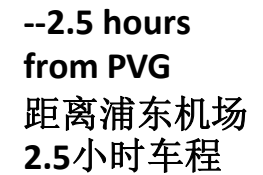




BRIGHT SPOT TECHNOLOGY (DANYANG) CO., LTD.
博锐斯精工科技（丹阳）有限公司

联合
Unite

ZHANGJIAGANG HENGLI FORGING CO.,LTD
张家港市亨利锻件制造有限公司



**--35 min from
Zhangjiagang
Railway Station
距离张家港站35
分钟车程**

FACTORY Profile 工厂简介

- Employee雇员：65人
- Establishment成立时间：2001年
- Quality Management System质量管理体系：ISO9001:2015
- Main Products主要产品：
 - Piping管道类: Flange, Forged pipe, Forged fitting 法兰，锻管，锻制管件
 - Pressure vessel压力容器类: Tube sheet, Cover, Channel course 管板，盖板，壳程
 - Valve阀门类: Valve body 阀体
 - Mechanical equipment机械设备类: Shaft, barrel, block 轴，筒体，方块
 - Irregular shaped forgings 各类异型锻件
- Capacity年产量：10,000 mt/y 一万吨/年
- Share of Export 出口比例：40%
- Total Area占地面积：30,000m²
- Workshop Area厂房面积：22,000m²
- Annual Turnover年营业额：15M USD 1500万美金

Materials 常用美标及欧标材料牌号

	CARBON	LOW ALLOY	STAINLESS STEEL				NICKEL ALLOY
			AUSTENITIC	MARTENSITIC	DUPLEX	PH	
EN	EN10250-2 S355J2G3(1.0570)	EN10250-3 42CrMo4(1.7225)	1.4301	EN10250-4 X20Cr13(1.4021)	1.4462	1.4542	
	EN10250-2 C35(1.0501)	EN10250-3 36CrNiMo4(1.6511)	1.4307	EN10250-4 X17CrNi16-2(1.4057)	1.4410		
	EN10250-2 C45(1.0503)	EN10250-3 34CrNiMo6(1.6582)	1.4541	EN10250-4 X4CrNiMo16-5-1(1.4418)			
		EN10250-3 30CrNiMo8(1.6580)	1.4401				
		EN10222-2 16Mo3(1.5415)	1.4404				
		EN10222-2 13CrMo4-5(1.7335)	1.4571				
		EN10084 18CrNiMo7-6(1.6587)	1.4435				
ASME	SA105	SA508 GR.3 CL.1	F304/304H/304L	SA182 F6NM	F51	17-4 PH	N04400
	SA350 LF2	SA694 F65	F316/316H/316L	SA182 F6A	F60		N06600
	SA694 F52	SA182 F5	F321/321H		F53		N06690
	SA266 GR.2	SA182 F9	F347/347H		F55		N08120
		SA182 F11	F310				N08800
		SA182 F22	F316Ti				N06625
		SA182 F22V	F317/317L				N08825
		SA182 F91	F20(N08020)				N10276
		SA182 F92	F44(S31254)				N08367
			F904L(N08904)				N06617
			FXM-19				N02200
							N06601
							N06025
Only regular material listed							



*Raw material supplier*原料供应商

Carbon/low alloys:碳钢/低合金钢

Jiangyin Xingcheng Special Steel Works Co., Ltd.

兴澄特钢

Baotou Iron&Steel (Group) Co., Ltd

包钢

Jiangsu Yonggang Group Co., Ltd

江苏永钢

Zhejiang Dalong Alloy steel Co.,Ltd

浙江大隆合金钢



*Raw material supplier*原料供应商

Stainless steel/Duplex steel:不锈钢/双相钢

Tsingshan Holding Group Co., Ltd.

青山钢铁

TISCO

太钢不锈

Zhejiang Dalong Alloy Steel Co.,Ltd.

浙江大隆

BAOWU Special Metallurgy Co., Ltd.

宝武特冶

Yongxing Special Stainless Steel Co.,Ltd.

永兴特钢

Zhong Hang Shang Da Superalloys Co., Ltd.

中航上大



Raw material supplier 原料供应商

Nickel alloys: 镍基合金

BAOWU Special Metallurgy Co., Ltd.

宝武特冶

Zhong Hang Shang Da Superalloys Co., Ltd.

中航上大

Yongxing Special Stainless Steel Co., Ltd

永兴特钢

Certificates—ISO 9001:2015 SGS 证书



ISO 9001:2015

Certificates- PED SGS 欧盟压力容器管道指令

SGS Portugal, S.A.
Industrial Services
Pólo Tecnológico de Labos,
Rua Centralidade Industrial,
Lote 11, nº1 1600-004 Lisboa - Portugal
T. (351) 21 710 42 00
F. (351) 21 710 75 26

SGS

Pag. 1/2

Quality Assurance System
According to Directive 2014/68/EU

Certificate N°: **PTC22.04826.5308**

Date: **2022.07.04**

ZhangJianggang Hengli Forging Co.,Ltd
Southern Part of Xiaojiazhuang Village,
Houcheng, Jiangang Town, Zhangjiagang
City, Jiangsu Province
P.R.China

Name and Address
of the Manufacturer:

SGS Portugal SA as a notified body for the scope of Pressure Equipment Directive 2014/68/EU,
certifies that the manufacturer has implemented, operates and maintains a Quality Assurance
System in accordance with the Pressure Equipment Directive Annex I, Paragraph 4.3.

CE 1155

Assessed According to **Annex I, Paragraph 4.3**
Directive 2014/68/EU.

Inspection Report N°: **PTR12.04614.5308**

Scope: **Manufacture of forgings (See Material List)**

Manufacturing Plant: **Southern Part of Xiaojiazhuang Village,
Houcheng, Jiangang Town, Zhangjiagang
City, Jiangsu Province, P.R.China**

Valid Until: **2025.05.11**

The validity of this certificate is connected to a valid certification in accordance with ISO 9001:2015

The manufacturer is therefore authorized to issue certificates of specific product control within the scope of the assessed
quality system and in accordance with the Pressure Equipment Directive and applied technical specifications. Possible
additional requirements - specific to applied technical specifications to meet PED annex I - are not affected.


Carlos Felgueiras
Technical Responsible

 **SGSSGS**

SGSPPM10 (2021.06-10)

SGS Portugal, S.A.
Industrial Services
Pólo Tecnológico de Labos,
Rua Centralidade Industrial,
Lote 11, nº1 1600-004 Lisboa - Portugal
T. (351) 21 710 42 00
F. (351) 21 710 75 26

SGS

Pag. 2/2

Quality Assurance System
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Southern Part of Xiaojiazhuang Village,
Houcheng, Jiangang Town, Zhangjiagang
City, Jiangsu Province
P.R.China

Name and Address
of the Manufacturer:

Table of Materials

Standardized designation of material	Reference Standard	Comments
1.0570.1.0501.1.0503	EN 10250-2	
1.6511.1.6582.1.6580.1.7225	EN10250-3	
1.5415.1.7335	EN10222-2	
1.6587	EN 10084	
1.4301.1.4307.1.4541.1.4401.1.4404.1.4571.1.4435.1.4462.1.4410	EN10222-5	
1.4021.1.4057.1.4418	EN 10250-4	
SA105	ASME SA105	
LF2 CL 1; LF2 CL 2	ASME SA350	
F52; F85	ASTM A694	
Gr.3 CL 1	ASME SA508	
F5; F8; F11 CL1; F11 CL2; F11CL3; F22 CL 1; F22CL 3	ASME SA182	
F22V; F81; F82; F51; F60; F53; F55; F6NM; F6a CL 1; F6a CL 2; F6a CL 3; F6a CL 4; F X6M-19; F20; F44; F304; F304L; F304H; F316; F316L; F316H; F321; F321H; F347; F347H; F316; F316H; F317; F317H; F90M		
N04400; N06650; N06680; N06120; N06800; N06025; N06825; N10276; N06367; N06617; N02200	ASME SB 564	


Carlos Felgueiras
Technical Responsible

SGSPPM10 (2021.06-10)

PED

Certificates- NORSOK M650 TUV THUERINGEN 挪威石油认证

CONFIRMATION

of having fulfilled the requirements of
NORSOK Standard M-650
(Edition 4, September 2011)
Confirmation no.: 154-1320-01
Name and address
of the manufacturer:
Zhangjiagang Hengli Forging Co., Ltd.
Southern part of Xiaojiazhuang Village,
Houcheng, Jingang Town, Zhangjiagang city,
Jiangsu Province, P.R. China

Based on the presented audit documentation this is to confirm that the Manufacturer mentioned above
has
• Quality Management System in conformity with EN ISO 9001:2015
• suitable and acceptable manufacturing facilities and equipment
• established Manufacturing Summary (Summaries) covering all manufacturing steps
• appropriate and safe installed heat treatment procedures
• knowledge and relevant manufacturing experience with the type of tested material
• demonstrated the results of product testing meeting the requirements of NORSOK Standard M-650

Approved: **NORSOK Standard M-650, Edition 4, Section 4.2**
QTR: **HL-QTR-23001**
HL-QTR-23002

Scope of approval:
Forging
Manufactured as open-die forging
Details of the scope are mentioned in the QTRs
issued by TÜV Thüringen

Confirmation expires: **2028-05-18**

Production site: **Southern part of Xiaojiazhuang Village, Houcheng, Jingang**

Town, Zhangjiagang city, Jiangsu Province, P.R. China

TÜV THÜRINGEN

Industrie-Service

TÜV THÜRINGEN

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Industrie-Service

Qualification Test Record (QTR)		NORSOK M-650		QTR No.: HL-QTR-23001	
Manufacturer name/address/ Web page:		Zhangjiagang Hengli Forging Co., Ltd. Southern part of Xiaojiazhuang Village, Houcheng, Jingang Town, Zhangjiagang city, Jiangsu Province, P.R. China www.hengliforging.com		Rev. No.: 01	
Reference standard		NORSOK M-650, Edition 4			
Material designation and MDS No.:		ASTM A182 F51/F50 (UNS S31803/S32103) NORSOK M-630 MDS 044 Rev.6			
Manufacturing Summary doc. No.:		HL-QTR-BOOK-23001		Rev. No.: 01	
Products and manufacturing process(es):		Open-die forging Manufactured as open-die forged, solution treated and quenched with liquid cooling.			
Mandatory conditions and sub-contractors:		The material shall be forged as close as practicable to the specified shape and size. No production process subcontracted.			
Other information:		Test is performed in lab certified acc.to ISO17025			
Qualification expires:		Valid till Apr. 2028			
Tested and qualified thickness and weight					
Products and manufacturing process(es):	Test record No.	Tested thickness mm	Qualified thickness mm	Test piece weight kg	Qualified weight kg
Open-die forging	QTR-23001-R	200	120-300	G>250	All
Qualification/acceptance signatures					
Manufacturer:		Prepared by/Date: Hu Tingting, 28 Apr. 2023		Checked by/Date: Luo Xuying, 28 Apr. 2023	
The manufacturer and this QTR are evaluated and found to be in compliance with the requirements of NORSOK M-650 for supply of the above listed products and materials. This acceptance does not exempt any purchaser from his responsibility to ensure that the products are valid for his products within the essential variables of NORSOK M-650.					
Qualified/Accepted by (company name /address):		Signature/Date: ref NING, 28 Apr. 2023		Signature/Date: ref NING, 28 Apr. 2023	
TÜV Thüringen e.V. - Shanghai Branch C6, 16 th Floor, 526 Laoshan Road, Shanghai 200122, P.R. China					

TÜV Thüringen Shanghai Co., Ltd.
C6, 16th Floor, 526 Laoshan Road, Shanghai
200122, P.R. China

Tel: +86-21-50651568
Fax: +86-21-50993126
Mail: alex.he@tuv-thueringen.com.cn

Qualification Test Record (QTR)		NORSOK M-650		QTR No.: HL-QTR-23002	
Manufacturer name/address/ Web page:		Zhangjiagang Hengli Forging Co., Ltd. Southern part of Xiaojiazhuang Village, Houcheng, Jingang Town, Zhangjiagang city, Jiangsu Province, P.R. China www.hengliforging.com		Rev. No.: 01	
Reference standard		NORSOK M-650, Edition 4			
Material designation and MDS No.:		ASTM A182 F51 (UNS S32750) NORSOK M-630 MDS 024 Rev.6			
Manufacturing Summary doc. No.:		HL-QTR-BOOK-23002		Rev. No.: 01	
Products and manufacturing process(es):		Open-die forging Manufactured as open-die forged, solution treated and quenched with liquid cooling.			
Mandatory conditions and sub-contractors:		The material shall be forged as close as practicable to the specified shape and size. No production process subcontracted.			
Other information:		Test is performed in lab certified acc.to ISO17025			
Qualification expires:		Valid till Apr. 2028			
Tested and qualified thickness and weight					
Products and manufacturing process(es):	Test record No.	Tested thickness mm	Qualified thickness mm	Test piece weight kg	Qualified weight kg
Open-die forging	QTR-23001-R	200	60-300	G>250	All
Qualification/acceptance signatures					
Manufacturer:		Prepared by/Date: Hu Tingting, 28 Apr. 2023		Checked by/Date: Luo Xuying, 28 Apr. 2023	
The manufacturer and this QTR are evaluated and found to be in compliance with the requirements of NORSOK M-650 for supply of the above listed products and materials. This acceptance does not exempt any purchaser from his responsibility to ensure that the products are valid for his products within the essential variables of NORSOK M-650.					
Qualified/Accepted by (company name /address):		Signature/Date: ref NING, 28 Apr. 2023		Signature/Date: ref NING, 28 Apr. 2023	
TÜV Thüringen e.V. - Shanghai Branch C6, 16 th Floor, 526 Laoshan Road, Shanghai 200122, P.R. China					

TÜV Thüringen Shanghai Co., Ltd.
C6, 16th Floor, 526 Laoshan Road, Shanghai
200122, P.R. China

Tel: +86-21-50651568
Fax: +86-21-50993126
Mail: alex.he@tuv-thueringen.com.cn

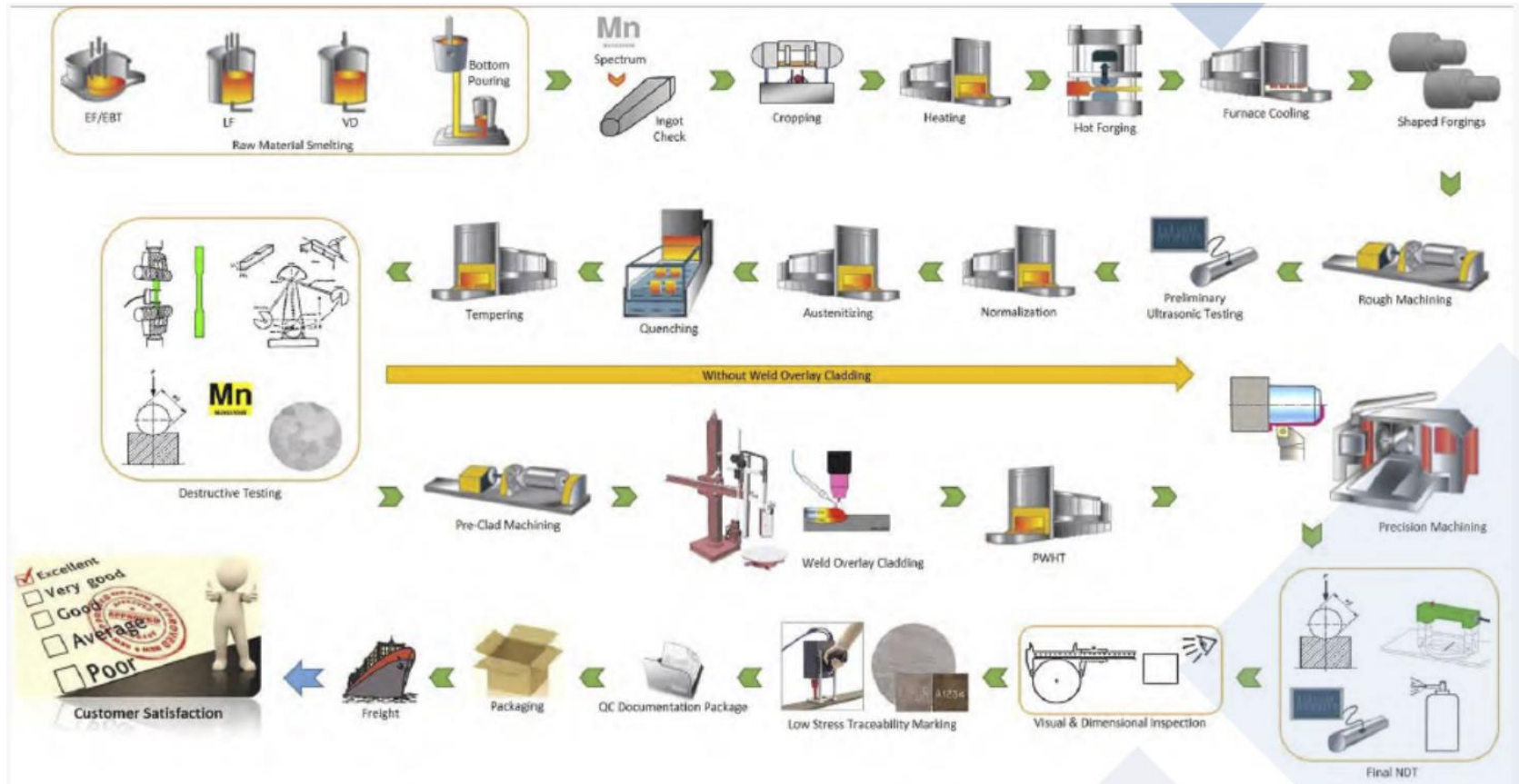
NORSOK M650

Certificates—TSG GOV 特种设备生产许可（压力管道元件）

中华人民共和国 特种设备生产许可证 Production License of Special Equipment People's Republic of China			
编号: TS2732K03-2027			
单位名称: 张家港市亨利锻件制造有限公司			
住 所: 金港镇后滕肖家庄村南首			
制造地址: 苏州市张家港市后滕街道长江明珠路 1 号			
经审查, 获准从事以下特种设备生产活动:			
许可项目	许可子项目	许可参数	备注
压力管道元件 制造	压力管道法兰 (钢制锻造法兰)	—	/
发证机关: 江苏省市场监督管理局 有效期至: 2027 年 07 月 16 日 发证日期: 2023 年 07 月 17 日 江苏省市场监督管理局制			

TSG

Process Flow—Forging 工艺流程图—锻件



Process & Facilities 设备与工艺

1. Raw Material & Sawing 原料与下料



2. Forging 锻造



3. Heat treatment after forging 锻后热处理



4. Rough machining 粗加工



Process & Facilities 设备与工艺

5. Final heat treatment 性能热处理



6. UT 超声波检查



7. Final Machining 精加工



Process & Facilities 设备与工艺

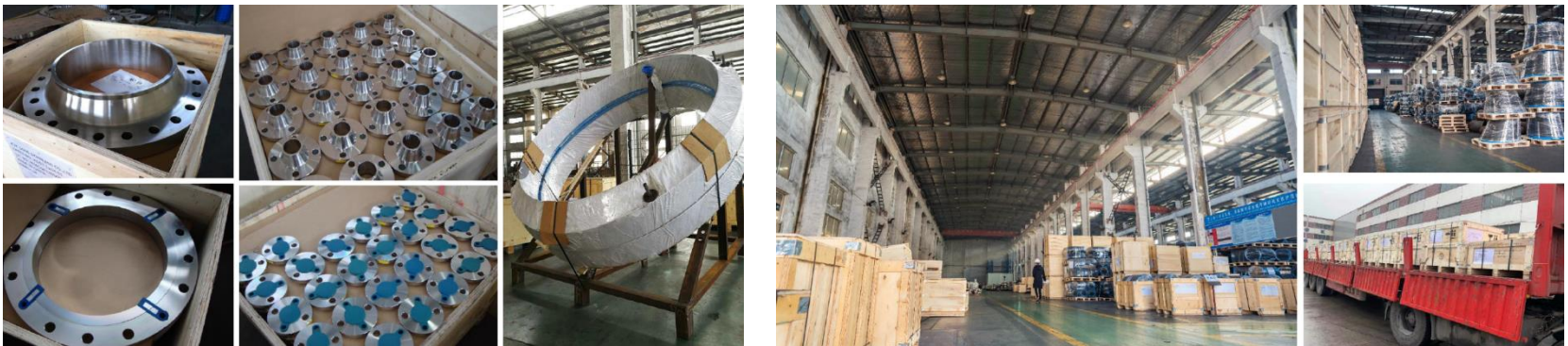
8. Final inspection 成品检验



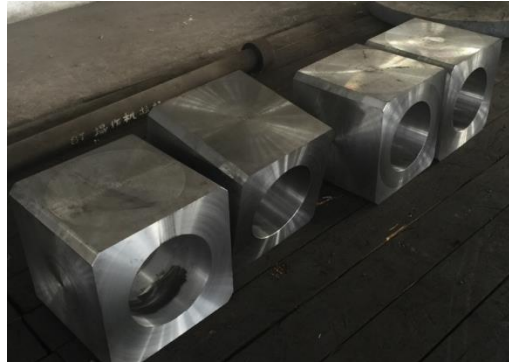
9. PT/MT 渗透/磁粉检查



10. Packing, storage, delivery 包装, 存贮, 运输



Products pictures 产品照片

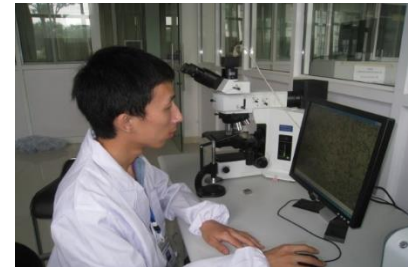


Products pictures 产品照片



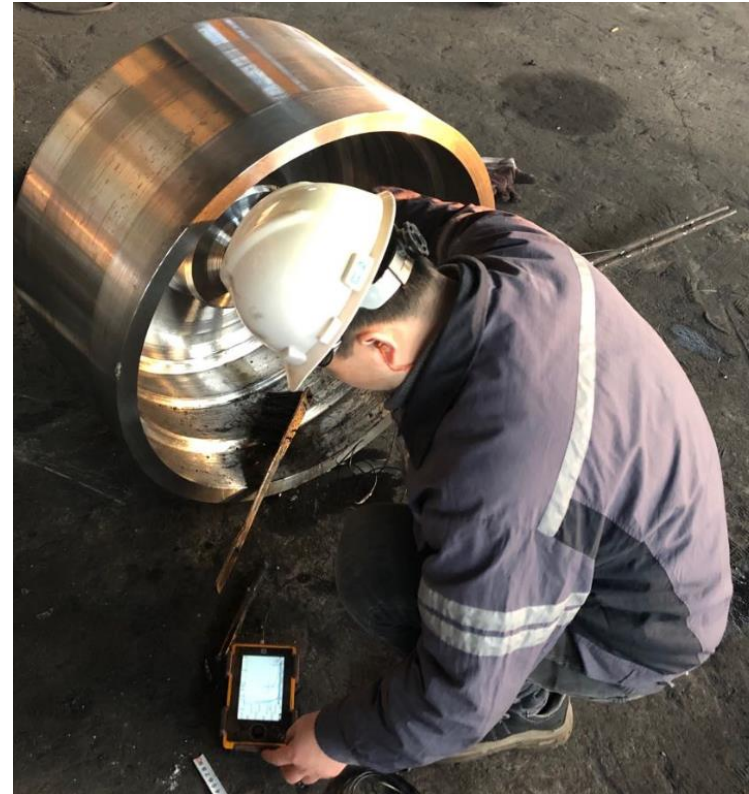
LAB实验室

- Chemical composition: optical spectrometer, PMI
化学成分: 台式光谱仪, 推车式光谱仪, 便携式光谱仪
- Metallographic test: Grain size test, Metallographic Analysis
金相试验: 晶粒度测定, 金相分析
- Mechanical test: Tensile test, Impact test, Hardness test
力学测试: 拉伸试验, 冲击试验, 硬度测试
- Corrosion test: Intercrystalline corrosion test
腐蚀试验: 晶间腐蚀实验



NDT 无损检测

- UT 超声波检查
- PT 渗透检查
- MT 磁粉检查
- VT 目视检查



Projects Applications 工程应用领域

- Oil-Gas 油气工程
- LNG 液化天然气项目
- Thermal Power plant 热电厂
- Refinery & Petrochemical 炼油与石化



Thanks!

感谢

Zhangjiagang Hengli Forging Co.,Ltd

张家港市亨利锻件制造有限公司

Add:,No.1 Changjiangmingzhu Road, Houcheng, Zhangjiagang,China

地址：张家港市后塍长江明珠路1号

Tel/电话:+86-511-86821910

Fax/传真:+86-511-86821910

Contact/联系人:Jessie Hwang/黄洁

M.P/移动电话:+86-18352847829

E-mail/电子邮件:info@brightspottech.com

Website/网址:www.brightspottech.com