



-Packager: Hanover

-Year Built: 2003

-Frame: Ariel JGQ-2/3 Stage

-Cylinder Configuration: 6.5" JG (635 psi), 4.375" P (1,270 psi), 2.75" P (1,500 psi)

-Cooler: Air X-Changers 32VV

- MAWP- IC1: 645 psi
- MAWP- IC 2: 1,270 psi
- MAWP- AC: 1,440 psi

-Current Condition:

Frame: Completely overhauled 4/7/2021:

- ALL valves rebuilt
- BOTH packing glands rebuilt
- BOTH VVCP's rebuilt
- ALL main and rod bearings replaced
- NEW tandem piston rod installed due to .003" wear
- Painted 4/8/21 with NACE level 1 Mesa Tan

-Price: \$45,000

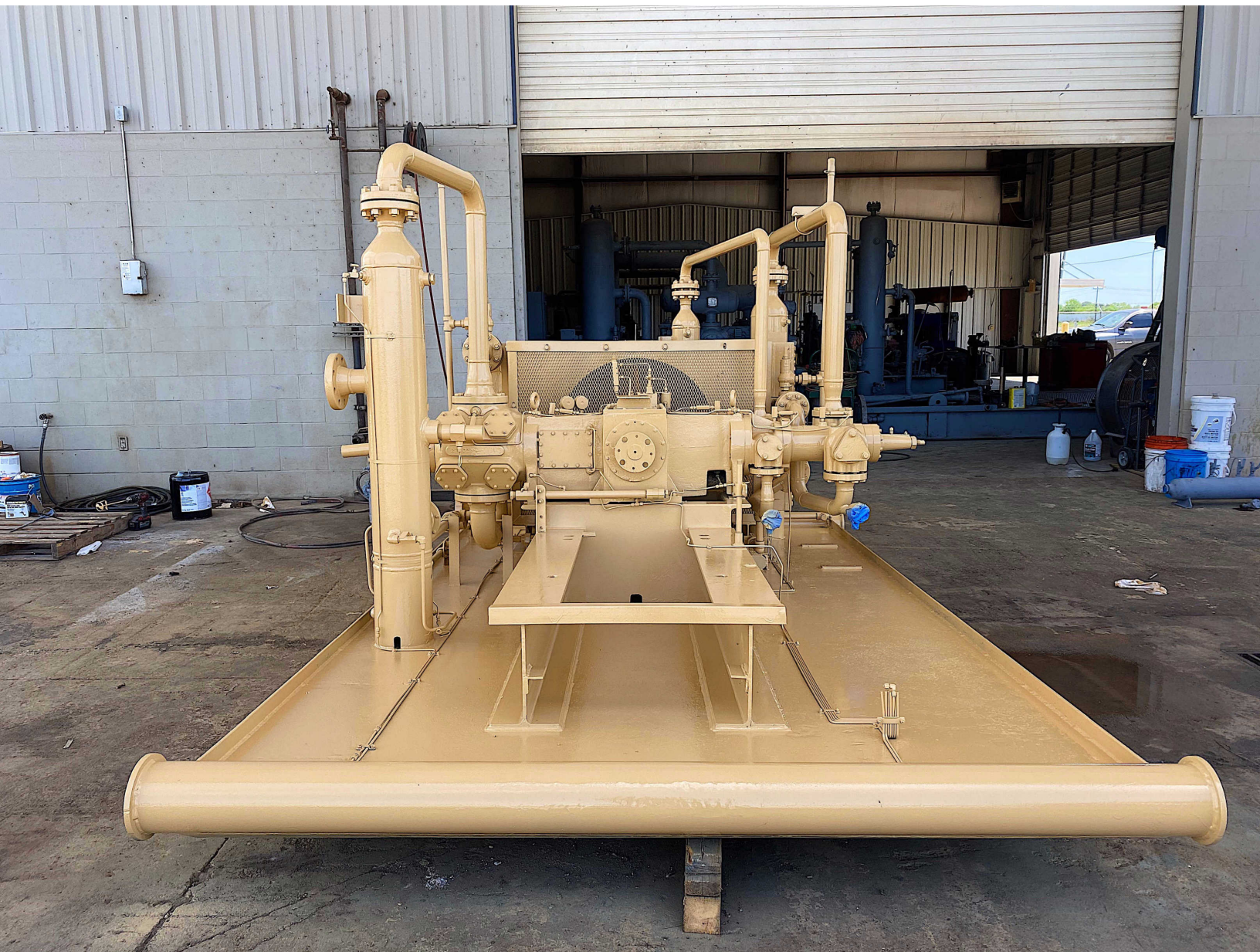
-Available to Ship: IMMEDIATELY

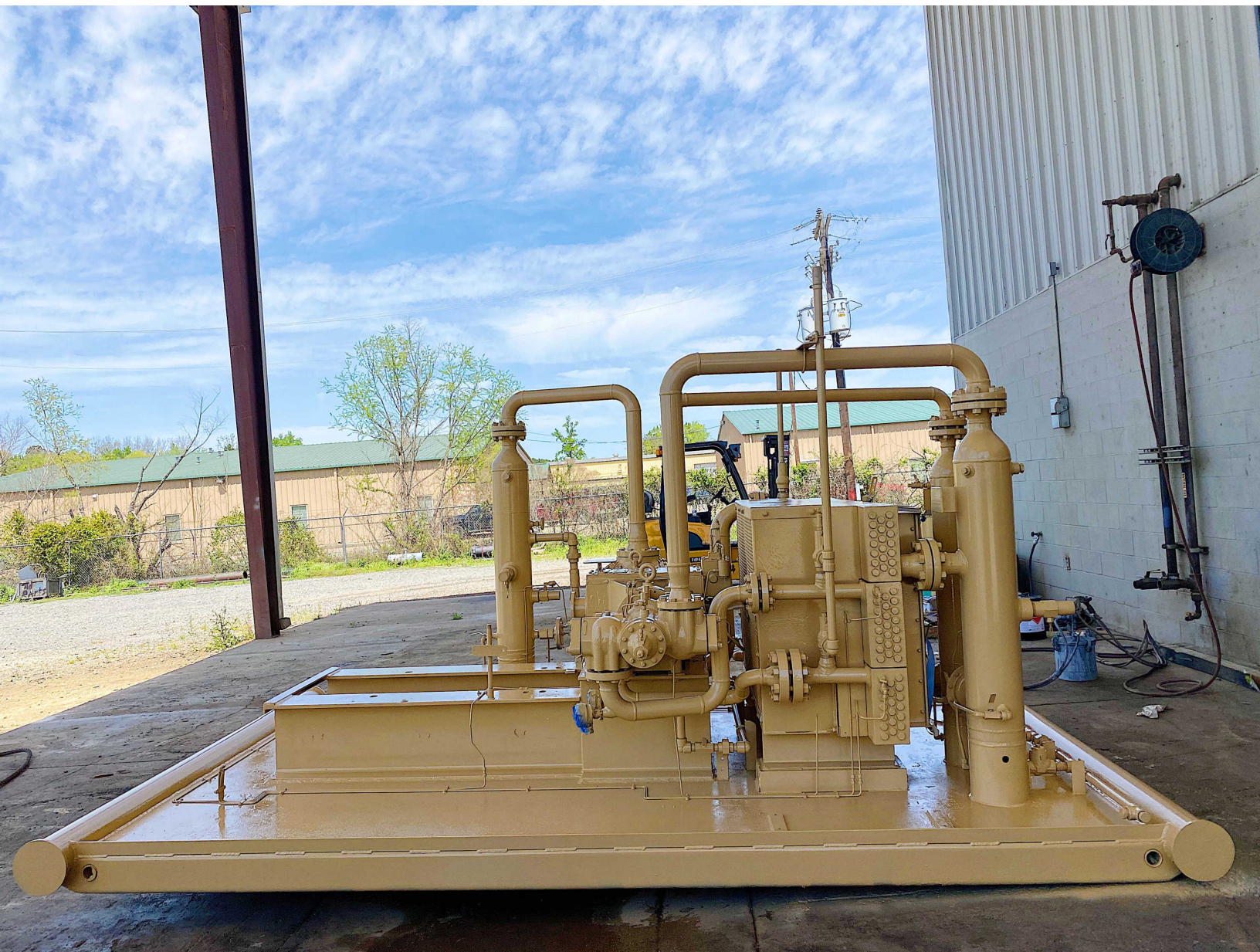
See below:

- Current photos (Painted Mesa Tan and ready to ship IMMEDIATELY!)
- Ariel Performance Runs:
 - 60 to 1,250 psi= 873 MCFD Using 160 HP
 - 90 to 1,250 psi= 1.227 MMCFD Using 196 HP
- Chart Cooler Performance Runs
 - 60 to 1,250 psi moving 873 MCFD: Outlet temp= 134*
 - 90 to 1,250 psi moving 1.227 MMCFD: Outlet temp= 135*

Synergy Field Services has a full-service compressor refurb shop and can provide additional repairs if you'd like further work performed for this unit or any other.











Ariel Performance

Company: Synergy Field Services, LLC
 Quote:
 Case 1:

Customer:
 Inquiry:
 Project:



7.7.6.0

Compressor Data:

Elevation, ft:	50.00	Barmtr, psia:	14.669	Ambient, F:	100.00
Frame:	JGQ/2	Stroke, in:	3.00	Rod Dia, in:	1.125
Max RL Tot, lbf:	20000	Max RL Tens, lbf:	10000	Max RL Comp, lbf:	11000
Rated RPM:	1800	Rated BHP:	280.0	Rated PS FPM:	900.0
Calc RPM:	1800.0	BHP:	160	Calc PS FPM:	900.0

Driver Data:

Type: **Electric**
Mfg:
Model: **200 HP**
BHP: 200
Avail: 200

Services

Gas Model

Stage Data:

	1 (SG)	2	3
Target Flow, MMSCFD	1.000	1.000	1.000
Flow Calc, MMSCFD	0.877	0.877	0.873
BHP per Stage	69.9	49.6	34.2
Specific Gravity	0.6500	0.6498	0.6485
Ratio of Sp Ht (N)	1.2486	1.2567	1.2777
Comp Suct (Zs)	0.9855	0.9574	0.9009
Comp Disch (Zd)	0.9797	0.9528	0.9068
Pres Suct Line, psig	60.00	N/A	N/A
Pres Suct Flg, psig	59.25	266.75	688.71
Pres Disch Flg, psig	271.75	698.53	1262.65
Pres Disch Line, psig	N/A	N/A	1250.00
Pres Ratio F/F	3.875	2.534	1.816
Temp Suct, F	80.00	120.00	120.00
Temp Clr Disch, F	120.00	120.00	120.00

Cylinder Data:

	Throw 1	Throw 2	Throw 2
Cyl Model	6-1/2JG	4-3/8P-HE	2-3/4P-CE
Cyl Bore, in	6.500	4.375	2.750
Cyl RDP (API), psig	577.3	1154.5	1363.6
Cyl MAWP, psig	635.0	1270.0	1500.0
Cyl Action	DBL	HE	CE
Cyl Disp, CFM	204.3	47.0	15.5
Pres Suct Intl, psig	55.87	253.24	626.88
Temp Suct Intl, F	86	124	123
Pres Disch Intl, psig	282.90	727.51	1357.85
Temp Disch Intl, F	267	259	227
HE Suct Gas Vel, FPM	7010	7211	0
HE Disch Gas Vel, FPM	6202	6121	N/A
HE Spcrs Used/Max	0/4	0/1	N/A
HE Vol Pkt Avail	1.45+58.43	1.16+49.95	N/A
Vol Pkt Used	0.00 (V) %	0.00 (V) %	N/A %
HE Min Clr, %	14.62	18.98	N/A
HE Total Clr, %	16.07	20.14	N/A
CE Suct Gas Vel, FPM	6800	0	9466
CE Disch Gas Vel, FPM	6017	N/A	7915
CE Spcrs Used/Max	0/4	N/A	0/2
CE Min Clr, %	15.57	N/A	23.20
CE Total Clr, %	15.57	N/A	23.20
Suct Vol Eff HE/CE, %	60.2/61.2	72.3/N/A	N/A/82.4
Disch Event HE/CE, ms	4.6/5.5	6.2/N/A	N/A/9.0
Suct Pseudo-Q HE/CE	4.1/3.8	3.2/N/A	N/A/4.5
Gas Rod Ld Comp, %	69.1 C	49.2 C	49.2 C
Gas Rod Ld Tens, %	72.4 T	53.3 T	53.3 T
Gas Rod Ld Total, %	74.2	53.7	53.7
Xhd Pin Deg/%RvrsI lbf	168/94.2	136/85.9	136/85.9
Flow Calc, MMSCFD	0.877	0.877	0.873

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Note: **BOLD**=Out of Limits, **ITALIC**=Special Appl, **BOLD**=Review Base: 14.70 psia, 60.0 F

File: C:\Users\Daniel\Documents\ArielPerformance\2019-11-10 Synergy 200 HP Elec- JGQ-2-3- 6.5 x

Gathering

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 Case:1 - Pkg:1

4.375 x 2.75- 90 to 1300 psi= 1.203 MMSCFD Using 194 of 200 HP.run



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Ariel Performance

Company: Synergy Field Services, LLC
 Quote:
 Case 1:

Customer:
 Inquiry:
 Project:



7.7.6.0

Compressor Data:

Elevation, ft:	50.00	Barmtr, psia:	14.669	Ambient, F:	100.00
Frame:	JGQ/2	Stroke, in:	3.00	Rod Dia, in:	1.125
Max RL Tot, lbf:	20000	Max RL Tens, lbf:	10000	Max RL Comp, lbf:	11000
Rated RPM:	1800	Rated BHP:	280.0	Rated PS FPM:	900.0
Calc RPM:	1800.0	BHP:	196	Calc PS FPM:	900.0

Driver Data:

Type: **Electric**
Mfg:
Model: **200 HP**
BHP: 200
Avail: 200

Services

Gas Model

Stage Data:

	1 (SG)	2	3
Target Flow, MMSCFD	1.000	1.000	1.000
Flow Calc, MMSCFD	1.230	1.230	1.227
BHP per Stage	93.6	64.4	32.2
Specific Gravity	0.6500	0.6501	0.6502
Ratio of Sp Ht (N)	1.2521	1.2627	1.2858
Comp Suct (Zs)	0.9793	0.9427	0.8759
Comp Disch (Zd)	0.9719	0.9395	0.8818
Pres Suct Line, psig	90.00	N/A	N/A
Pres Suct Flg, psig	88.95	361.30	872.33
Pres Disch Flg, psig	366.30	882.33	1262.65
Pres Disch Line, psig	N/A	N/A	1250.00
Pres Ratio F/F	3.676	2.386	1.440
Temp Suct, F	80.00	120.00	120.00
Temp Clr Disch, F	120.00	120.00	120.00

Cylinder Data:

	Throw 1	Throw 2	Throw 2
Cyl Model	6-1/2JG	4-3/8P-HE	2-3/4P-CE
Cyl Bore, in	6.500	4.375	2.750
Cyl RDP (API), psig	577.3	1154.5	1363.6
Cyl MAWP, psig	635.0	1270.0	1500.0
Cyl Action	DBL	HE	CE
Cyl Disp, CFM	204.3	47.0	15.5
Pres Suct Intl, psig	84.18	342.95	791.80
Temp Suct Intl, F	86	124	122
Pres Disch Intl, psig	381.37	919.63	1365.55
Temp Disch Intl, F	262	253	196
HE Suct Gas Vel, FPM	7010	7211	0
HE Disch Gas Vel, FPM	6202	6121	N/A
HE Spcrs Used/Max	0/4	0/1	N/A
HE Vol Pkt Avail	1.45+58.43	1.16+49.95	N/A
Vol Pkt Used	5.00 (V) %	0.00 (V) %	N/A %
HE Min Clr, %	14.62	18.98	N/A
HE Total Clr, %	19.00	20.14	N/A
CE Suct Gas Vel, FPM	6800	0	9466
CE Disch Gas Vel, FPM	6017	N/A	7915
CE Spcrs Used/Max	0/4	N/A	0/2
CE Min Clr, %	15.57	N/A	23.20
CE Total Clr, %	15.57	N/A	23.20
Suct Vol Eff HE/CE, %	57.2/63.5	74.8/N/A	N/A/89.3
Disch Event HE/CE, ms	4.6/5.6	6.6/N/A	N/A/10.6
Suct Pseudo-Q HE/CE	4.1/3.9	3.3/N/A	N/A/4.6
Gas Rod Ld Comp, %	90.5 C	60.2 C	60.2 C
Gas Rod Ld Tens, %	94.7 T	48.8 T	48.8 T
Gas Rod Ld Total, %	97.1	57.5	57.5
Xhd Pin Deg/%RvrsI lbf	174/97.1	166/97.6	166/97.6
Flow Calc, MMSCFD	1.230	1.230	1.227

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Gathering

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 Case:1 - Pkg:1

4.375 x 2.75- 90 to 1300 psi= 1.203 MMCFD Using 194 of 200 HP.run



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PERFORMANCE				
5	Service	IC1	IC2	AC
6	Flow	1.23 MMSCFD	1.23 MMSCFD	1.23 MMSCFD
7	Fluid	0.65 SPGR	0.6501 SPGR	0.6502 SPGR
8	Temp. In / Out, f	262.0 / 162.1	253.0 / 147.8	196.0 / 135.3
9	Pressure, psia	381.0	897.0	1277.3
10	Pressure Drop	8.7	11.6	9.9
11	Heat Load, btu/hr	150,682	167,505	102,242
12	True LMTD, f	83.9	70.7	47.0
13	Overall Bare Rate, U, btu/hr ft ² f	115.5	132.5	140.0
14	Fouling Factor, ft ² hr f/btu	0.0010	0.0010	0.0010
15	Surface, bare / Extended, sq.ft.	16 / 247	18 / 284	16 / 247
16	Sections, No. / Connected	(1) SINGLY	(1) SINGLY	(1) SINGLY
17	Design Temp. (Max / Min), f	350 / -10	350 / -10	350 / -10
18	Design / Test Press., psig	645 / 838	1292 / 1679	1440 / 1872
19	Pass Arrangement	CROSSFLOW	CROSSFLOW	CROSSFLOW
20	No. Tube Rows / Tube Passes	3 / 3	3 / 5	3 / 5
21	Section Weight, lbs	294	355	367
22	Tubes, OD x BWG	5/8X16(0.060MIN)	5/8X16(0.060MIN)	5/8X16(0.060MIN)
23	Material	SA214	SA214	SA214
24	No.Per Section / Length, ft	20 / 5	23 / 5	20 / 5
25	Retarders			
26	Accelerators			
27	L-Tension / Fins, Type	L-TENSION / WHEEL	L-TENSION / WHEEL	L-TENSION / WHEEL
28	Material	ALUMINUM	ALUMINUM	ALUMINUM
29	Nozzles, Rating / Type	300 RFWN	600 RFWN	1500 RFWN
30	Material / Bore	SA105 / SCH-	SA105 / SCH-	SA105 / SCH-
31	(No.Inlets) / Size, in	(1) / 3 IN	(1) / 2 IN	(1) / 2 IN
32	(No.Outlets) / Size, in	(1) / 3 IN	(1) / 2 IN	(1) / 2 IN
33	Headers, Type	BOX W/PLUGS	BOX W/PLUGS	BOX W/PLUGS
34	Material	SA516 70	SA516 70	SA516 70
35	Corrosion Allow., in			
36	Grooved Tubesheet			YES
37	Plugs, Type	SHOULDER	SHOULDER	SHOULDER
38	Plugs Material	SA105	SA105	SA105
39	Industry Specifications	AXC-STD	AXC-STD	AXC-STD
40	ASME Code Stamp / N.B.	YES	YES	YES
41	Canadian Registration #			
42	PWHT			
43	NACE			
44	Inspection / NDT			

B = 100% R.T. of all nozzle butt welds.
SB = **S** PLUS **B** as each are described above.
UB = **U** PLUS **B** as each are described above.

AIR-SIDE PERFORMANCE		FAN DATA	DRIVER DATA		REDUCER DATA	
45	Ambient Air Temp., In, f	100	No. Fans / Make	Type	ENGINE DRIVE	Type REDUCER BY OTHERS
46	Elevation, ft	50	Blade Material			
47	Air Flow, SCFM	10,633	HP/FAN @ RPM			
48	Air Temp., Out, f	136.4	Dia., in / No. Blades			
49	Min. Ambient, f		Blade Angle, Deg			
50			Series / Blade Adj.			
51			Fan Hub Bushing			