel bar that supports the swivel and connects it to the hook; resembles the handle of a bucket.

Bailer:

A cylindrical container with a valve used in cable-tool drilling; used to remove oil, water, sand, and mud from a well.

Barrel of Oil Equivalent (BOE):

The amount of oil barrels produced from a site each day.

Base Oil:

Simply put, base oil is the continuous phase in oil-based drilling fluids (water-in-oil emulsions where water is in the dispersed phase and oil is in the continuous phase).

BBL:

BBL is simply the abbreviation for barrel. For context, a barrel of oil is 42 US gallons.

Bit:

A steel bar that supports the swivel and connects it to the hook. Resembles the handle of a bucket.

Bitumen:

An extremely viscous form of crude oil that contains sulfur and other metals; to be produced, bitumen must be heated or combined with lighter hydrocarbons.

Blind Pool:

An oil and gas limited partnership that has not committed to a single lease or property yet.

Blowout:

Occurs when down-hole pressure gas is not properly balanced with the weight of the drilling mud, the uncontrolled flow of gas, oil, or other fluids.

Bore:

As a noun, a bore is the inside diameter of a pipe or drilled hole. As a verb, bore means to penetrate a surface with a rotary tool.

Borehole:

Also known as the wellbore, a borehole typically refers to the openhole or uncased portion that is created in well drilling.

Bottomhole:

As the name suggests, the bottomhole is the deepest part (the bottom) of the well.

Broker Participation:

In this situation, brokers will register potential bidders for properties being sold at an auction. The brokers are paid through commission by the property owner or auction firm.

BTU:

An acronym for British Thermal Unit, BTU is a measurement to describe the amount of heat generated from burning oil or gas.

Burner Valve:

There are two instances where burner valves are used. The first is in a dehy unit or line heater where it maintains a constant temperature in the process bath by controlling the flow of gas to the fire tube. The second is on a heater treater where constant temperatures are maintained in the vessel by the burner valve.

C

Cable:

A rope, wire, or braid of strong fibers.

Cased Hole:

A well that has the casing already inserted. The opposite of a cased hole is an open hole.

Casing:

A steel pipe that's placed in an oil or gas well after drilling is completed to prevent the well hole from caving in. Casing also prevents fluids from moving from one formation (like groundwater) to another and helps in well control.

Casing Tongs:

A large wrench used for turning casing tubulars when making up or breaking out casing.

Cavitation:

Describes the continuous pumping of mud from surface-level mud tanks, down the drill pipe, out the drill bit nozzles, and through the gap between the drill pipe and the borehole to the surface. This movement carries rock cuttings via the shale shaker to the mud system.

Check Stub:

The stub attached to a check that includes relevant information like the well name, production month, total volume produced, price received, and the net decimal interest of the payee.

Circulation:

Caused by quick changes in pressure, cavitation is the creation of vapor cavities within a low-pressure liquid. Cavitation can cause severe wear through cyclic stress on metal surfaces as they implode.

Coiled Tubing:

A long, but small in diameter pipe that is used to replace jointed pipes in certain types of drilling, completion, and workover operations.

Commercial Well:

A well that produces enough to pay for its production costs and leave enough oil and gas to be sold for revenue.

Completion:

Used to describe all activities between drilling to casing point and putting the well to production. Includes cleaning out the well bore, setting the casing and tubing, adding surface equipment, and perforating the casing.

Compressor:

An engine that is used to increase natural gas pressure so that it can more easily flow through the pipeline.

Concession:

A government grant is awarded to oil and gas companies to explore and produce oil and gas – usually on government-owned property. Typically, the government receives a bonus or license fee and a portion of the production.

Conventional Resources:

Hydrocarbon accumulation within highly permeable rocks that tend to have high-recovery factors.

Conveyance:

Used to describe the legal transfer of property from one owner to another via a deed or bill of sale.

Cost Oil:

Specified in the production sharing contract, cost oil is applied annually by the operator to recover costs.

Counterbalance Weight:

As the name suggests, a counterbalance weight is used to balance an existing weight. Often used in oil production pumping units to balance the weight of the upstroke (fluids and the column of the sucker rod) and downstroke (rods) of the pump.

Crude Oil:

Oil's form as it comes directly from the ground; it's a mixture including naturally occurring liquid hydrocarbons.

D

Dead Oil:

Thick oil or residue that's at such a low pressure that no dissolved gas or volatile elements are present.

Deed:

A legal document used to transfer a property's title from a person (or organization) to another.

Delay Rental:

Paid to the lessor by the lessee, this consideration extends the oil and gas lease terms when there is no operations or production. The payment typically gives the lessee another year, however, if no payment is made and operations cease, the lease is considered abandoned.

Density Log:

This radioactivity contact log responds to variations in the specific gravity of formations by emitting neutrons and measuring the secondary gamma radiation from the detector to the instrument. This is particularly helpful when measuring porosity in shaley sands.

Depletion:

The loss in mineral deposits as the well is produced.

Depletion (Gas) Drive:

An income tax deduction that can be taken advantage of for exhausting a natural resource.

Depreciation Allowance:

The loss in mineral deposits as the well is produced.

Development Well:

A well that's drilled in a proven oil or gas reservoir at the depth of proven productivity.

Die Inserts:

A removable, steel, serrated piece that fits into the jaws of tongs. Die inserts grip drill pipes, drill collars and casing while the tongs are making up or breaking out pipe.

Dies:

A tool used to shape, form, or finish other tools or pieces of metal.

Diesel Engine:

An internal-combustion engine frequently used for powering drilling rigs. A diesel engine is a high-compression engine that draws air into its cylinders and compresses the air to very high pressures; ignition then occurs as fuel is injected into the compressed, hot air. Combustion takes place in the cylinder above the piston; the combustion then powers the piston.

Dipmeter Survey:

Also called a dip meter or dip log, this surveying method determines the direction and angle of a formation dip in relation to the borehole to provide geological structure of the formation.

Directional Drilling:

Drilling in the opposite direction of a wellbore from the vertical. Directional drilling uses rotary steerable tools to move around rocks or other obstructions to continue drilling.

Division Order:

A document used to describe the property owner's interests in drilling operations to the property operator. The Division Order also details the owner's personal information like their tax ID.

Downstream:

The industry that includes, oil refineries, petrochemical plants, petroleum products distributors, retail outlets and natural gas distribution companies. The Downstream operates anywhere oil, plastics and natural gases are used.

Drill Bit:

The cutting or boring element used to access oil or gas in the drilling process. Not only are most bits roller-cone bits, but the drill bit also typically includes both the cutting element and the circulating element.

Drill Collars:

A heavy steel tube that's placed between the drill pipe and the bit in the drill stem. Drill collars are used to add weight to the bit to make drilling easier.

Drill Pipe:

A piece of seamless tubing used to rotate the bit and circulate the drilling fluid. The pipe joints are usually about 30 feet long and are joined together by tool joints.

Drill Rig:

The machinery that's used to drill oil and gas wells. There are two types of drill rigs: rotary and cable tools, with rotary drill rigs being more efficient.

Drill String:

Transmits fluid and rotational power from the Kelly bushing to the drilling collar. As the name suggests, the drill string is a column, or string, with attached tool joints.

Dry Hole:

Describes a well that does not produce oil or gas at commercial volume; typically, is a producing well, but does not have enough resources to justify production.

E

Electronic Flow Meter:

Monitors the amount of oil and gas flowing from a wellhead; measurements are expressed in real time, actual flow, cumulative flow, and historical data.

Electronic Log:

Used by geologists to determine the nature of rocks, a special tool is used in an uncased hole that outputs electrical current into the rock and records the rock's resistance.

Electronic Rig:

A drilling rig – typically powered by diesel – where the original energy source is converted to electricity via generators. Electricity is then pumped through electrical conductors to electrical motors.

Elevator Links:

Cylindrical bars used to attach elevators to the hooks and support the weight of the elevator.

Elevators:

Hinged steel devices with manual operating handles that are attached to rotary and top drive rigs. Crew members latch elevators onto tool joints to operate them.

Enhanced Oil Recovery:

This oil recovery process that restores formation pressure and improves oil displacement can be used at any point of the productive life of an oil reservoir. There are three major types of enhanced oil recovery: chemical flooding, miscible displacement, and thermal recovery. Each recovery type alters the original properties of oil, but the specific type used is dependent on the temperature, depth, and other traits of the reservoir.=

Estimated Ultimate Recovery (EUR):

An estimation of the cumulative volume of reserves that will be discovered in a specific reservoir.

Exploratory Well:

A well created for the purpose of finding oil or gas in a previously unproductive area.

F

Field:

Used to describe the area holding reservoirs grouped on the same geological structural feature or stratigraphic condition. Can also describe the area holding a single reservoir.

Flowing Well:

A well that produces oil and gas using its own reservoir pressure as opposed to pumps or other production methods.

Fluid Injection:

Forces oil into producing wells by injecting gas and liquids into the reservoir.

Foamy Oil:

Also known as heavy oil, this substance contains dispersed gas bubbles that were created at the wellhead of a heavy oil reservoir. The bubbles in foamy oil stay small, keeping the oil viscosity low, while still creating the energy needed to drive the oil to the producing well.

Fracturing:

The process of a fluid (usually crude oil, diesel or water) being pumped into the reservoir to break the reservoir rock open.

Fracturing Fluid:

A liquid, typically water, oil, or an acid, that's used in hydraulic fracturing. Fracturing fluid assists in the hydraulic fracturing process by carrying propping agents that hold open formation cracks after hydraulic pressure dissipates.

Free Water Knockout (FWKO):

A vertical or horizontal separator is used to separate gas, oil and water. The water is removed to prevent corrosion and the formation of hydrates or tight emulsions.

G

Gas Anchor:

Used to prevent gas lock, this tubular and perforated device works by allowing the lighter gas to rise, while the fluids make their way to the pump. It works like this: fluids first enter the anchor, while gas rises and exits the anchor through the perforations at the top. The rest of the fluids enter the anchor through a mosquito bill which allows all the gas to escape before fluids enter the pump.

Gas Drive:

The energy created by expanding compressed gas within a reservoir. Also called a depletion drive, this energy moves crude oil to a wellbore.

Gas Injection:

The process of injecting gas into a reservoir to maintain the pressure created by the gas drive. This process also reduces the decline rate of the original reservoir drive. There are two main types of gas injection: non-miscible oil and miscible oil injection.

Gas Oil Contact:

Used to describe the surface where the above gas and below oil make contact. This contact is transitional, forming a mix of gas and oil.

Gas/Oil Ratio:

In well testing this refers to the ratio of produced gas to produced oil (also known as GOR); in production, this is the volume ratio of gas vs. oil that comes out of solution at standard conditions.

Gas Well:

A well that primarily produces gas.

Grantee:

The person who received the land or mineral grant.

Grantor:

The person responsible for granting or conveying land, minerals, and other resources.

Gravity:

Developed by the American Petroleum Institute, these standard measures the density of liquid as expressed by degrees. The lower the degree, the heavier the liquid.

Greasing Out:

The massing our grouping of mud particles occurs when the barite (cement aggregate) becomes coated with an oily substance.

Gunk Plug:

Bentonite, cement, or polymers mixed into an oil that is pumped into a well to seal a leak zone.

H

Heavy Oil:

Crude oil with an API gravity of 20 degrees or less. It tends to have a high viscosity and hinders the easy flow of oil.

High Pressure Control Valve:

As the name suggests, the high-pressure control valve is used to control fluids up to pressures of 6000 psi. The valves range from 2 to 10 inches long and are used to release fluid from areas of natural gas production.

Horizontal Drilling:

A drilling technique that consists of vertical drilling down to a particular depth, and then involves turning at a right angle to drill horizontally within a specified reservoir.

Horizontal Severance:

Reserves oil, mineral, or gas rights at specific geologic depths.

Hot Oiling:

Hot oiling is used to dissolve or move paraffin deposits from production tubing by circulating heated oil.

Hydraulic:

Operated, moved, or effected by water or liquid.

Hydraulic Fluid:

A low-viscosity fluid used in a liquid-based system.

Hydraulic Fracturing:

High-pressured liquid is pumped into a formation to force the formation open and create passages for oil to flow into the wellbore.

Hydraulic Pumping:

A pumping method that uses a downhole pump without sucker rods. Specifically, two reciprocating hydraulic pumps are used; the first pump powers the second, the production pump. Single and double tubing strings can both be used to pump multiple wells from a main source. When a single string is used, power oil travels down the string to the pump, and a mix of power oil and fluid is returned through the casing tub annulus. When two strings are used, power oil travels down one string, while the other returns the exhaust and produced fluid.

I

Improved Oil Recovery:

Generally speaking, improved oil recovery is any activity that increases oil production and recovery factor. However, in the restricted sense, it's a process (like water flooding or gas flooding) that adds energy to the reservoir to increase oil production and recovery factor. Improved oil recovery allows further oil extraction beyond typical methods.

Induction Log:

In this electric well log, the conductivity of a formation is measured. In other surveys, the resistivity is measured. Conductivity measurements work because oil-bearing formations are less conductive than water-bearing formations.

Injection Head:

Injects coiled tubing into a well to seal the tubing and provide a pressure tight connection.

Injection Well:

As the name hints, an injection well is a well where fluids are injected into an underground stratum. Also called an input well, this process increases reservoir pressure and displaces oil.

Intangible Drilling Costs:

Abbreviated as IDC, these costs are inclusive of everything needed to drill and prepare wells for oil and gas production. Includes costs associated with ground clearing, construction of derricks and pipelines, and wages, among a plethora of other costs.

Interface Float:

A weighted float was created to sink in oil and float in water; used as a testing tool.

J

Joint:

A single section of drill pipe, casing or tubing that's usually about 30 feet long.

Joint Operating Agreement (JOA):

A written agreement between multiple land operating partners that details how the land will be developed, who will pay for the exploration and development, and when this development will happen.

Joint Venture:

A phrase to describe an oil and gas investment project.

K

Kelly:

This steel piece turns the drill stem as the rotary table turns; typically suspended from the swivel through the rotary table and then connected to the top joint of the drill pipe.

Kelly Bushing:

A long hollow steel bar that's used to connect the upper end of a drill string. Kelly bushing is a sleeve in the rotary table that allows the Kelly to freely move up and down during drilling. Kelly bushing also plays a part in the measurement of well depth, as well depth is measured from the Kelly bushing, down to the bottom of the well.

Kick:

Occurs when water, gas, oil, or other fluid enters the wellbore during drilling when the pressure created by the column of drilling fluid is lower in comparison to the pressure created by fluids in the drilled formation. When not addressed, kicks may cause blowouts.

Kick Fluids:

Any combination of fluids (including oil, gas, and water) that enters the borehole from a permeable formation.

L

Landman:

The person who manages land leasing and land damage for oil and gas companies.

Landowner:

The individual who owns the property where minerals are found. Oftentimes the ownership is limited to the ground-level of the property.

Lease:

The agreement was formed by the owner of the property and the interested exploration and development party. The property owner gives the lessee exclusive rights to search for and extract any minerals found on the property.

Lessee:

The person who acquires the right to drill for oil or gas on a piece of land.

Lessor:

The landowner who grants access for drilling for oil or gas on their land, known as a mineral lease.

The person who acquires the right to drill for oil or gas on a piece of land.

Liner:

The most common definition of a liner is a pipe used below existing casing to cause an open hole. A liner extends from the setting depth up into another string of casing above the lower end of the oil string. Other types of liners include: a short type of perforated pipe that's placed opposite of a producing formation to prevent loose sand from entering the well; liners in jet perforating guns are conically shaped and are used to increase the efficiency of the charge by improving the jet penetrability; cylinder liners are replaceable tubes created to fit inside the cylinder of an engine or a pump.

Low Pressure Control Valve:

A diaphragm is used to control the flow of liquid and gas; often found in oil and water dump valves. Used in systems with working pressures up to 300 psi.

M

Master Valve:

Also known as the master gate, the master valve is located on the Christmas tree and used to control gas and oil flow.

MBOE:

The acronym represents one thousand barrels of oil equivalent.

Mechanical Oil Valve:

Also known as a Mechanical Liquid Valve or a Dump Valve, it is designed to work together with a trunnion assembly to remove liquids from the vessel. It's controlled by a mechanical level.

Midstream Sector:

The sector within the industry between oil production and the consumers that processes, stores and markets crude oil and natural gas.

Migration:

The movement of oil and gas within layers of rock deep within the earth.

Mineral Rights:

The owner of the gas, oil, or other minerals when they're naturally occurring in a reservoir. Frequently, mineral owners will contract a oil or gas lease with a third-party to extract the minerals.

MMBBL:

A unit of measurement to describe a million barrels of crude oil, bitumen, natural gas liquids, or condensate.

N

Natural Gas:

A mixture of hydrocarbons and non-hydrocarbons (like Hydrogen Sulfide or Nitrogen) in the same gaseous space or in a mixture of crude oil in underground preserves

Net Oil Production:

The amount of oil produced minus the injected oil (also known as the power oil).

Non-Associated Gas:

The extracted natural gas from a reservoir that doesn't contain notable amounts of crude oil.

O

Oil and Gas Lease:

A contract between the mineral owner and the company interested in drilling gives the interested company rights to explore and produce oil and gas for a specified term. The lease is usually given for royalty payments in return.

Oil-Base Mud:

A type of drilling mud where the oil is in the continuous phase. Oil-base mud is frequently used where it is difficult to drill with Water-base mud.

Oil Chamber:

A compartment of the separator that gathers oil skimming over the oil weir.

Oilfield:

The surface area, reservoir, wells and production equipment overlying oil reservoirs.

Oil Outlet:

The pipe that directs oil out of the treater.

Oil Weir:

Similar to a dam, this vessel compartment allows oil to skim over into the oil chamber.

Operating Expenses:

Any costs associated with operating a well or similar venture.

Operator:

The party or person responsible for the drilling and operation of a well, and the maintenance of the leased land. All of the operator's responsibilities will be detailed in the JOA.

Over Balanced Drilling:

Used to describe instances where the pressure used to drill (from the drilling fluids) is more than the pressure of the oil or gas within the reservoir.

P

Paid-Up Lease:

An oil and gas lease that's paid to the Lessor through the first term at the lease signing.

Paraffin Base Crude Oil:

Used for motor oil or kerosene, this crude oil contains a lot of paraffin wax, but minimal asphaltic materials.

Pipe:

A hollow steel tube that transports fluids. Pipes used in oil fields are: casing, drill pipes, tubing, and line pipes.

Pipeline Oil:

A type of oil acceptable for pipeline shipment because it's free water, sediment, and emulsion (BS&W) content is low enough.

Plunger:

The part of the sucker rod pump that pulls well fluids into the pump.

Power Oil:

This type of crude oil is used to energize the bottom pump in hydraulic pumping through surface pressurization.

Production:

Term used to describe the process of extracting, preparing, storing, and delivering well oils.

Profit Oil:

After deducting the expenses from the oil production, the amount of production that's left is known as profit oil. This oil will be shared among participating parties and the host government based on the production sharing contract.

R

Refinery:

Processing plant where crude oil is turned into a variety of more useful oils like gasoline and diesel.

Reserves:

The amount of oil and gas in a reservoir that can be extracted. Measured in terms of barrels of oil or million cubic feet (MCF)

Reservoir:

Simply put, a reservoir is the rock body in which oil or gas is stored. Common reservoir rocks are limestones, dolomites, or sandstones – all rocks that are porous, permeable, or naturally fractured. A reservoir can be filled with oil, volatile oil, dry gas, and gas condensate.

Residual Oil:

When fluids are flowing through rock by way of primary recovery, secondary recovery, and invasion, residual oil does not move.

Rotary:

The machine used to drive rotational power to the drill stem while still allowing vertical movement of the pipe for rotary drilling. Most modern rotary machines have a rotary or master brushing used to turn the Kelly bushing, which then allows vertical movement of the Kelly while the stem is turning.

Royalty:

A percentage of the profits made from the development of mineral resources. Royalties are paid to the property owners.

Royalty Revenue:

Funds given to the lessor from the production of oil and gas excluding production costs, taxes, and transportation fees.

S

Saltwater Disposal Well:

Oilfield salt water is drained into these wells.

Secondary Recovery:

Once a reservoir has been fully extracted using the primary production method, the well or field moves into secondary recovery. Secondary recovery methods frequently include gas injection or water flooding – the goal being to repressurize the reservoir for additional oil recovery.

Shut In:

Closing the valves on a well to stop production. Can also refer to a well on which the valves were closed to stop production.

Spring Loaded Back Pressure Regulator:

Controls the gas pressure and water level in the vessel of a free water knockout.

Steam Oil Ratio:

Also known as SOR, steam-oil ratio is used to rate the efficiency of steam injection oil production. The ratio measures the volume of steam needed to create one unit volume of oil and the lower the ratio, the more efficiently the steam is being used.

T

Tertiary Recovery:

A type of improved recovery method used to restore formation pressure, improve oil displacement, or improve reservoir fluid flow. Can also be used to extract additional oil after the secondary recovery.

Treater Valve:

A float less level control valve, typically installed with the water leg and oil leg of a heater treater.

Tubing:

A pipe with a small diameter or a tube threaded at both ends. Tubing is lowered into a completed well so that oil and gas can be produced through the string of tubing.

Turnkey:

A type of fixed price drilling contract where a drilling contractor is required to drill to a specific depth and provide ample equipment, so the operator only needs to turn a valve to see oil or gas flow.

Two-Phase Separator:

A horizontal, vertical, or spherical vessel that separates well fluids into gas and total liquid. The oil leaves the vessel through the bottom, while gas leaves through the top.

U

Ultra Heavy Oil:

The US Department of Energy classifies a hydrocarbon fluid as an ultra-heavy oil when it has a gravity of 10 degrees API or lower.

Unconsolidated Sandstone:

A type of sand formation where the grains of sand don't stick to each other. When an unconsolidated sandstone produces oil, it frequently is mixed with sand unless properly controlled.

Unit Operator:

When multiple oil companies are involved in field production, the unit operator is the company in charge of development and production.

Upstream Sector:

The sector within the oil and gas industry that finds and produces crude oil and natural gas; often called the exploration sector.

V

Valve:

Used as a safety device to control flow within a line by opening or shutting a line completely.

Velocity:

In geophysics, velocity is described as a medium distance divided by travel time. Velocity can be measured vertically, laterally, and azimuthally and measured with laboratory measurements, acoustic logs, vertical seismic profiles, and velocity analysis of seismic data.

Viscosity:

Used to describe a fluid's resistance to flow. For example, a highly viscous fluid won't flow as easily as one with a low viscosity.

Viscous Oil:

A heavy crude oil with a viscosity above 10 cp, a gravity below 22.3 degrees API, and low hydrogen-to-carbon ratios. Viscous oil also boasts higher acid numbers as well as high nitrogen and heavy-metal content.

W

Water Drive:

The production of oil is due to the expansion of underlying water and rock, which then forces oil into the wellbore. Both bottom water drive and edge water drive are commonly used. Bottom water involves oil that's totally in contact with water, whereas with edge water, only a small portion of the oil touches water.

Water in Oil Emulsion:

A type of drilling fluid that consists of an external phase of oil with water or brine droplets.

Water/Oil Ratio:

Also, known as WOR, water oil ratio is the ratio of produced water to produced oil.

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INDEX

Oilfield Equipment Index

INDEX… Oilfield Equipment Index

The complexities of the oil and gas industry can make keeping up with all the downhole tubulars, OCTG & drilling equipment used in the industry difficult. To simplify things, we've compiled a index of the most important components related to drilling and to the oil and gas industry.

Drilling Rigs

Land Rigs, Offshore Rigs, Barge Rigs, Workover Rigs, Helicopter Rigs, Rathole Rigs, and Coiled Tubing Rigs, Etc.

Derricks / Subs / Drawworks

Derricks, Substructures, Masts, Skidding Systems, Drawworks, Traction Motors, Auto Drillers, Electric Motors, Drilling Consoles, Brakes Conventional, Brakes AC, and Cat Heads, Etc.

Power

Engines - Diesel, Engines - Natural Gas, Engines - Tri-Power, Generators - Diesel, Generators - Natural Gas, Generators - Tri-Power, Transmissions Compounds, Compressors, and Radiators / Cooling, Etc.

Rotating & Traveling Equipment

Top Drives, Rotary Tables, Blocks, Rotary Drives, Hooks, Kelly Drive Bushings, Kellys, Kelly Spinners, Swivels, Power Swivels, and Drill Line, Etc.

Handling Tools

Iron Roughnecks, Tongs, Power Tongs, Elevators Slips, Safety Clamps, Bails, Pipe Spinners, Air Hoist, and Bucking Units, Etc.

Downhole Tools

Downhole Motors, Fishing Tools, and Wireline Units, Etc.

Tanks

Fuel Tanks, Frac Tanks, Water Takes, Lubster Units, Etc.

Drill Pipe / HWDP / Drill Collars

New - Drill Pipe, Used - Drill Pipe, New - HWPD, Used - HWDP, New - SWDP, Used - SWDP, New - Tri-Spiral, Used - Tri-Spiral, New - Drill Collars (Slick), Used - Drill Collars (Slick), New - Drill Collars (Spiraled), Used - Drill Collars (Spiraled), New - Drill Collars Non-Magnetic, Used - Drill Collars Non-Magnetic, New - Drill Pipe Pup-Joints, Used - Drill Pipe Pup-Joints, New - Kellys (Square), Used - Kellys (Square), New - Kellys

(Hexagonal), Used - Kellys (Hexagonal), New - IB Stabilizers (Forged), Used - IB Stabilizers (Forged), Etc.

NOTE: All used equipment listed above has been or is currently being refurbished and inspected in accordance with API DS-1 Category 5 and/or Category 3 thru 5. Inspection reports are available upon request.

BOP Dart / Kelly Valves / Subs

BOP Dart Valves, Upper Kelly Valves, Lower Kelly Valves, Safety Valves, Drill String Check Valves, Float Valves, Kelly Saver Subs, Top-Drive Subs, BOP Test Subs, Straight OD Crossover Subs, Reduced OD Crossover Subs, Circulation Subs, Bit Subs, Pump-in Subs, Lift Subs, Throw-Away Subs, Etc.

OCTG Tubing & Casing

New - Tubing, Used - Tubing, New - PH-4 & PH-6 Tubing, Used - PH-4 & PH-6 Tubing, New - Casing, Used - Casing, New - API Couplings, New - Thread Protectors, New - Pup Joints, Used - Pup Joints.

NOTE: All used equipment listed above has been or is currently being refurbished and inspected in accordance with API. Inspection reports are available upon request.

Well Control

BOP's, BOP Rams, Koomey Units, Accumulators, Choke Kill Manifolds, Choke Valves, Mud Cross / HCR Valves, and Instrumentation, Etc.

Mud Pumps & Systems

Duplex Mud Pumps, Triplex Mud Pumps, Mud Systems, Mud Tanks, Centrifugal Pumps, Agitators, Electrical Motors, Mud Mixers, Desilter, Desander, Shell Shakers, Degasser, Gas Separators, and Expendables / Parts, Etc.

Auxiliary

Hoses, Valves, Catwalks / V Doors, Stairways, Derricks, Skids, Stands Sheaves, Dead Line, Heating Unit / Boilers, Anchor, Fire & safety, and Matting Boards, Etc.

Houses / Offices / Stations

Dog Houses, Offices / Company Man, Tool Houses, Crew Quarters, Mud Houses, Crew Camps, and Offices / Tool-Pusher, Etc.

Truck / Trailers / Cranes / Movers

Trucks, Trailers, Cranes, and Dozers / Excavators, Etc.

For Rental and/or Lease

Drill Pipe, HWDP, Drill Collars, Handling Tools, Drilling Equipment, and Complete Drilling Rigs, Etc.

Other

Welding Equipment, Etc.

Employment

Oilfield Jobs, and Engineering jobs, Etc.

Oilfield Service Companies

Drilling Services, Well Service, Pipe Recovery, Fracking, Drill Pipe Inspection, Drill Collar Inspection, Tubing & Casing Inspection, Derrick Inspection, Trucking, Crane Services, Welding, Machine Shop, Drawworks Rebuild, Engine Shop, BOP Rebuild, Hydraulics, Seismic, Oil - Fuel - Grease & Coolant, Rig Technology Software, Logistics, Shipping, Import / Export Services, Cementing, Well Logging, Laydown Services, Sandblasting, Equipment Painting, Construction, Construction Diving, Consulting, Financing, Factoring Services, Insurance, Marketing, and Oilfield Equipment Appraisals, Etc.

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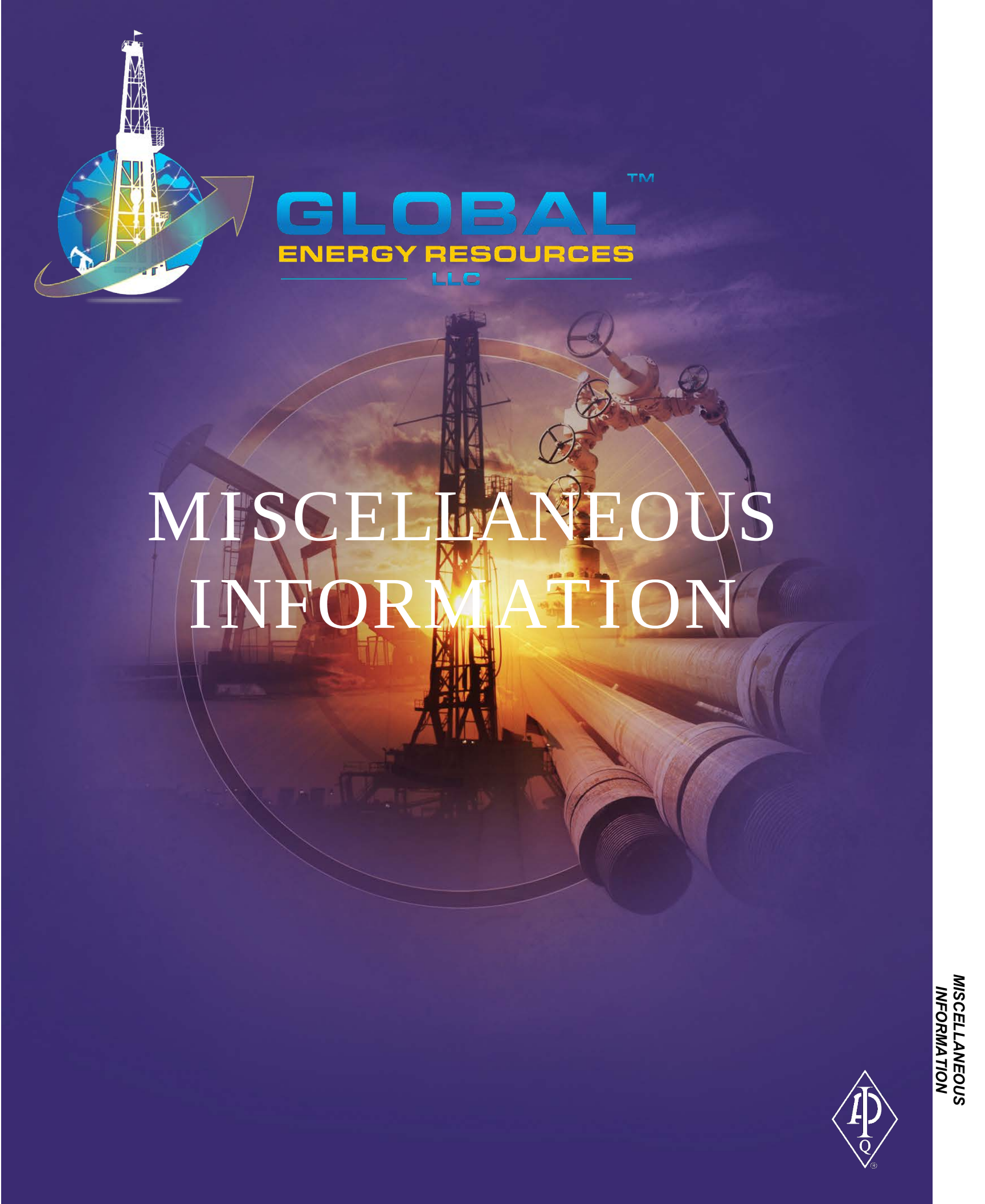

MISCELLANEOUS INFORMATION

MISCELLANEOUS INFORMATION

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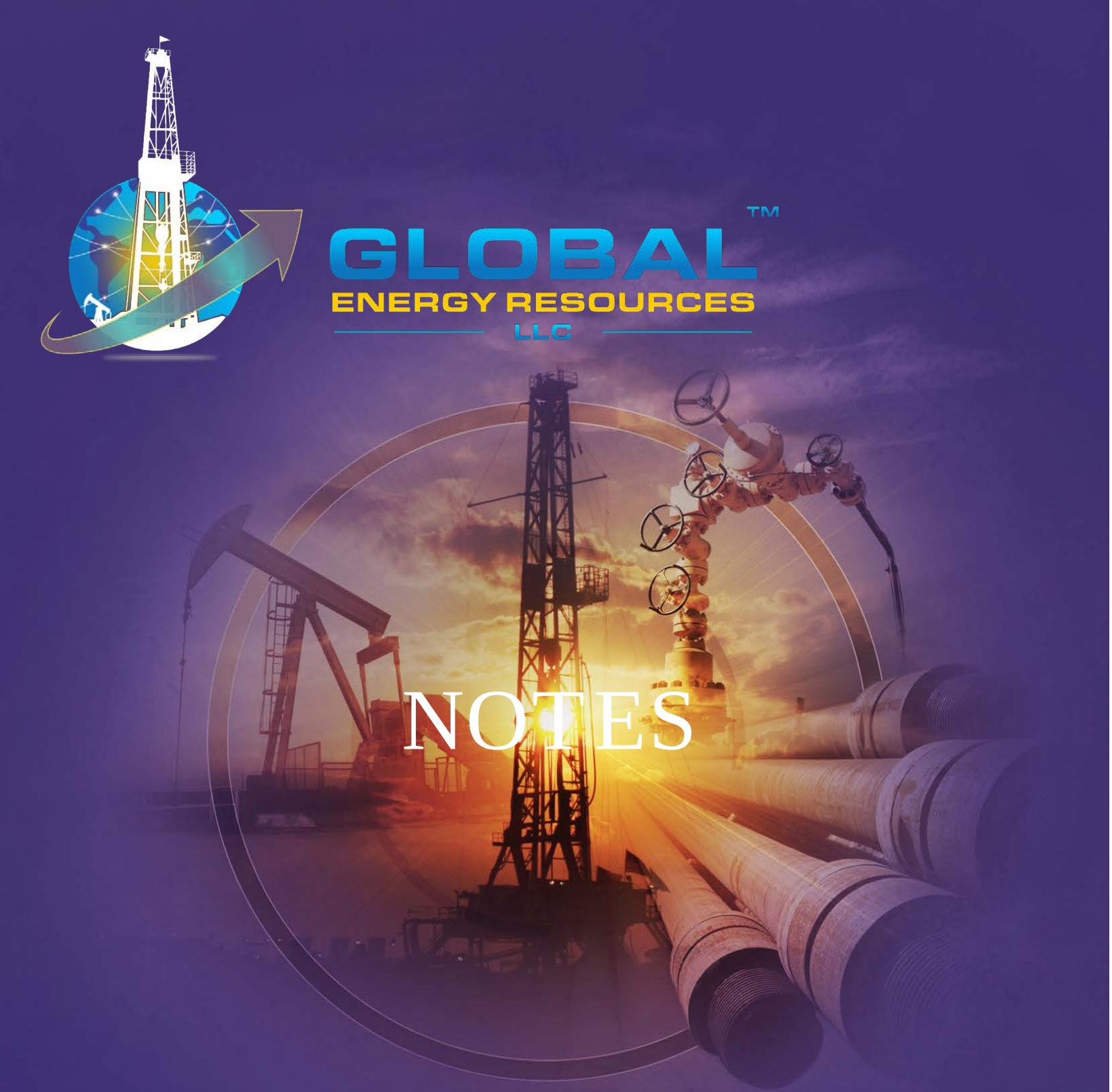

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Corporate Office Hours

Monday	09:00 am – 06:00 pm
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Wednesday	09:00 am – 06:00 pm
Thursday	09:00 am – 06:00 pm
Friday	09:00 am – 02:00 pm
Saturday	By Appointment Only
Sunday	By Appointment Only

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