

5252C



Farris Pressure Management  
a Division of Spartan Controls

### FARRIS PRESSURE MANAGEMENT

#### EDMONTON FACILITY INSPECTION TEST REPORT

<b>CUSTOMER</b>	<b>ORDER#</b>	<b>Farris WO#</b>	<b>Metal Tag:</b>
VaporTech Energy Services Inc.	827095	827095-05	
PO: PO002060			
			<b>Sup. Tag:</b>

<b>MODEL:</b>	<b>TYPE:</b>	<b>VALVE SIZE:</b>	<b>ORIFICE</b>	<b>FactorySerial#</b>	<b>CRN#</b>
26FA10-120/00	2600	1.5"150RFx2"150RF	F	508403-3-A10	OG8442.5C

**SERVICE:**

<b>SERVICE:</b>	Gas	<b>StampSymbol:</b>	UV NB
<b>CAPACITY:</b>	406 SCFM	<b>Metric Only:</b>	No

<b>Set Pressure</b>	<b>Back Pressure</b>	<b>Diff</b>	<b>Cold Diff</b>	<b>Temp. Corr.</b>	<b>Temperature</b>
50 PSIG	0 PSIG	50 PSIG	50 PSIG	0 PSIG	60 F (16 C)

**MATERIAL/HEAT NUMBER ASSIGNMENT:**

<b>Body</b>	Y6213	<b>Nozzle</b>	P4290
<b>Bonnet</b>	Y7689	<b>Disc</b>	21004

**PERFORMANCE TEST DATA:**

<b>TEST FLUID</b>	<input checked="" type="checkbox"/> Air	<b>Final Test Pressure</b>	50 PSIG	<b>Upper B.D.R. Setting:</b>	Notches
	<input type="checkbox"/> Water			<b>Lower B.D.R. Setting:</b>	52 Notches
	<input type="checkbox"/> Air Over Water			<b>Shop Test Gauges Used:</b>	1. 4E 2. 137H

**BACKPRESSURE TEST:**

Not Applicable, (Open Bonnet / Cap Design)

40 PSIG Air

**SEAT TIGHTNESS TEST (API 527)**

<b>TEST FLUID</b>	<b>Req'd At</b>	<b>Leak Test Pressure</b>	45 PSIG	<b>_____ KPAG</b>	
<input checked="" type="checkbox"/> Air	<input checked="" type="checkbox"/> 90%	<b>No Visible Leaks</b>	<input type="checkbox"/>		
<input type="checkbox"/> Water	<input type="checkbox"/> 95% Of Set Pressure	<b>Leak Rate</b>	10 B.P.M.	<b>Final Inspection / Tech Tested</b>	Ken
<input type="checkbox"/> Air Over Water				<b>Date Tested</b>	6/11/07

**FOR WITNESS TESTING ONLY**

Tested By: \_\_\_\_\_ Date: \_\_\_\_\_

Customer Witness: \_\_\_\_\_ Farris Witness: \_\_\_\_\_


Date:	6/18/07	Init:	MBS
PO#:	2060		
Job#:	5252		
CE Calculated:	39 / 36		
MTR Accepted:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	

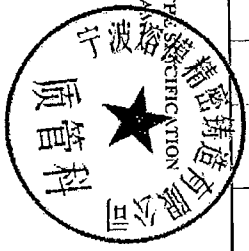
NINGBO INVESTMENT CASTING CO., LTD.  
 INSPECTION CERTIFICATE EN 10204-3.1 B

FAX: 86-574-89069088  
 E-mail: nbycm@mail.nbpctzj.cn

HEAT NO.	CASTING NO.	DESC.	QTY	CHEMICAL COMPOSITION (%)											MECHANICAL PROPERTIES					
				C	Mn	Si	S	P	Cr*	Mo*	Ni*	Co*	V*	SUM*	YIELD (MPa)	TENSILE (MPa)	EL. 2° (%)	ROA (%)	HB	
Y6213	106513K-3C-023	BODY	7	0.20	0.95	0.52	0.022	0.030	0.06	0.04	0.05	0.05	0.30	0.030	1.00	319	517	30	51	161
Y7653	106513K-3C-023	BODY	5	0.20	0.87	0.51	0.013	0.022	0.06	0.03	0.06	0.05	0.003	0.20	328	517	26	40	161	
Y7701	106513K-3C-023	BODY	1	0.19	0.88	0.53	0.020	0.030	0.14	0.06	0.16	0.04	0.005	0.41	297	498	27	45	158	
Y7706	106513K-3C-023	BODY	1	0.22	1.00	0.48	0.020	0.029	0.14	0.05	0.10	0.05	0.004	0.34	340	539	31	55	163	
Y7707	106513K-3C-023	BODY	1	0.21	0.85	0.49	0.018	0.027	0.06	0.04	0.05	0.06	0.004	0.21	326	515	27	40	161	
Y7720	106513K-3C-023	BODY	2	0.20	0.87	0.50	0.017	0.030	0.15	0.04	0.09	0.07	0.005	0.36	318	515	27	40	161	
Y7791	106513K-3C-023	BODY	1	0.21	0.87	0.47	0.017	0.023	0.05	0.03	0.03	0.07	0.002	0.18	324	519	27	43	161	
Y7797	106513K-3C-023	BODY	2	0.21	0.90	0.49	0.014	0.022	0.12	0.03	0.05	0.05	0.002	0.25	323	534	28	50	168	
Y6193	106513K-3C-023	BODY	1	0.19	0.90	0.50	0.017	0.022	0.08	0.03	0.05	0.04	0.002	0.20	308	511	29	50	161	
Y6194	106513K-3C-023	BODY	1	0.21	0.89	0.47	0.025	0.017	0.09	0.03	0.05	0.06	0.007	0.24	330	517	26	42	161	
Y6199	106513K-3C-023	BODY	7	0.20	0.92	0.45	0.016	0.030	0.07	0.04	0.04	0.05	0.004	0.20	323	518	29	49	161	
Y6200	106513K-3C-023	BODY	2	0.21	1.00	0.53	0.017	0.025	0.09	0.04	0.05	0.06	0.002	0.24	328	519	31	55	161	
Y7950	106513K-3C-023	BODY	5	0.19	0.87	0.46	0.016	0.030	0.06	0.03	0.06	0.04	0.002	0.19	307	503	27	44	160	
Y7951	106513K-3C-023	BODY	8	0.21	0.85	0.46	0.016	0.028	0.06	0.03	0.05	0.07	0.004	0.21	325	521	28	44	161	
Y7954	106513K-3C-023	BODY	6	0.21	0.89	0.49	0.015	0.024	0.11	0.02	0.04	0.04	0.005	0.22	326	519	27	44	161	

CE = 39

WE CERTIFY THAT ALL RESULTS ARE IN ACCORDANCE TO THE INSPECTION CERTIFICATE  
 FOUNDRY INSPECTOR: 



**APPROVED**

APR 17 2006  
 FARRIS ENGINEERING  
 QUALITY CONTROL  
 484

RE ENTERED APR 12 2006

NINGBO INVESTMENT CASTING CO., LTD.  
INSPECTION CERTIFICATE EN 10204-3.1 B

FAX: 86-574-88069088  
E-mail: abym@mail.nbptt.zj.cn

P.O. Number: 455516# 455569#

CUSTOMER NAME	FARRIS	HEAT	HEAT MENT	NORMALIZED	TEMPERED	CERT. NO.	2006-002
SPECIFICATION	ASME/ASTM S/A216 WCB 95E /	TREAT MENT	930° C - 3.0H	650° C-1.0H	CERT. DATE	01/12/2006	

HEAT NO.	CASTING NO.	DESC.	QTY	CHEMICAL COMPOSITION (%)											MECHANICAL PROPERTIES				SPEC. REQ. MIN.	
				C	Mn	SI	S	P	Cr*	Mo*	NI*	CU*	V*	SUM*	YIELD (MPa)	TENSILE (MPa)	EL. 2" (%)	ROA (%)		HB
Y7596	302464X33-023	BONNET	15	0.18	1.00	0.60	0.045	0.040	0.024	0.05	0.03	0.06	0.05	0.003	0.19	293	499	29	51	157
Y7597	302464X33-023	BONNET	23	0.19	0.82	0.49	0.015	0.025	0.19	0.03	0.09	0.05	0.005	0.37	307	501	27	44	160	
Y7680	302464X33-023	BONNET	30	0.20	0.89	0.54	0.018	0.018	0.05	0.03	0.05	0.04	0.002	0.17	317	529	27	44	162	
Y7681	302464X33-023	BONNET	29	0.21	0.97	0.50	0.018	0.020	0.06	0.03	0.05	0.06	0.003	0.20	326	517	31	53	161	
Y7682	302464X33-023	BONNET	27	0.22	0.94	0.55	0.022	0.023	0.09	0.03	0.07	0.07	0.002	0.26	331	529	28	43	162	
Y7683	302464X33-023	BONNET	33	0.20	0.91	0.48	0.019	0.030	0.12	0.05	0.09	0.05	0.003	0.31	326	519	27	48	161	
Y7684	302464X33-023	BONNET	28	0.21	1.00	0.54	0.018	0.025	0.09	0.04	0.09	0.04	0.003	0.26	329	525	31	57	162	
Y7685	302464X33-023	BONNET	24	0.21	0.93	0.48	0.015	0.029	0.07	0.03	0.06	0.07	0.005	0.24	315	524	31	52	164	
Y7686	302464X33-023	BONNET	22	0.22	0.96	0.55	0.020	0.030	0.13	0.07	0.05	0.05	0.004	0.30	341	538	29	43	163	
Y7688	302464X33-023	BONNET	22	0.22	0.94	0.48	0.019	0.030	0.08	0.04	0.04	0.05	0.004	0.21	328	524	30	50	162	
Y7690	302464X33-023	BONNET	30	0.20	0.92	0.52	0.012	0.030	0.18	0.03	0.04	0.04	0.004	0.36	319	529	30	51	165	
Y7691	302464X33-023	BONNET	22	0.20	0.91	0.51	0.012	0.030	0.21	0.03	0.10	0.05	0.004	0.38	325	536	26	47	167	
Y7692	302464X33-023	BONNET	19	0.20	0.91	0.51	0.010	0.027	0.20	0.03	0.10	0.06	0.004	0.39	328	523	30	50	162	
Y7693	302464X33-023	BONNET	22	0.20	0.90	0.53	0.010	0.023	0.21	0.02	0.11	0.05	0.005	0.40	290	498	26	40	163	
Y7694	302464X33-023	BONNET	24	0.18	0.81	0.56	0.015	0.020	0.07	0.03	0.04	0.05	0.002	0.19	341	535	30	51	163	
Y7695	302464X33-023	BONNET	10	0.18	0.81	0.50	0.020	0.023	0.07	0.03	0.06	0.07	0.003	0.23	339	532	26	45	162	
Y7696	302464X33-023	BONNET	1	0.21	1.00	0.57	0.023	0.024	0.03	0.03	0.06	0.04	0.003	0.23	335	542	27	49	172	
Y7697	302464X33-023	BONNET	4	0.23	0.97	0.53	0.019	0.023	0.06	0.03	0.03	0.06	0.005	0.19	325	536	28	50	167	
Y7698	302464X33-023	BONNET	6	0.22	0.96	0.51	0.016	0.030	0.19	0.03	0.10	0.04	0.002	0.36	305	514	32	53	161	
Y7687	302464X33-023	BONNET	29	0.19	0.93	0.52	0.016	0.025	0.09	0.03	0.06	0.05	0.004	0.23	294	509	33	54	158	
Y7689	302464X33-023	BONNET	26	0.18	0.84	0.53	0.016	0.019	0.11	0.04	0.11	0.04	0.002	0.30	294	509	33	54	158	

WE CERTIFY THAT ALL RESULTS ARE IN ACCORDANCE TO THE SPECIFICATION  
FOUNDRY INSPECTOR: [Stamp] STAMP:

**APPROVED**



FEB 0 2 2006  
FARRIS ENGINEERING  
QUALITY CONTROL  
BY 491

ENTERED JAN 31 2006

CE=1.36



PENNSYLVANIA PRECISION CAST PARTS, INC.  
 PO Box 1429 · Lebanon, PA 17042  
 Phone 717-273-3338 Fax 717-273-2662

**REPORT OF CHEMICAL ANALYSIS AND MECHANICAL PROPERTIES**

Inspection Certificate EN 10204-3.1

Customer: FARRIS ENGINEERING  
 PO Number: 464067 ITEM 4

W/O No.: 92307  
 Date: 11/10/2006

PPCP No.: 323-1  
 Part No.: 101261-010

Specification: ASME SA351, GR. CF8M

HEAT NO.	C	Mn	Si	P	S	Cr	Ni	Mo	Co	Tensile K.S.I.	Yield K.S.I.	Elong in 2"	Red. Of Area %	Hardness	Pieces Shipped
K2327	0.046	0.761	1.370	0.023	0.007	18.350	9.320	2.160	0.119	87.4	45.7	48	0	89HRB	11
K2388	0.051	0.744	1.300	0.026	0.006	18.680	9.390	2.160	0.140	87.6	45.5	47	0	86HRB	21
K2389	0.055	0.607	1.230	0.022	0.006	18.510	9.380	2.050	0.103	87.6	46.0	47	0	89HRB	100
P3627	0.054	0.904	1.280	0.022	0.005	18.000	9.460	2.140	0.134	87.2	45.2	50	0	87HRB	2
P4289	0.064	0.731	1.280	0.028	0.008	18.100	9.880	2.170	0.150	86.4	42.0	59	0	81HRB	6
P4290	0.052	0.830	1.360	0.028	0.010	18.170	9.630	2.070	0.153	88.2	44.9	58	0	86HRB	26

Remarks: DESCRIPTION: NOZZLE

31655

**APPROVED**

NOV 21 2006

FARRIS ENGINEERING  
 QUALITY CONTROL  
 BY 519

We hereby certify that the above material has been tested in accordance with the listed specifications and conforms to all applicable requirements thereof.  
 Quality Assurance System certified IAW PED 97/23/EC Annex I Section 4.3 — Certificate Number US.PCP.126.00  
 Visual inspection performed IAW MSS-SP95 unless otherwise stated in customer requirements.

**MERCURY STATEMENT:**  
 "We certify the above castings have been produced from mercury free material and no mercury or mercury bearing instruments have been used in their processing."

"Casting material supplied is of North American origin with no Asian content."

PENNSYLVANIA PRECISION CAST PARTS  
 BY *Sandra G. Burrows*  
 Sandra G. Burrows  
 Q.A. Manager

**VSL WIRES LIMITED**

004072-14

10, IMPERIAL CHAMBER, FIRST FLOOR,  
WILSON ROAD, BALLARD ESTATE,  
MUMBAI 400 038 (INDIA)

**TEST CERTIFICATE**

**CUSTOMER:**

UNIVERSAL STAINLESS AND ALLOYS INC.  
1255 FEWSTER DRIVE  
MISSISSUAGA ONTARIO,  
CANADA L4W 1A2.

**ORDER NO.**

P004072

**PACKING LIST NO.**  
VSL/52035

**INSPECTION NO**  
VSL/52035/4

**DATE**  
17/08/2005

**BUNDLE NO.**

155175,155221,155225

**GRADE**  
316/316L

**DESCRIPTION :**

STAINLESS STEEL BRIGHT BARS

**COLD DRAWN**

SIZE (INC)	SHAPE	TOLERANCE	LENGTH (FT)	PIECES	WEIGHT (LBS)
7/8	ROUND	ASTM A484	12' - 14'	159	4035

**CHEMICAL ANALYSIS**

HEAT NO.	C	Mn	Si	S	P	Ni	Cr	Mo	Cu	N	Co
21004	0.025	1.45	0.39	0.020	0.029	11.24	16.93	2.16	0.30	0.045	0.07

316SS

**TEST RESULT**

.2% YIELD STRENGTH KSI	TENSILE STRENGTH KSI	ELONGATION %	REDUCTION OF AREA %	HARDNESS BHN	GRAIN SIZE
87	105	42	74	221	6

**Specification :**

MATERIAL CONFIRMS TO AISI 316, AISI 316L, UNS#S31800/S31803, ASTM A276-00A, ASTM A 484-00, ASTM A182-01, ASME SA182-01, ASTM A193-01B B8M CL1, ASME SA 193-00 B8M CL1, ASTM A479-01, ASME SA479-01, AMS 6648H, AMS 5853H, MIL -S-7720A AM2, RMS 60, QQ-S-763F, NACE MR 0175-03, EN 10204-3.1B, I.G.C TEST SATISFACTORY ACCORDING TO ASTM A282-01 PRACTICE E.

**Remarks :**

FREE FROM MERCURY CONTAMINATION, FREE FROM WELDING OR WELD REPAIRS, MACRO & MICRO STRUCTURE SATISFACTORY, SOLUTION ANNEALED AS PER ASTM A479 AT 1900 F AND WATER QUENCHED, MELTING PROCESS:ADD

We hereby certified that the material described above has been tested and complies with the terms of order/contract.

**APPROVED**

WORKS INSPECTOR

MAY 26 2006

FARRIS ENGINEERING  
QUALITY CONTROL

BY

484

5252C



Farris Pressure Management  
a Division of Spartan Controls

### FARRIS PRESSURE MANAGEMENT

#### EDMONTON FACILITY INSPECTION TEST REPORT

<b>CUSTOMER</b>	<b>ORDER#</b>	<b>Farris WO#</b>	<b>Metal Tag:</b>
VaporTech Energy Services Inc.	827095	827095-06	
<b>PO:</b> PO002060			<b>Sup. Tag:</b>

<b>MODEL:</b>	<b>TYPE:</b>	<b>VALVE SIZE:</b>	<b>ORIFICE</b>	<b>FactorySerial#</b>	<b>CRN#</b>
27CA23-M20/00	2700	.75"MNPTx1"FNPT	C	488429-24-KE	OG0386.9C

**SERVICE:**

SERVICE: Gas StampSymbol: UV NB

CAPACITY: 136 SCFM Metric Only: No

<u>Set Pressure</u>	<u>Back Pressure</u>	<u>Diff</u>	<u>Cold Diff</u>	<u>Temp. Corr.</u>	<u>Temperature</u>
100 PSIG	0 PSIG	100 PSIG	100 PSIG	0 PSIG	60 F (16 C)

**MATERIAL/HEADNUMBER ASSIGNMENT**

Body: F9 Nozzle: \_\_\_\_\_

Bonnet: F17 Disc: 4403718

**PERFORMANCE TEST DATA**

TEST FLUID:  Air  Water  Air Over Water

Final Test Pressure: 100 PSIG

Upper B.D.R. Setting: \_\_\_\_\_ Notches

Lower B.D.R. Setting: 7.5 Notches

Shop Test Gauges Used: 1. 50 2. 11A

**BACK PRESSURE TEST**

Not Applicable, (Open Bonnet / Cap Design)

85 PSIG Air

**SEAT TIGHTNESS TEST (API 527)**

TEST FLUID:  Air  Water  Air Over Water

Req'd At:  90%  95% Of Set Pressure

Leak Test Pressure: 90 PSIG

No Visible Leaks:

Leak Rate: 8 B.P.M.

Final Inspection / Tech Tested: Ken

Date Tested: 6/11/07

**FOR WITNESS TESTING ONLY**

Tested By: \_\_\_\_\_ Date: \_\_\_\_\_

Customer Witness: \_\_\_\_\_ Farris Witness: \_\_\_\_\_

Date: 6/18/07 Init: MMS

PO#: 2060

Job#: 5252

CE Calculated: 31655/.37

MTR Accepted:  Yes  No

# MATERIAL TEST CERTIFICATE

材料試驗報告

China Flowtek International Co.

MESSRS.: CURTISS WRIGHT Flow Control Corporation, Farris  
 Certificate No. 證書號: Farris USA-326181x28-010 Body 3/4 C 1 MNPT -2005-0420

Date: Apr. 20, 2005  
 Page: 1 of 1

Tel: 886-7-7911175, Fax: 7911135  
 email: cflowtek@ms9.hinet.net

Material	ASME SA351 Gr. CF8M																																																																											
	Chemical Composition 化學成份 (%)																																																																											
Spec. No. Heat No.	C	Si	Mn	P	S	Ni	Cr	Mo	QTY/pcs Per Heat Number		Remarks																																																																	
	0.08 Max.	1.50 Max.	1.50 Max.	0.040 Max.	0.040 Max.	9.0 ~ 12.0	18.0 ~ 21.0	2.0 ~ 3.0																																																																				
F8	0.070	0.420	1.000	0.015	0.023	9.250	18.410	2.360	294																																																																			
F9	0.067	0.400	0.850	0.018	0.020	9.330	18.260	2.110	155																																																																			
F10	0.063	0.690	1.110	0.019	0.017	9.920	18.530	2.380	1																																																																			
<table border="1"> <thead> <tr> <th rowspan="2">Tension test 伸拉試驗</th> <th rowspan="2">50mm</th> <th rowspan="2">12.5mm</th> <th rowspan="2">Hardness 硬度</th> <th colspan="2">Impact test 衝擊試驗</th> <th colspan="3">Heat Treatment 熱處理</th> </tr> <tr> <th>Energy Min/turn</th> <th>Average Degree C</th> <th>Treatment</th> <th>Kept temp.</th> <th>Kept Hrs.</th> <th>Remarks</th> </tr> </thead> <tbody> <tr> <td>Spec. ASME SA351 Gr. CF8M</td> <td>Tensile Strength ksi</td> <td>Yield Strength ksi</td> <td>Elongation (%)</td> <td>Reduction of Area (%)</td> <td colspan="2"></td> <td colspan="3">Keeping temp. / Keeping hour</td> </tr> <tr> <td>Heat No.</td> <td>70.0 Min.</td> <td>30.0 Min.</td> <td>30.0 Min.</td> <td></td> <td colspan="2"></td> <td colspan="3"></td> </tr> <tr> <td>F8</td> <td>76.36</td> <td>35.94</td> <td>36</td> <td></td> <td colspan="2"></td> <td colspan="3"></td> </tr> <tr> <td>F9</td> <td>76.65</td> <td>36.51</td> <td>36</td> <td></td> <td colspan="2"></td> <td colspan="3"></td> </tr> <tr> <td>F10</td> <td>75.93</td> <td>35.07</td> <td>36</td> <td></td> <td colspan="2"></td> <td colspan="3"></td> </tr> </tbody> </table>												Tension test 伸拉試驗	50mm	12.5mm	Hardness 硬度	Impact test 衝擊試驗		Heat Treatment 熱處理			Energy Min/turn	Average Degree C	Treatment	Kept temp.	Kept Hrs.	Remarks	Spec. ASME SA351 Gr. CF8M	Tensile Strength ksi	Yield Strength ksi	Elongation (%)	Reduction of Area (%)			Keeping temp. / Keeping hour			Heat No.	70.0 Min.	30.0 Min.	30.0 Min.							F8	76.36	35.94	36							F9	76.65	36.51	36							F10	75.93	35.07	36						
Tension test 伸拉試驗	50mm	12.5mm	Hardness 硬度	Impact test 衝擊試驗		Heat Treatment 熱處理																																																																						
				Energy Min/turn	Average Degree C	Treatment	Kept temp.	Kept Hrs.	Remarks																																																																			
Spec. ASME SA351 Gr. CF8M	Tensile Strength ksi	Yield Strength ksi	Elongation (%)	Reduction of Area (%)			Keeping temp. / Keeping hour																																																																					
Heat No.	70.0 Min.	30.0 Min.	30.0 Min.																																																																									
F8	76.36	35.94	36																																																																									
F9	76.65	36.51	36																																																																									
F10	75.93	35.07	36																																																																									
Order No.	Item 項次	Part No.	Drawing No.	Part Name 品名	Qty 數量	Remarks:																																																																						
280393	34	26181x28-010		Body 3/4 C1 MNPT	72	544 APPROVED China Flowtek International Co.																																																																						
280404	20	26181x28-010		Body 3/4 C1 MNPT	378																																																																							

We hereby certified that the above results are true and correct in every detail.

Approval:

經理 9/4/05

Inspector:

31655

**MATERIAL TEST CERTIFICATE**

材料試驗報告

China Flowtek International Co.

MESSRS : CURTISS WRIGHT Flow Control Corporation, Farris Engineering  
 Certificate No. 證書號: Farris USA -324800X1-023 Bonnet 2005-0415

Date: Apr. 15, 2005.  
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Material	ASME SA216 Gr. WCB											
	Chemical Composition 化學成份 (%)											
Spec.	C	Si	Mn	P	S	NI	Cr	Mo	Cu	V	Qty/ pcs Per Heat Number	
	Spec. No.	0.30	0.60	1.00	0.040	0.045	0.5 Max	0.5 Max	0.2 Max.	0.3 Max.	0.03 Max.	74
Heat No.	Max.	Max.	Max.	Max.	Max.	0.026	0.110	0.005	0.025	0.002		
E32	0.290	0.550	0.760	0.016	0.025	0.015	0.053	0.005	0.028	0.001	337	
F15	0.230	0.490	0.770	0.025	0.019	0.018	0.052	0.005	0.027	0.001	342	
F16	0.220	0.500	0.760	0.020	0.021	0.022	0.052	0.005	0.028	0.002	357	
F17	0.230	0.480	0.770	0.019	0.025	0.028	0.052	0.005	0.020	0.002	276	
F18	0.220	0.430	0.760	0.023	0.025	0.028	0.120	0.005	0.020	0.002		
Tension test 伸拉試驗												
Spec.	Tensile Strength ksi	Yield Strength ksi	Elongation (%)	Reduction of Area (%)	Hardness (HB)	Impact test 衝擊試驗		Heat Treatment 熱處理		Keeping temp. 保持溫度		Remarks
						Minimum	Average	Minimum	Average	Temp.	Time	
ASME SA216 Gr. WCB	70.0 - 95.0	35.0	22.0	35.0								
E32	76.80	42.89	26	46								
F15	76.36	41.73	26	44								
F16	76.51	42.31	26	44								
F17	75.35	40.28	25	42								
F18	76.94	43.33	26	45								
Order No. 訂單號碼: 280404												
Part Name 品名: Bonnet												
Finish Part No. 324800X1-023												
Drawing No. 1.386												
Qty 數量: 1,386												
Remarks: Material APPROVED 544												

We hereby certified that the above results are true and correct in every detail

Approval:



Inspector:



CE-37



