

G O O D S R E C E I P T S L I P

No. 5003579120

Page

1

Goods Receipt date: 2019.02.09
Current Date: 2019.02.09

Plant:	2031	Description:	Sunrise Oilsands
Vendor :	0011033523	Name:	WESTLUND INDUSTRIAL
Delivery Note:	77818719	Bill of Lading:	
GR Slip:		Header Text:	
PO:	8401345245 / 110	Telephone:	587-779-3302
Pur. group:	726 Sunrise		

Itm	Material	Description	Qty.	Un
PO Itm	Acct.assgt.	Recipient		
0001		2 600 GATE VLV BB TRIM 12 NACE LCC BODY		
	F 000050065945	/ G-TROLAND	2	EA
00110	TA 2019			

50065945
1SKID TA2019
-1ARD

Issued by: Daniel Nimoak

SIGNATURE

WESTLUND INDUSTRIAL
A Division of EMCO Corporation

205 MACDONALD CRESCENT
FORT MCMURRAY, AB T9H 4B3
Ph: (780)791-7173
Fax: (780)791-7196

BR#: 778 WHSE: 778

REQUIRES BY: 12/12/19
DATE REQUISE:
CONTACT NAME: ROLAND
NOM DU CLIENT:
CONTACT NO.:
TELEPHONE:

INVOICE NO. / N° DE FACTURE
77818719-03

CUSTOMER P.O. NUMBER
N° DE COMM. DU CLIENT
8401345245

DATE / TIME PRINTED
DATE / HEURE D'IMPRESSION
02/06/19 09:45 MST

GST/HST: R101626026

BILL TO / FACTURER À:

CUST. NO. / N° DU CLIENT: 613977
PHONE NO / N° TÉL: (403)750-5069

PICKER # 1

HUSKY ENERGY INC
SUNRISE OILSANDS WAREHOUSE
LSD 4-15-95-7-W4M
FORT MACKAY, AB TOP 1C0

SHIP TO / EXPÉDIER À:
HUSKY ENERGY INC
SUNRISE OILSANDS WAREHOUSE
LSD 4-15-95-7-W4M
FORT MACKAY, AB TOP 1C0

RECEIVED FEB 09 2019

This is a B/O

DATE / TIME ORDERED
DATE / HEURE COMMANDÉ
01/17/19 09:15

SPECIAL INSTRUCTIONS

DIRECTIVES SPÉCIALES

REFER

PPD/ADD
PORT PAYE/ALC
COL
PORT D0
PPD/ADD
PORT PAYE/ALC

LN	SKU CODE	BIN LOC CASIER N°	DESCRIPTION	UOM	ORDERED COMMANDÉ	SHIPPED EXPÉDIÉ	B/O EN. SOUFF.	LIST / LISTE	%	NET
1	UX778604	Non Stoc	2 600 GATE VLV BB TRIM 12 NACE LCC BODY 2" 600# RF VELAN GATE VALVE, LCC BODY, 316/ HFS, BB, OS&Y, TRIM 12, NACE, FIG# F2064C-31NB CAT C TESTING NO TAGS REQUESTED BNH52FO1 ✓ F08-2064C-31NB BNH53FO1 ✓	EA	2	2		1597.90	NET	3195.80

STAGING AREA
AIRE RÉSERVÉ
PIPE
TUYAUX
BAGS
SACS
BOXES
BOÎTES
SKIDS
PALETTES
CRATES
CAGEOT
OTHER
AUTRES

AKEN BY / ENTRÉE PAR
nd - Jillian MacDonald

LES REP. / REPRÉSENTANT
31m-Lorne McNalley 778
FREIGHT / FRET
PLACED BY / PAR
ROLAND

SUBTOTAL 3195.80
GST/HST 159.79
TOTAL DUE 3355.59

LL OF LADING NUMBER / N° DU CONNAISSEMENT 988020
DATE PICKED / RAMASSÉ LE 02/06/19
PICKED BY / RAMASSÉ PAR BB
WEIGHT / POIDS 0.0
VIA Velocity Exp
DATE SHIPPED / DATE EXPÉDIÉE
PAGE 1 Last Page

0 RETURNS ALLOWED ON SPECIAL ORDERS WITHOUT PERMISSION / AUCUN RETOUR SUR LES COMMANDES SPÉCIALES SANS AUTORISATION

CUSTOMER'S
SIGNATURE
SIGNATURE
U CLIENT
CUSTOMER'S
NAME (PRINTED)
NOM DU CLIENT
(IMPRIMÉ)

PACKING SLIP
BORDEREAU D'EXPÉDITION



INSPECTION AND TEST CERTIFICATE
EN-10204-3.1

VELAN INC.
7007 Cote de Liesse
Montreal

Customer Name : EMCO CORP.
Valve Type : Full Port Gate
Figure Number : F08-2064C-31NB

Order :
Line :
Size : 2" (50 mm)
Pressure Class : 600 Class
Quantity : 2

Certificate : VC00008301

Date : 1/18/2019

HYDROSTATIC TEST

Test Standard : API-598	Hydro Test Results : ACCEPTABLE	Other Test : ACCEPTABLE
-------------------------	---------------------------------	-------------------------

Test Type	Shell	Packing	Seat (H.P.)	Seat (L.P.)	Backseat
Duration (sec)	15	15	N/A	15	15
Pressure (psig)	2250	2250	N/A	80	1650
Result	ACCEPTABLE	ACCEPTABLE	N/A	ACCEPTABLE	ACCEPTABLE

A352-06-LCB/LCC-

CHEMICALS														MECHANICALS				
Heat Code	Unit	CE	Al	C	Cr	Cu	Mn	Mo	Ni	P	S	Si	V	ELONG	IMP	RED	UTS	YIELD
			%	%	%	%	%	%	%	%	%	%	%	(%)	(FT-LB)	(%)	(ksi)	(ksi)
BNH52F01 BODY	0.37	0.033	0.2	0.031	0.021	0.878	0.005	0.246	0.018	0.008	0.431	0.015		31	44.25	62	80.35	52.79
BNH53F01 BONNET	0.4	0.047	0.204	0.127	0.027	0.846	0.007	0.275	0.025	0.009	0.529	0.016		33	36.88	58	74.26	45.69

BODY HEAT #
BNH52F01

BONNET HEAT #
BNH53F01

PO#8401345245



INSPECTION AND TEST CERTIFICATE EN-10204-3.1

Page 2 of 2
1/18/2019 4:24:55 PM

TEST REPORT (EN 10204 - 2.1)

Valve Item	Specification
NUTS	ASTM-A194 2H
NUTS	ASTM-A194 7M
SEAT	ASTM-A350 LF2 CL1+CoCr
STEM	SS316
STUD	- ASTM-A193 B7
STUD	ASTM-A320 L7M
WDGE	ASTM-A351 CF8M

All Velan Valves are tested in accordance with specification required by the design. Valves designed to API specifications API 594, API 600, API 602, API 603, API 608, API 609 and API 623 are tested to API 598. Valves designed to B16.34 are tested to B16.34 and MSS-SP-61.

Valves meet the material requirement of the current NACE MR0103 and NACE MR0175 / ISO 15156. It is the equipment user's responsibility to ensure that the materials are suitable for the intended service.

All materials are dually certifiable to ASTM / ASME.

The header information on this certificate (including customer name, valve description, figure number, and quantity) has been entered by the user of this application and he/she is therefore responsible for the accuracy of the data.

Velan certifies that valve(s) described above are in compliance with the requirements of the identified standards and specifications. This report is based on actual test results of chemical and mechanical properties as well as hydrostatic test, and is in compliance with EN 10204 3.1.

Victor Apostolescu
Vice President, QA

ALCO

4905-72 Avenue,
Edmonton, Alberta
T6B 2M6 PHONE: (780) 440-4560

ALCO FLOW CONTROL**ASME VALVE MODIFICATION****INSPECTION & TEST REPORTS****QF 704 Rev 0**

DATE		FEB 1/19		JOB#		71288-1		LD. #		AS LISTED			
CUSTOMER		SUNBELT SUPPLY		LOCATION		EDMONTON		P.O. #		46386-00			
MAKE		VELAN		TYPE		GATE		FIG#		F08-2064C-31NB			
SIZE		2"		ENDS		RF		RATING		600			
MATERIAL BODY		LCC		MATERIAL BONNET		LCC		TRIM: STEM/ DISC/ SEAT			316/CF8M/HF		
	ID #	BODY HT#	BONNET HT#	SHELL TEST	BK. SEAT	H.P. CLOSURE	LKG. D.P.M.	L.P. CLOSURE	LKG. D.P.M.	DURATION SEC.	ACC	REJ	TESTED BY
1	68727	BNH52F01	BNH53F01	2250	1650	1650	0	80	0	60	X		BILL
2	68728	BNH52F01	BNH53F01	2250	1650	1650	0	80	0	60	X		BILL
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
TEST PRESSURE IS IN PSI		TEST CODE:		API 598	YES	ASME 16.34		MSS.SP.61			OTHER		
TEST REQUIRED:		SHELL	YES	BACKSEAT		YES	H.P. CLOSURE		YES	L.P. CLOSURE		YES	
INSPECTED BY:		BILL GREER			CUSTOMER INSPECTOR:								
CHECKLIST:	ENDS COVERED		✓	PAINTING		✗	APPEARANCE		✓	TAGGING		✓	
	QUANTITY		2	M.T.R TRACKING		✗	PAPERWORK		✓	PACKAGED		✓	
INSPECTED BY:		EDWARD CHANG			CUSTOMER INSPECTOR:								
WORK PERFORMED:													
DISASSEMBLE													
SEND FOR HUSKY CAT. C TESTING													
ASSEMBLE AND HYDRO TEST AS PER API 598													
PTG-30													
PTG-44													
SIGNATURE													
													

REPORT#: 49517
MT ☒ LT ☐ VT ☐

Date: January 22, 2019 Page 1 of 1
Client: ALCO Inc.
Location: Rivest Technologies Inc. JOB #: 49517
Examination Standard: ASME V, Art. 7, 2017 Ed. P.O. #: 87487
Acceptance Standard: Husky Cat C W.O. #: 71288-1
Description: 2" 600# Velan Gate Valve

EXAMINATION CONDITIONS: ☒ As Welded ☒ Base Metal ☐ As Ground ☒ Machined ☒ Painted ☐ Shot Blasted Inspection Temp: 15°C

Minimum Light Requirements: Blacklight Min 1000uW/cm2 Visible Light: Min 100fc @ exam surface

EQUIPMENT	SERIAL NO.	MPI TECHNIQUE	LPI TECHNIQUE	TEST MEDIUM
☒ Hand Yoke	Magnaflux Y-6 SN:43530	☒ AC	☐ Water Washable	☒ Wet: Magnaglo Carrier II
☒ Blacklight	Spectroline BIB 150P	☐ DC	☐ Solvent Removable	☒ Dry: Magnaglo 14A
☒ Intensity Meter	Spectroline XR-1000 SN:1821145	☒ Continuous	Dwell Time _____ min	☐ Contrast: Magnaflux WCP-2
Calibrated / Due:	Yoke: 1/22/19 Meter: 9/13/18, 9/13/19 Daily Check ✓	☐ Residual	Developer Time _____ min	☐ Bath: Magnaflux 7HF
Rivest Procedure:	MT-2, Revision: 0 Lighting: LED	☒ 10lb test bar	Interpretation Time _____ min	Batch #:

EXAMINATION:

A wet fluorescent magnetic particle examination was performed on all accessible surfaces on the following:

Qty. (1) - 2" 600# Velan Gate Valve

V1 Body HT#: BNH52F01, Bonnet HT#: BNH53F01
V2 Body HT#: BNH52F01, Bonnet HT#: BNH53F01

RESULTS:

No rejectable indications were noted during examination.
Valves are acceptable to the above standards.

This Certificate or Report is valid only for that work which was specifically requested. The company is not responsible for any views or opinions expressed by employees performing this work which fall outside the contract terms or reference. All Certificates and/or Reports are the result of work performed in conformance with applicable specifications and standards to the best of our ability and intent. However, the Company will not be responsible for deviation within the normal limits of accuracy in accordance with the standard practices. Final Code Acceptance shall require Client and Manufacturer Representative's signatures.

A.M.		P.M.		TOTAL HOURS	KMS	SUBSISTENCE		CONSUMABLES
TIME IN	TIME OUT	TIME IN	TIME OUT	S.T. hrs		MAN DAY	OT/MEALS	
				O.T. hrs				

Interpretation is done in accordance with the specified standard, to the best of my professional ability.

Technician: John Johnston *John Johnston* SNT/CGSB Level II CGSB # 19902 Assistant: _____

The above interpretation is a professional opinion, final interpretation is the responsibility of the client.

Client Representative (Print): _____ Sign: _____ Date: _____

Date:	January 22, 2019	Page	1	of	1
Client:	ALCO Inc.				
Location:	Rivest Technologies Inc.	JOB #:	49517		
Examination Standard	ASTM A1038	Scale:	Brinell	P.O. #:	87487
Acceptance Standard	Husky Cat. C	Tag #	71288-1		
Description:	2" 600# Velan Gate Valve				

EXAMINATION CONDITIONS: ☐ As Welded ☒ Base Metal ☒ As Ground ☐ Machined ☐ Painted ☐ Shot Blasted 15°C

TEST EQUIPMENT:

Instrument: Krautkramer Model: Mic 10 Serial No. 34101-5800 Cal. Date: December 12, 2018

HARDNESS RESULTS: ☐ See attached drawings ☐ Sheets sketch(es) ☐ Supplemental

[illegible][illegible]

Interpretation is done in accordance with the specified standard, to the best of my professional ability.

Technician Jeff Kinsella  SNT/CGSB Level Assistant

The above interpretation is a professional opinion; final interpretation is the responsibility of the client.

Client Representative (Print): _____ Sign: _____ Date: _____

REPORT#: 49645
MT ☒ LT ☐ VT ☐

Date:	January 31, 2019	Page	1	of	1
Client:	ALCO Inc.				
Location:	Rivest Technologies Inc.	JOB #:	49645		
Examination Standard	ASME V, Art. 7, 2017 Ed.	P.O. #:	87771		
Acceptance Standard	Husky Cat C	W.O. #	71288-1		
Description:	2" 600# Velan Gate Valve				

EXAMINATION CONDITIONS: ☒ As Welded ☒ Base Metal ☐ As Ground ☒ Machined ☒ Painted ☐ Shot Blasted Inspection Temp: 15°C

Minimum Light Requirements: Blacklight Min 1000uW/cm2 Visible Light: Min 100fc @ exam surface				
EQUIPMENT	SERIAL NO.	MPI TECHNIQUE	LPI TECHNIQUE	TEST MEDIUM
☒ Hand Yoke	Magnaflux Y-6 SN:43530	☒ AC	☐ Water Washable	☒ Wet: Magnaglo Carrier II
☒ Blacklight	Spectroline BIB 150P	☐ DC	☐ Solvent Removable	☒ Dry: Magnaglo 14A
☒ Intensity Meter	Spectroline XR-1000 SN:1821145	☒ Continuous	Dwell Time _____ min	☐ Contrast: Magnaflux WCP-2
Calibrated / Due:	Yoke:1/31/19 Meter:9/13/18, 9/13/19 Daily Check ✓	☐ Residual	Developer Time _____ min	☐ Bath: Magnaflux 7HF
Rivest Procedure:	MT-2, Revision: 0 Lighting: LED	☒ 10lb test bar	Interpretation Time _____ min	Batch #:

EXAMINATION:

A wet fluorescent magnetic particle examination was performed on all accessible surfaces on the following:

Qty. (1) - 2" 600# Velan Gate Valve

V1 Body HT#: BNH52F01, Bonnet HT#: BNH53F01

RESULTS:

No rejectable indications were noted during examination.
Valve is acceptable to the above standards.

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A.M.		P.M.		TOTAL HOURS	KMS	SUBSISTENCE		CONSUMABLES
TIME IN	TIME OUT	TIME IN	TIME OUT	S.T. hrs		MAN DAY	OT/MEALS	
				O.T. hrs				

Interpretation is done in accordance with the specified standard, to the best of my professional ability.

Technician Bill Parry *BP* SNT/CGSB Level II CGSB # 18188 Assistant _____

The above interpretation is a professional opinion, final interpretation is the responsibility of the client.

Client Representative (Print): _____ Sign: _____ Date: _____

Date:	January 31, 2019	Page	1	of	1
Client:	ALCO Inc.				
Location:	Rivest Technologies Inc.	JOB #:	49645		
Examination Standard	ASTM A1038	Scale:	Brinell	P.O. #:	87771
Acceptance Standard	Husky Cat. C	Tag #	71288-1		
Description:	2" 600# Velan Gate Valve				

EXAMINATION CONDITIONS: ☐ As Welded ☒ Base Metal ☒ As Ground ☐ Machined ☐ Painted ☐ Shot Blasted 15°C

TEST EQUIPMENT:

Instrument: Krautkramer Model: Mic 10 Serial No. 34101-5800 Cal. Date: January 31, 2019

HARDNESS RESULTS: ☐ See attached drawings ☐ Sheets sketch(es) ☐ Supplemental

[illegible]

A.M.		P.M.		TOTAL HOURS	KMS	SUBSISTENCE		CONSUMABLES
TIME IN	TIME OUT	TIME IN	TIME OUT	S.T. 0.5 hrs		MAN DAY	OT/MEALS	2 Hits
				O.T. hrs				
ernretation is done in accordance with the provisions of the Government of India, Ministry of Defence, Department of Ordnance and Stores, New Delhi.								

Interpretation is done in accordance with the specified standard, to the best of my professional ability.

chnician Bill Parry SNT/CGSB Level _____ Assistant _____
e above interpretation is a professional opinion; final interpretation is the responsibility of the client.
ent Representative (Print): _____ Sign: _____ Date: _____

REPORT#: 49645
MT ☒ LT ☐ VT ☐

Date:	January 31, 2019	Page	1	of	1
Client:	ALCO Inc.				
Location:	Rivest Technologies Inc.	JOB #:	49645		
Examination Standard	ASME V, Art. 7, 2017 Ed.	P.O. #:	87771		
Acceptance Standard	Husky Cat C	W.O. #	71288-1		
Description:	2" 600# Velan Gate Valve				

EXAMINATION CONDITIONS: ☒ As Welded ☒ Base Metal ☐ As Ground ☒ Machined ☒ Painted ☐ Shot Blasted Inspection Temp: 15°C

Minimum Light Requirements: Blacklight Min 1000uW/cm2		Visible Light: Min 100fc @ exam surface		
EQUIPMENT	SERIAL NO.	MPI TECHNIQUE	LPI TECHNIQUE	TEST MEDIUM
☒ Hand Yoke	Magnaflux Y-6 SN:43530	☒ AC	☐ Water Washable	☒ Wet: Magnaglo Carrier II
☒ Blacklight	Spectroline BIB 150P	☐ DC	☐ Solvent Removable	☒ Dry: Magnaglo 14A
☒ Intensity Meter	Spectroline XR-1000 SN:1821145	☒ Continuous	Dwell Time _____ min	☐ Contrast: Magnaflux WCP-2
Calibrated / Due:	Yoke:1/31/19 Meter:9/13/18, 9/13/19 Daily Check ✓	☐ Residual	Developer Time _____ min	☐ Bath: Magnaflux 7HF
Rivest Procedure:	MT-2, Revision. 0 Lighting: LED	☒ 10lb test bar	Interpretation Time _____ min	Batch #:

EXAMINATION:

A wet fluorescent magnetic particle examination was performed on all accessible surfaces on the following:

Qty. (1) - 2" 600# Velan Gate Valve

V1 Body HT#: BNH52F01, Bonnet HT#: BNH53F01

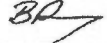
RESULTS:

No rejectable indications were noted during examination.
Valve is acceptable to the above standards.

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A.M.		P.M.		TOTAL HOURS		KMS	SUBSISTENCE		CONSUMABLES
TIME IN	TIME OUT	TIME IN	TIME OUT	S.T.	hrs		MAN DAY	OT/MEALS	
				O.T.	hrs				

Interpretation is done in accordance with the specified standard, to the best of my professional ability.

Technician Bill Parry  SNT/CGSB Level II CGSB # 18188 Assistant _____

The above interpretation is a professional opinion, final interpretation is the responsibility of the client.

Client Representative (Print): _____ Sign: _____ Date: _____

Date: January 31, 2019 JOB #: 49645 Page 1 of 1
Client: ALCO Inc. P.O. #: 87771
Location: Rivest Technologies Inc. Description: Qty. (1) - 2" 600# Velan Gate Valve

DEFECT LEGEND										SEVERITY		PROCEDURES		CODE LEGEND			
IF - INCOMPLETE FUSION IP - INCOMPLETE PENETRATION UC - UNDERCUTTING S - SLAG/SAND										AS PER ASTM E446 Radiographs		1 - SINGLE WALL EXPOSURE 2 - DOUBLE WALL EXPOSURE 3 - SINGLE WALL VIEWING 4 - DOUBLE WALL VIEWING		1 - ASME B31.3 NORMAL 2 - ASME B31.3 SEVERE 3 - ASME VIII DIV 1 UW51 4 - ASME VIII DIV 1 UW52 5 - ASME B16.34 6 - Husky Cat. C 7 - GP29-03-02 8 - SCL L37 Cat. 4			
P - POROSITY BT - BURN THROUGH IC - INTERNAL CONCAVITY LC - LOW COVER										HB - HOLLOW BEAD C - CRACK AB - ARC BURNS SH - SHRINKAGE							
FILM NO.	LOCATION	DIA.	THK.	SOD	SYM	IF	IP	IC	UC	S	P	SH	PROC #	CODE #	✓	REMARKS	X
1																WO#: 71288-1	
2																	
3																Body Heat #: BNH52F01	
4	V1															Bonnet Heat #: BNH53F01	
5	X1	Body	2"	600#	24"								2/4	5/6	✓		
6	X2	Body	2"	600#	24"								2/4	5/6	✓		
7	X3	Bonnet	2"	600#	21"								2/4	5/6	✓		
8																	
9																	
10																	
11																	
12																	
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14																	
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27																	
28																	

No. Of Exp.	Film Brand & Design	Screen Type & Thickness	No. of Film per Cassette	Type of Energy	Physical Size	Material	OFD	IQI	
								Type	Size
5	Kodak	0.010" Pb	1	IRI92	0.12"	P1	600#	ASTM	B

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A.M.		P.M.		TOTAL HOURS	KMS	SUBSISTENCE		FILM
TIME IN	TIME OUT	TIME IN	TIME OUT	S.T. hrs		MAN DAY	OT/MEALS	3 - 70 x 220mm
				O.T. hrs				2 - 14" x 17"

Interpretation is done in accordance with the specified code, to the best of my professional ability.

radiographer Kelly Mock *[Signature]* SNT/CGSB Level II Cert #6248 Assistant Adam
The above interpretation is a professional opinion, final film interpretation is the responsibility of the client.
I am in full agreement with the contents of this report and accept receipt of the associated film. Client Representative: _____

Date: January 31, 2019 JOB #: 49645 Page 1 of 1
Client: ALCO Inc. P.O. #: 87771
Location: Rivest Technologies Inc. Description: Qty. (1) - 2" 600# Velan Gate Valve

DEFECT LEGEND										SEVERITY		PROCEDURES		CODE LEGEND			
IF - INCOMPLETE FUSION IP - INCOMPLETE PENETRATION UC - UNDERCUTTING S - SLAG/SAND										AS PER ASTM E446 Radiographs		1 - SINGLE WALL EXPOSURE 2 - DOUBLE WALL EXPOSURE 3 - SINGLE WALL VIEWING 4 - DOUBLE WALL VIEWING		1 - ASME B31.3 NORMAL 2 - ASME B31.3 SEVERE 3 - ASME VIII DIV 1 UW51 4 - ASME VIII DIV 1 UW52 5 - ASME B16.34 6 - Husky Cat. C 7 - GP29-03-02 8 - SCL L37 Cat. 4			
P - POROSITY BT - BURN THROUGH IC - INTERNAL CONCAVITY LC - LOW COVER										HB - HOLLOW BEAD C - CRACK AB - ARC BURNS SH - SHRINKAGE							
FILM NO.	LOCATION	DIA.	THK.	SOD	SYM	IF	IP	IC	UC	S	P	SH	PROC #	CODE #	✓	REMARKS	X
1																WO#: 71288-1	
2																	
3																Body Heat #: BNH52F01	
4	V1															Bonnet Heat #: BNH53F01	
5	X1	Body	2"	600#	24"					2	2		2/4	5/6	✓		
6	X2	Body	2"	600#	24"					2	2		2/4	5/6	✓		
7	X3	Bonnet	2"	600#	21"								2/4	5/6	✓		
8																	
9																	
10																Body Heat #: BNH52F01	
11	V2															Bonnet Heat #: BNH53F01	
12	X1	Body	2"	600#	24"						1		2/4	5/6	✓		
13	X2	Body	2"	600#	24"						1		2/4	5/6	✓		
14	X3	Bonnet	2"	600#	21"								2/4	5/6	✓		
15																	
16																	
17																	
18																	
19																	
20																	
21																	
22																	
23																	
24																	
25																	
26																	
27																	
28																	

No. Of Exp.	Film Brand & Design	Screen Type & Thickness	No. of Film per Cassette	Type of Energy	Physical Size	Material	OFD	IQI	
								Type	Size
10	Kodak	0.010" Pb	1	IRI92	0.12"	P1	600#	ASTM	B

This Certificate or Report is valid only for that work which was specifically requested. The company is not responsible for any views or opinions expressed by employees performing this work which fall outside the contract terms or reference. All Certificates and/or Reports are the result of work performed in conformance with applicable specifications and standards to the best of our ability and intent. However, the Company will not be responsible for deviation within the normal limits of accuracy in accordance with the standard practices. Final Code Acceptance shall require Client and Manufacturer Representative's signatures.

A.M.		P.M.		TOTAL HOURS		SUBSISTENCE		FILM	
TIME IN	TIME OUT	TIME IN	TIME OUT	S.T.	hrs	MAN DAY	OT/MEALS	6 - 70 x 220mm	
				O.T.	hrs			4 - 14" x 17"	

Film Interpretation is done in accordance with the specified code, to the best of my professional ability.

Radiographer Kelly Mock SNT/CGSB Level II Cert #6248 Assistant Adam
The above interpretation is a professional opinion, final film interpretation is the responsibility of the client.
I am in full agreement with the contents of this report and accept receipt of the associated film. Client Representative: _____

Date: January 31, 2019 JOB #: 49645 Page 1 of 1
Client: ALCO Inc. P.O. #: 87771
Location: Rivest Technologies Inc. Description: Qty. (1) - 2" 600# Velan Gate Valve

DEFECT LEGEND										SEVERITY		PROCEDURES		CODE LEGEND					
IF - INCOMPLETE FUSION IP - INCOMPLETE PENETRATION UC - UNDERCUTTING S - SLAG/SAND										P - POROSITY BT - BURN THROUGH IC - INTERNAL CONCAVITY LC - LOW COVER		HB - HOLLOW BEAD C - CRACK AB - ARC BURNS SH - SHRINKAGE		1 - SINGLE WALL EXPOSURE 2 - DOUBLE WALL EXPOSURE 3 - SINGLE WALL VIEWING 4 - DOUBLE WALL VIEWING		1 - ASME B31.3 NORMAL 2 - ASME B31.3 SEVERE 3 - ASME VIII DIV 1 UW51 4 - ASME VIII DIV 1 UW52 5 - ASME B16.34 6 - Husky Cat. C 7 - GP29-03-02 8 - SCL L37 Cat. 4			
	FILM NO.	LOCATION	DIA.	THK.	SOD	SYM	IF	IP	IC	UC	S	P	SH		PROC #	CODE #	✓	REMARKS	X
1																		WO#: 71288-1	
2																			
3																		Body Heat #: BNH52F01	
4	V1																	Bonnet Heat #: BNH53F01	
5	X1	Body	2"	600#	24"						2	2			2/4	5/6	✓		
6	X2	Body	2"	600#	24"						2	2			2/4	5/6	✓		
7	X3	Bonnet	2"	600#	21"										2/4	5/6	✓		
8																			
9																			
10																		Body Heat #: BNH52F01	
1	V2																	Bonnet Heat #: BNH53F01	
2	X1	Body	2"	600#	24"							1			2/4	5/6	✓		
3	X2	Body	2"	600#	24"							1			2/4	5/6	✓		
4	X3	Bonnet	2"	600#	21"										2/4	5/6	✓		
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			
13																			
14																			
15																			
16																			
17																			
18																			

No. Of Exp.	Film Brand & Design	Screen Type & Thickness	No. of Film per Cassette	Type of Energy	Physical Size	Material	OFD	IQI	
								Type	Size
10	Kodak	0.010" Pb	1	IRI92	0.12"	P1	600#	ASTM	B

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A.M.		P.M.		TOTAL HOURS	KMS	SUBSISTENCE		FILM
TIME IN	TIME OUT	TIME IN	TIME OUT	S.T. hrs		MAN DAY	OT/MEALS	6 - 70 x 220mm
				O.T. hrs				4 - 14" x 17"

Film Interpretation is done in accordance with the specified code, to the best of my professional ability.

Radiographer Kelly Mock SNT/CGSB Level II Cert #6248 Assistant Adam
The above interpretation is a professional opinion, final film interpretation is the responsibility of the client.
I am in full agreement with the contents of this report and accept receipt of the associated film. Client Representative: _____



INSPECTION AND TEST CERTIFICATE

EN-10204-3.1

VELAN INC.
7007 Cote de Liesse
Montreal

Customer Name : EMCO

Valve Type : Full Port Gate

Figure Number : F08-2064C-31NB

Order :

Certificate : VCC00008942

Line :

Date : 1/30/2019

Size : 2" (50 mm)

Pressure Class : 600 Class

Quantity : 1

HYDROSTATIC TEST

Test Standard : API-598

Hydro Test Results :

ACCEPTABLE

Other Test :

ACCEPTABLE

Test Type	Shell	Packing	Seat (H.P.)	Seat (L.P.)	Backseat
Duration (sec)	15	15	N/A	15	15
Pressure (psig)	2250	2250	N/A	80	1650
Result	ACCEPTABLE	ACCEPTABLE	N/A	ACCEPTABLE	ACCEPTABLE

A352-06-LCB/LCC-

CHEMICALS

CE	AI	C	Cr	Cu	Mn	Mo	Ni	P	S	SI	V	ELONG (%)	IMP (FT-LB)	RED (%)	UTS (ksi)	YIELD (ksi)
Heat Code	Unit	%	%	%	%	%	%	%	%	%	%	(%)	(FT-LB)	(%)	(ksi)	(ksi)
BNH52F01	BODY	0.37	0.033	0.2	0.031	0.021	0.878	0.005	0.246	0.018	0.008	0.431	0.015	31	44.25	62
BNH53F01	BONNET	0.4	0.047	0.204	0.127	0.027	0.846	0.007	0.275	0.025	0.009	0.529	0.016	33	36.88	58

MECHANICALS

FAILED



INSPECTION AND TEST CERTIFICATE
EN-10204-3.1

Page 2 Of 2
1/30/2019 10:28:20 AM

TEST REPORT (EN 10204 - 2.1)

Valve Item	Specification
NUTS	ASTM-A194 2H
NUTS	ASTM-A194 7M
SEAT	ASTM-A350 LP2 CL1+CoCr
STEM	SS316
STUD	ASTM-A193 B7
STUD	ASTM-A320 L7M
WDGE	ASTM-A351 CF8M

All Velan Valves are tested in accordance with specification required by the design. Valves designed to API specifications API 594, API 600, API 602, API 603, API 608, API 609 and API 623 are tested to API 598. Valves designed to B16.34 are tested to B16.34 and MSS-SP-61.

Valves meet the material requirement of the current NACE MR0103 and NACE MR0175 / ISO 15156. Its is the equipment user's responsibility to ensure that the materials are suitable for the intended service.

All materials are dually certifiable to ASTM / ASME.

The header information on this certificate (including customer name, valve description, figure number, and quantity) has been entered by the user of this application and he/she is therefore responsible for the accuracy of the data.

Velan certifies that valve(s) described above are in compliance with the requirements of the identified standards and specifications. This report is based on actual test results of chemical and mechanical properties as well as hydrostatic test, and is in compliance with EN 10204 3.1.

Victor Apostolescu
Vice President, QA



4905-72 Avenue,
Edmonton, Alberta
T6B 2M6 PHONE: (780) 440-4560

ALCO FLOW CONTROL
ASME VALVE MODIFICATION
INSPECTION & TEST REPORTS

QF 704 Rev 0

DATE JAN 30/19 JOB# 71419-1 I.D.# AS LISTED

CUSTOMER SUNBELT SUPPLY LOCATION EDMONTON P.O.# F08-2064C-31NB

MAKE VELAN TYPE GATE FIG#

SIZE 2" ENDS RF RATING

MATERIAL LCC BONNET LCC TRIM: STEM/ DISC/ SEAT

BODY 316/CF8M/HP

ID # BODY HT# BONNET HT# TEST SEAT BK. H.P. L.K. L.P. L.K. DURATION ACC REL TESTED BY

1 BNH52F01 BNH53F01 2250 1650 1650 0 80 0 60 X

2 3 4 5 6 7 8 9 10 11 12 13 14 15

TEST PRESSURE IS IN PSI TEST CODE: API 598 YES ASME 16.34

H.P. CLOSURE YES MSS.SP.61 OTHER

SHELL YES BACKSEAT YES L.P. CLOSURE YES L.P. CLOSURE YES

INSPECTED BY: BILL GREER CUSTOMER INSPECTOR:

ENDS COVERED PAINTING APPEARANCE TAGGING

QUANTITY 1 M.T.R TRACKING PAPERWORK PACKAGED

INSPECTED BY: EDWARD CHANG CUSTOMER INSPECTOR:

WORK PERFORMED:

DISASSEMBLE

SEND FOR HUSKY CAT. C TESTING (BODY FAILED)

ASSEMBLE AND HYDRO TEST AS PER API 598

PTG-30

PTG-44

SIGNATURE

REPORT

RT#: 49517



Date: January 22, 2019

Client: ALCO Inc.

Location: Rivest Technologies Inc.

Description: Qty. (2) - 2" 600# Velan Gate Valve

P.O. #: 87487

JOB #: 49517

Page

1 of 1

[illegible][illegible]

No. Of Exp.	Film Brand & Design	Screen Thickness	No. of Film per Cassette	Type of Energy	Physical Size	Material	OFD	IQI	Size
10	Kodak	0.010" Pb	1	IR192	0.12"	P1	600#	ASTM	B

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A.M.		P.M.	TOTAL HOURS	KMS	SUBSTANCE	FILM
TIME IN	TIME OUT	TIME IN	TIME OUT	S.T. hrs	MAN DAY	OT/MEALS 6-70 x 220mm
			O.T. hrs			4-14" x 17"

Film interpretation is done in accordance with the specified code, to the best of my professional ability.

Radiographer Daryl Rivesi
 SNT/CGSB Level II Cert #6202

I am in full agreement with the contents of this report and accept receipt of the associated film. Client Report

Assistant
Adam

RADIOGRAPHIC INSPECTION REPORT

2450-80 Ave, Edmonton, Alberta T6P1N2
Phone:(780)469-8333 Fax:(780)469-8884

RT#: 49517

Date: January 22, 2019

Client: ALCO Inc.

Location: Rivest Technologies Inc.

P.O. #: 87487

P.O. #: 87487

P.O. #: 87487

Description: Qty. (2) - 2" 600# Velan Gate Valve

Page

1 of 1

DEFECT LEGEND		SEVERITY		PROCEDURES		CODE LEGEND	
IF - INCOMPLETE FUSION	P - POROSITY	HB - HOLLOW BEAD	AS PER	1 - SINGLE WALL EXPOSURE	1 - ASME B31.3 NORMAL	5 - ASME B16.34	
IP - INCOMPLETE PENETRATION	BT - BURN THROUGH	C - CRACK	AS PER	2 - DOUBLE WALL EXPOSURE	2 - ASME B31.3 SEVERE	6 - Husky Cal. C	
UC - UNDERCUTTING	IC - INTERNAL CONCAVITY	AB - ARC BURNS	ASTM E446	3 - SINGLE WALL VIEWING	3 - ASME VIII DIV 1 UW51	7 - GP29-03-02	
S - SLA/S/AND	LC - LOW COVER	SH - SHRINKAGE	Radiographs	4 - DOUBLE WALL VIEWING	4 - ASME VIII DIV 1 UW52	8 - SCL L37 Cal. 4	

[illegible]

No. Of Exp.	Film Brand & Design	Kodak	0.010" Pb	Screen Thickness Type &	1	IRI92	0.12"	P1	600#	ASTM	B
				No. of Film per Cassette	Type of Energy	Physical Size	Material	OFD	Type	Size	IQI

A.M.	P.M.	TOTAL HOURS	KMS	SUBSISTENT
contract terms or references. All Certifications and/or Reports are the result of work performed in conformance with applicable specifications and standards to the best of our ability and intent. However, the Company will not be responsible for deviation within the normal limits of accuracy in accordance with the standard practices. Final Code Acceptance shall require Client and Manufacturer Representative's signatures.				

TIME IN	TIME OUT	TIME IN	TIME OUT	S.T.	O.T.	MAN DAY	OT/MEALS	4 - 14 x 17"
				hrs	hrs			

Interpretation is done in accordance with the specified code, to the best of my professional ability.

SNT/CGSB Level II Cert #6202

Assistant
Adam

I am in full agreement with the contents of this report and accept receipt of the associated film. Client Representative:



RADIOGRAPHIC INSPECTION
REPORT

2450-80 Ave, Edmonton, Alberta T6P1N2
Phone:(780)469-8333 Fax:(780)469-8884
RT#: 49517

Date: January 22, 2019
Client: ALCO Inc.
Location: Rivest Technologies Inc.
Description: Qty. (2) - 2" 600# Velan Gate Valve
JOB #: 49517
P.O. #: 87487
Page 1 of 1

DEFECT LEGEND														
S - SLAG/SAND	IC - INCOMPLETE FUSION	IP - INCOMPLETE PENETRATION	BT - BURN THROUGH	IC - INTERNAL CONCAVITY	LC - LOW COVER	HB - HOLLOW BEAD	C - CRACK	AB - ARC BURNS	SH - SHRINKAGE	AS PER	ASTM E446	PROCEDURES		
1 - SINGLE WALL EXPOSURE			2 - DOUBLE WALL EXPOSURE			3 - SINGLE WALL VIEWING			4 - DOUBLE WALL VIEWING			CODE LEGEND		
1 - ASME B31.3 NORMAL			2 - ASME B31.3 SEVERE			3 - ASME VIII DIV 1 UW51			4 - ASME VIII DIV 1 UW52			REMARKS		
5 - ASME B16.34			6 - Husky Cat. C			7 - GP29-03-02			8 - SCL L37 Cat. 4					

NO.	NO.	LOCATION	DIA.	THK.	SOD	SYM	IF	IP	IC	UC	S	P	SH	PROC	#	CODE	✓	REMARKS	X
1																			
2																			
3																			
4	V1																		
5	X1	Body	2"	600#	24"						4	1						Sand as marked	X
6	X2	Body	2"	600#	24"						4							Sand as marked	X
7	X3	Bonnet	2"	600#	21"														
8																			
9																			
10																			
11	V2																	Body Heat #: BNH52F01	
12	X1	Body	2"	600#	24"														
13	X2	Body	2"	600#	24"														
14	X3	Bonnet	2"	600#	21"														
15																			
16																			
17																			
18																			
19																			
20																			
21																			
22																			
23																			
24																			
25																			
26																			
27																			
28																			

No. Of Exp.	Film Brand & Design	Screen Type & Thickness	No. of Film per Cassette	Type of Energy	Physical Size	Material	OFD	Type	Size
10	Kodak	0.010" Pb	1	IR192	0.12"	P1	600#	ASTM	B

TIME IN	TIME OUT	TIME IN	TIME OUT	S.T.	O.T.	TOTAL HOURS	SUBSISTENCE	FILM
							MAN DAY	6 - 70 x 220mm
								4 - 14" x 17"

Interpretation is done in accordance with the specified code, to the best of my professional ability.
Radiographer: Daryl Rivest
SNT/CSB Level II Cert #6202
Assistant: Adam
I am in full agreement with the contents of this report and accept receipt of the associated film. Client Representative:

G O O D S R E C E I P T S L I P

No. 5003591492

Page 1

Goods Receipt date: 2019.02.18
Current Date: 2019.02.18

Plant:	2031	Description:	Sunrise Oilsands
Vendor :	0011033523	Name:	WESTLUND INDUSTRIAL
Delivery Note:	77819066-00	Bill of Lading:	
GR Slip:		Header Text:	
PO:	8401352606 / 20	Telephone:	587-779-3302
Pur. group:	726 Sunrise		

Itm	Material	Description	Qty.	Un
PO Itm	Acct.assgt.	Recipient		
0001		3 600 RF GATE VLV TRIM 12 BB OS&Y WCB		
	F 000060574136	/ D-TSyed Hassan	4	EA
00010	TA2019			
0002		2 600 RF GATE VLV TRIM 12 BB OS&Y WCB		
	F 000060574136	/ D-TSyed Hassan	4	EA
00020	TA2019			

60574136

TA 2019.

1 Pallet

Issued by: Chetan Chetankumar S I G N A T U R E

YARD

WESTLUND INDUSTRIAL
A Division of EMCO Corporation

BR#: 778 WHSE: 778

INVOICE NO. / N° DE FACTURE
77819066-00

205 MACDONALD CRESCENT
FORT MCMURRAY, AB T9H 4B3
Ph: (780)791-7173
Fax: (780)791-7196

REQUIRES BY: 12/12/19
DATE REQUISE:
CONTACT NAME: MAHER
NOM DU CLIENT:
CONTACT NO.:
TÉLÉPHONE:

CUSTOMER P.O. NUMBER
N° DE COMM. DU CLIENT
8401352606

GST/HST: R101626026

DATE / TIME PRINTED
DATE / HEURE D'IMPRESSION
02/12/19 10:13 MST

BILL TO / FACTURER À:

PICKER # 1

CUST. NO. / N° DU CLIENT: 613977
PHONE NO. / N° TÉL: (403)750-5069

SHIP TO / EXPÉDIER À:
HUSKY ENERGY INC

HUSKY ENERGY INC
SUNRISE OILSANDS WAREHOUSE
LSD 4-15-95-7-W4M
FORT MACKAY, AB TOP 1CO

SUNRISE OILSANDS WAREHOUSE
LSD 4-15-95-7-W4M
FORT MACKAY, AB TOP 1CO

DATE / TIME ORDERED
DATE / HEURE COMMANDE
02/08/19 14:14

SHIPPED/EXPÉDIÉ

SPECIAL INSTRUCTIONS
DIRECTIVES SPÉCIALES

REFER

PPD / PORT PAYÉ
COL / PORT DO
PPD / PORT PAYÉ

LN	SKU CODE	BIN LOC CASIER N°	DESCRIPTION	UOM	ORDERED COMMANDE	SHIPPED EXPÉDIÉ	B/O EN. SOUFF.	LIST / LISTE	%	NET
1	VD778364	Non Stoc	2 600 RF GATE VLV TRIM 12 BB OS&Y WCB NEWAY 2G6RA12-NC-ULE1 CAT. A TESTING INCL. TAG: GA-611-S	EA	4	4		872.80	NET	3491.20
2	VD778366	Non Stoc	3 600 RF GATE VLV TRIM 12 BB OS&Y WCB NEWAY 3GRA12-NC-ULE1 CAT. A TESTING INCL. TAG: GA-611-S	EA	4	4		1343.70	NET	5374.80
★ SN Heat #S 10016172-510-33 [534V7,03C83] ✓ " - " - 58 [75V50,03C83] ✓ " - " - 20 [699V7,03C83] ✓ " - " - 59 [521V5,02C11] ✓ 10016172-760-4 [226V5,0V443] ✓ " - " - 8 [119V2,0V443] ✓ " - " - 10 [283V8,7593k] ✓ " - " - 27 [233V5,604V0] ✓										

RECEIVED FEB 17 2019

Chetom

STAGING AREA / AIRE RÉSERVÉ
PIPE / TUYAUX
BAGS / SACS
BOXES / BOÎTES
SKIDS / PALETTES
CRATES / CAGEOT
OTHER / AUTRES

TAKEN BY / ENTRÉE PAR
jmd - Jillian MacDonald
SALES REP. / REPRÉSENTANT
81m-Lorne McAlley 778
FREIGHT / FRET
PLACED BY / PAR
MAHER

SUBTOTAL 8866.00
GST/HST 443.30
TOTAL DUE 9309.30

BILL OF LADING NUMBER / N° DU CONNAISSEMENT 988042
DATE PICKED / RAMASSÉ LE 02/12/19
PICKED BY / RAMASSÉ PAR BB
WEIGHT / POIDS 0.0
VIA Velocity Exp
DATE SHIPPED / DATE EXPÉDIÉE
PAGE 1 Last Page

NO RETURNS ALLOWED ON SPECIAL ORDERS WITHOUT PERMISSION / AUCUN RETOUR SUR LES COMMANDES SPÉCIALES SANS AUTORISATION

CUSTOMER'S SIGNATURE / SIGNATURE DU CLIENT
CUSTOMER'S NAME (PRINTED) / NOM DU CLIENT (IMPRIMÉ)

PACKING SLIP
BORDEREAU D'EXPÉDITION

		MATERIAL TEST REPORT EN 10204-2004 Type 3.1				TC No. 10016172-760(80695756) DATE: 2018.11.06 PAGE: 1 OF 11	
CUSTOMER:		QTY.	PART NO.	PRODUCT CODE	PRODUCT DESCRIPTION		
		40	11472241	3G6RA12-NC-ULE1	3G6R,C00/12 [-NVL,-B7M/2HM] ASTM A216 WCB, TRIM F316/HF GATE VALVE, 3 INCH, CLASS 600, RAISED FACE END		
PO NO.: ITEM NO.:	76	PRESSURE TEST (MPa/PSI)			OTHER INSPECTION		
		HYDROSTATIC		PNEUM	RESULT	VISUAL	DIMENSION
		SHELL	SEATS/BACKSEAT	SEATS	Accepted	Accepted	Accepted
PROJECT:	N/A	15.4/2233	11.3/1638	0.6/87	Accepted		
PROJECT NO.:		N/A					
APPLICABLE STANDARDS AND SPECIFICATION - P/T RATING: ASME B16.34 - MAIN MATERIAL: RELEVANT ASTM STANDARD - DESIGN: API600 ASME B16.34 - TEST: API598 EN12266 - TRIM MATERIAL (SEAT/STEM) AND BOLTING ARE ACCORDING TO THE P.O. AND MATERIAL SPECIFICATION - VALVES CONFORM TO NACE MR0175/MR0103 LATEST REVISION - NOTE: ALL RELATED STANDARDS ARE THE LATEST VERSION UNLESS SPECIFIED BY PURCHASE ORDER.							
WITNESSED BY: _____							
We hereby certify that the valves listed above are manufactured and tested in accordance with the requirements of valve standard and purchase order.							
NEWAY VALVE Q.C. Manager							

MATERIAL TEST REPORT EN 10204-2004 Type 3.1

TC No. 10016172-760(80695756)
DATE: 2018.11.06
PAGE: 2 OF 11

PRODUCT TRACEABILITY TABLE

SERIAL NO.	MATERIAL CODE AND HEAT NO.				TAG NO.	SERIAL NO.	MATERIAL CODE AND HEAT NO.				TAG NO.		
	BODY		BONNET				WEDGE/DISC		BONNET			WEDGE/DISC	
	WCB		WCB				WCB		WCB			WCB	
10016172-760-1	117V0		9900K	5129A	/	10016172-760-2	119V3		0V548	4199A	/		
10016172-760-3	091V9		0V363	5129A	/	10016172-760-4	226V5		0V443	5129A	/		
10016172-760-5	117V0		233V5	23C70	/	10016172-760-6	46C35		730V1	23C70	/		
10016172-760-7	119V2		7593K	5129A	/	10016172-760-8	119V2		0V443	5129A	/		
10016172-760-9	233V4		0115X	5129A	/	10016172-760-10	283V8		7593K	5129A	/		
10016172-760-11	222V0		233V4	5129A	/	10016172-760-12	283V8		221V9	5129A	/		
10016172-760-13	219V6		0V386	5129A	/	10016172-760-14	221V9		0V548	5129A	/		
10016172-760-15	117V0		0V307	5129A	/	10016172-760-16	226V6		0V444	5129A	/		
10016172-760-17	222V0		219V5	5129A	/	10016172-760-18	119V3		089V3	23C70	/		
10016172-760-19	119V2		0V386	5129A	/	10016172-760-20	226V5		0V240	5129A	/		
10016172-760-21	744V8		221V9	5129A	/	10016172-760-22	226V6		470V0	5129A	/		
10016172-760-23	744V8		0V593	5129A	/	10016172-760-24	744V8		0V443	5129A	/		
10016172-760-25	233V4		58V75	5129A	/	10016172-760-26	119V2		224V4	5129A	/		
10016172-760-27	233V5		604V0	5129A	/	10016172-760-28	233V4		59V85	5129A	/		
10016172-760-29	091V9		219V5	5129A	/	10016172-760-30	098V5		233V4	5129A	/		



MATERIAL TEST REPORT

EN 10204-2004 Type 3.1

TC No. 10016172-760(80695756)
DATE: 2018.11.06
PAGE: 3 OF 11

PRODUCT TRACEABILITY TABLE

SERIAL NO.	MATERIAL CODE AND HEAT NO.				TAG NO.	MATERIAL CODE AND HEAT NO.				TAG NO.			
	BODY		BONNET			WEDGE/DISC		WEDGE/DISC					
	WCB		WCB			WCB		WCB					
10016172-760-31	119V2		49V22		5129A	/	10016172-760-32	283V8		470V0		5129A	/
10016172-760-33	222V0		741V1		5129A	/	10016172-760-34	233V4		221V9		5129A	/
10016172-760-35	119V3		224V4		5129A	/	10016172-760-36	098V5		233V5		5129A	/
10016172-760-37	744V9		0V386		5129A	/	10016172-760-38	744V9		9900K		5129A	/
10016172-760-39	744V8		0V444		5129A	/	10016172-760-40	098V5		0V307		5129A	/



MATERIAL TEST REPORT

EN 10204-2004 Type 3.1

TC No. 10016172-760(80695756)
DATE: 2018.11.06
PAGE: 4 OF 11

MATERIAL COMPONENTS AND PROPERTIES

Material	Heat treatment	Temp °C (°F)	Holding time (h)	Cooling media	Furnace
2HM	QUENCH	>= 850 (1562 F)	1H/25MM, >= 1H	OIL	ELECTRIC
2HM	TEMPER	>= 620 (1148 F)	1H/25MM, >= 1H	AIR	ELECTRIC

We hereby certify that the material are manufactured, inspected and tested in accordance with the material specification and purchase order requirements.

PART NAME	MATERIAL	HEAT NO.	CHEMICAL ANALYSIS												MECHANICAL PROPERTIES						
			C %	Mn %	Si %	S %	P %							TS MPa	YS MPa	E %	R %	HARD HB	IMPACT TEST VALUE TEMP °C:		
																			Avg.	Min.	
																				1	2
		MAX. MIN.	1.000 0.400	0.400 0.050	0.050 0.040												235 159				
NUT	2HM	HIA0022	0.430	0.530	0.180	0.009	0.018											195			



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MATERIAL COMPONENTS AND PROPERTIES

Material	Heat treatment	Temp °C (°F)	Holding time (h)	Cooling media	Furnace
A105N	NORMALIZE	850-920 (1562-1688 F)	1H/25MM, >=1H	AIR	ELECTRIC FURNACE

We hereby certify that the material are manufactured, inspected and tested in accordance with the material specification and purchase order requirements.

PART NAME	MATERIAL	HEAT NO.	CHEMICAL ANALYSIS													MECHANICAL PROPERTIES										
			C	Mn	Si	S	P	Cr	Ni	Mo	Cu	V				C.E.	TS	YS	E	R	HARD	IMPACT TEST VALUE				
			%	%	%	%	%	%	%	%	%	%				%	MPa	MPa	%	%	HB	TEMP °C.				
		MAX.	0.350	1.050	0.350	0.040	0.035	0.300	0.400	0.120	0.400	0.0800					485	250	22	30	187	Avg.				
		MIN.		0.600	0.100																	1	2	3		
CE: C+Mn/6+ (Cr+Mo+V) / 5+ (Ni+Cu) / 15 ≤ 0.43																										

SEAT RING	A105N	QC53101	0.190	0.970	0.230	0.013	0.023	0.090	0.040	0.001	0.040	0.0010						0.375	528	315	42	61	169		
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Material	Heat treatment	Temp °C (°F)	Holding time (h)	Cooling media	Furnace
B7M	QUENCH	>=850 (1562 F)	1H/25MM, >=1H	OIL	ELECTRIC
B7M	TEMPER	>=620 (1148 F)	1H/25MM, >=1H	AIR	ELECTRIC

We hereby certify that the material are manufactured, inspected and tested in accordance with the material specification and purchase order requirements.

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PART NAME	MATERIAL	HEAT NO.	CHEMICAL ANALYSIS												MECHANICAL PROPERTIES								
			C %	Mn %	Si %	S %	P %	Cr %	Mo %							TS MPa	YS MPa	E %	R %	HARD HB	IMPACT TEST VALUE TEMP °C:		
																					Avg.	Min:	
		MAX. MIN.	0.480 0.380	1.000 0.750	0.350 0.150	0.040	0.035	1.100 0.800	0.250 0.150							690	550	18	50	235			
BOLT	B7M	SGIH010	0.440	0.860	0.220	0.021	0.018	0.850	0.200							776	636	25	52	216			



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MATERIAL COMPONENTS AND PROPERTIES

Material	Heat treatment	Temp °C (°F)	Holding time (h)	Cooling media	Furnace
F316	SOLUTION	Δ = 1040 (1904 F)	1H/25MM, >=1H	WATER	ELECTRIC
We hereby certify that the material are manufactured, inspected and tested in accordance with the material specification and purchase order requirements.					

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PART NAME	MATERIAL	HEAT NO.	CHEMICAL ANALYSIS											MECHANICAL PROPERTIES						
			C %	Mn %	Si %	S %	P %	Cr %	Ni %	Mo %	N %	TS MPa	YS MPa	E %	R %	HARD HB	IMPACT TEST VALUE TEMP °C:			
																	Avg.	Min:		
		MAX.	0.080	2.000	1.000	0.030	0.045	18.00	14.00	3.000	0.100					237	1	2	3	
		MIN.						16.00	10.00	2.000		515	205	30	50					

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MATERIAL COMPONENTS AND PROPERTIES

Material	Heat treatment	Temp°C(°F)	Holding time(h)	Cooling media	Furnace
WCB	NORMALIZE	920-940 (1688-1724 F)	1H/25MM, >=1H	AIR	GAS

We hereby certify that the material are manufactured, inspected and tested in accordance with the material specification and purchase order requirements.

PART NAME	MATERIAL	HEAT NO.	CHEMICAL ANALYSIS											MECHANICAL PROPERTIES												
			C	Mn	Si	S	P	Cr	Ni	Mo	Cu	V					C.E.	TS	YS	E	R	HARD	IMPACT TEST VALUE			
			%	%	%	%	%	%	%	%	%	%	%				%	MPa	MPa	%	%	HB	TEMP °C:			
		MAX.	0.230	1.280	0.600	0.030	0.035	0.500	0.500	0.200	0.300	0.0300					655	250	22	35	237	Avg.	Min:			
		MIN.															485					1	2	3		
CE: C+Mn/6+ (Cr+Mo+V)/5+ (Ni+Cu)/15 ≤ 0.43																										
BODY	WCB	091V9	0.194	1.095	0.404	0.010	0.025	0.048	0.020	0.001	0.012	0.0040					0.389	525	330	29	49	146				
BODY	WCB	098V5	0.189	1.146	0.385	0.008	0.022	0.030	0.018	0.001	0.011	0.0020					0.389	530	335	27	50	143				
BODY	WCB	117V0	0.188	1.088	0.382	0.009	0.021	0.016	0.001	0.001	0.009	0.0010					0.374	535	340	29	52	154				
BODY	WCB	119V2	0.197	1.095	0.389	0.008	0.022	0.012	0.001	0.001	0.011	0.0010					0.383	540	345	31	43	157				
BODY	WCB	119V3	0.197	1.131	0.418	0.008	0.022	0.024	0.016	0.001	0.008	0.0020					0.393	525	335	36	53	141				
BODY	WCB	219V6	0.206	1.179	0.443	0.009	0.024	0.003	0.001	0.001	0.009	0.0010					0.404	530	340	30	56	145				
BODY	WCB	221V9	0.199	1.084	0.397	0.009	0.023	0.002	0.001	0.001	0.008	0.0010					0.381	540	360	29	49	152				
BODY	WCB	222V0	0.183	1.111	0.361	0.006	0.024	0.007	0.006	0.001	0.010	0.0010					0.371	510	335	32	53	146				
BODY	WCB	226V5	0.187	1.063	0.377	0.007	0.022	0.004	0.005	0.001	0.009	0.0010					0.366	505	335	35	50	145				
BODY	WCB	226V6	0.199	1.093	0.387	0.008	0.024	0.001	0.001	0.001	0.006	0.0010					0.382	520	340	25	50	145				
BODY	WCB	233V4	0.196	1.139	0.414	0.008	0.020	0.014	0.001	0.001	0.006	0.0010					0.390	525	330	33	59	154				

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MATERIAL COMPONENTS AND PROPERTIES											
Material	Heat treatment	Temp°C (°F)		Holding time(h)		Cooling media	Furnace				
WCB	NORMALIZE	920-940 (1688-1724 F)		1H/25MM, >=1H		AIR	GAS				
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MATERIAL COMPONENTS AND PROPERTIES

Material	Heat treatment	Temp °C (°F)	Holding time (h)	Cooling media	Furnace
WCB	NORMALIZE	920-940 (1688-1724 F)	1H/25MM, >=1H	AIR	GAS

We hereby certify that the material are manufactured, inspected and tested in accordance with the material specification and purchase order requirements.

PART NAME	MATERIAL	HEAT NO.	CHEMICAL ANALYSIS										MECHANICAL PROPERTIES					
			C	Mn	Si	S	P	Cr	Ni	Mo	Cu	V	C.E.	TS	YS	E	R	HARD
			%	%	%	%	%	%	%	%	%	%	%	MPa	MPa	%	%	HB
		MAX.	0.230	1.280	0.600	0.030	0.035	0.500	0.500	0.200	0.300	0.0300		655	250	22	35	237
		MIN.												485				
CE: C+Mn/6+ (Cr+Mo+V) / 5+ (Ni+Cu) / 15 ≤ 0.43																		
BONNET	WCB	0V443	0.207	1.155	0.442	0.011	0.031	0.055	0.021	0.001	0.020	0.0010	0.414	525	335	29	55	160
BONNET	WCB	0V444	0.200	1.140	0.440	0.009	0.029	0.056	0.017	0.001	0.013	0.0010	0.404	510	325	33	55	156
BONNET	WCB	0V548	0.191	1.099	0.422	0.007	0.029	0.067	0.017	0.001	0.013	0.0010	0.390	530	345	33	54	152
BONNET	WCB	0V593	0.195	1.071	0.461	0.007	0.027	0.061	0.018	0.001	0.014	0.0010	0.388	545	340	27	43	156
BONNET	WCB	219V5	0.202	1.099	0.405	0.008	0.025	0.010	0.005	0.001	0.010	0.0010	0.389	505	320	32	54	149
BONNET	WCB	221V9	0.199	1.084	0.397	0.009	0.023	0.002	0.001	0.001	0.008	0.0010	0.381	540	360	29	49	152
BONNET	WCB	224V4	0.187	1.100	0.401	0.007	0.024	0.005	0.004	0.001	0.005	0.0010	0.372	505	335	34	57	145
BONNET	WCB	233V4	0.196	1.139	0.414	0.008	0.020	0.014	0.001	0.001	0.006	0.0010	0.390	525	330	33	59	154
BONNET	WCB	233V5	0.196	1.108	0.422	0.011	0.027	0.010	0.001	0.001	0.012	0.0010	0.384	520	330	29	54	145
BONNET	WCB	470V0	0.178	1.110	0.424	0.007	0.029	0.034	0.027	0.001	0.007	0.0040	0.373	515	350	32	53	145
BONNET	WCB	49V22	0.204	1.158	0.460	0.010	0.025	0.055	0.039	0.001	0.012	0.0010	0.412	525	345	30	52	142



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MATERIAL COMPONENTS AND PROPERTIES

Material	Heat treatment	Temp°C(°F)	Holding time(h)	Cooling media	Furnace
WCB	NORMALIZE	920-940 (1688-1724 F)	1H/25MM. >=1H	AIR	GAS

We hereby certify that the material are manufactured, inspected and tested in accordance with the material specification and purchase order requirements.

PART NAME	MATERIAL	HEAT NO.	CHEMICAL ANALYSIS											MECHANICAL PROPERTIES											
			C	Mn	Si	S	P	Cr	Ni	Mo	Cu	V													
			%	%	%	%	%	%	%	%	%	%	%		C.E.	TS	YS	E	R	HARD	IMPACT TEST VALUE				
		MAX.	0.230	1.280	0.600	0.030	0.035	0.500	0.500	0.200	0.300	0.0300				655	250	22	35	237	Avg.	1	2	3	
		MIN.														485					Min:				
CE: C+Mn/6+ (Cr+Mo+V) /5+ (Ni+Cu) /15 ≤ 0.43																									
BONNET	WCB	58V75	0.188	1.155	0.445	0.010	0.025	0.021	0.005	0.001	0.012	0.0010				0.386	525	340	28	53	145				
BONNET	WCB	59V85	0.203	1.101	0.403	0.008	0.023	0.017	0.006	0.001	0.009	0.0010				0.391	525	330	35	56	147				
BONNET	WCB	604V0	0.187	1.079	0.416	0.006	0.025	0.001	0.001	0.001	0.001	0.0040				0.368	520	315	31	56	151				
BONNET	WCB	730V1	0.190	1.170	0.396	0.006	0.025	0.003	0.001	0.001	0.001	0.0050				0.387	535	345	31	52	154				
BONNET	WCB	741V1	0.185	1.098	0.433	0.005	0.026	0.043	0.001	0.001	0.007	0.0050				0.378	510	315	30	52	153				
BONNET	WCB	7593K	0.185	1.125	0.410	0.006	0.021	0.050	0.027	0.004	0.024	0.0070				0.388	520	360	34	60	143				
BONNET	WCB	9900K	0.194	1.140	0.437	0.009	0.029	0.051	0.036	0.001	0.015	0.0010				0.398	520	330	31	43	158				
WEDGE	WCB	23C70	0.180	1.196	0.370	0.008	0.020	0.055	0.023	0.013	0.018	0.0060				0.397	515	345	33	55	156				
WEDGE	WCB	4199A	0.192	0.800	0.417	0.018	0.020	0.051	0.020	0.010	0.010	0.0010				0.340	526	319	25	46	166				
WEDGE	WCB	5129A	0.201	0.841	0.463	0.014	0.020	0.044	0.022	0.010	0.016	0.0010				0.355	525	340	26	53	169				



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CUSTOMER:		QTY.	PART NO.	PRODUCT CODE	PRODUCT DESCRIPTION			
		56	11442466	2G6RA12-NC-U1E1	2G6R,C00/12 [-NV1,-B7M/2HM] ASTM A216 WCB, TRIM F316/3F GATE VALVE, 2 INCH, CLASS 600, RAISED FACE END			
PO NO.:	ITEM NO.:	PRESSURE TEST (MPa/PSI)			OTHER INSPECTION			
		HYDROSTATIC		RESULT				
PROJECT:	N/A	SHELL	SEATS/BACKSEAT	PNEUM	VISUAL	DIMENSION	OPERATION	MARKING
		15.4/2233	11.3/1638	SEATS	Accepted	Accepted	Accepted	Accepted
PROJECT NO.:		N/A						

APPLICABLE STANDARDS AND SPECIFICATION

- P/T RATING: ASME B16.34
- MAIN MATERIAL: RELEVANT ASTM STANDARD
- DESIGN: API600 ASME B16.34
- TEST: API598 EN12266
- TRIM MATERIAL (SEAT/STEM) AND BOLTING ARE ACCORDING TO THE P.O. AND MATERIAL SPECIFICATION
- VALVES CONFORM TO NACE MR0175/MR0103 LATEST REVISION
- NOTE: ALL RELATED STANDARDS ARE THE LATEST VERSION UNLESS SPECIFIED BY PURCHASE ORDER.

WITNESSED BY: _____

We hereby certify that the valves listed above are manufactured and tested in accordance with the requirements of valve standard and purchase order.

NEWAY VALVE
Q.C. Manager

Judy Brown
Judy Brown

MATERIAL TEST REPORT

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PRODUCT TRACEABILITY TABLE

SERIAL NO.	MATERIAL CODE AND HEAT NO.				TAG NO.	SERIAL NO.	MATERIAL CODE AND HEAT NO.				TAG NO.				
	BODY		BONNET				WEDGE/DISC		BODY			BONNET		WEDGE/DISC	
	WCB		WCB				WCB		WCB			WCB		WCB	
10016172-510-1	537V2		02C11		879V4	/	10016172-510-2	592V1		01C44		877V9	/		
10016172-510-4	75V62		00C16		878V6	/	10016172-510-5	537V2		03C31		878V6	/		
10016172-510-6	560V5		03C31		878V7	/	10016172-510-7	537V2		03C83		878V6	/		
10016172-510-8	560V5		00C16		878V7	/	10016172-510-9	699V7		01C44		878V7	/		
10016172-510-10	524V0		03C83		878V7	/	10016172-510-11	679V7		03C31		877V9	/		
10016172-510-12	679V7		00C16		877V9	/	10016172-510-13	606V1		01C91		877V9	/		
10016172-510-14	562V7		01C44		878V6	/	10016172-510-15	537V2		00C16		878V7	/		
10016172-510-16	592V1		00C60		878V7	/	10016172-510-17	75V50		01C44		878V7	/		
10016172-510-18	510V1		03C83		878V7	/	10016172-510-20	699V7		03C83		878V7	/		
10016172-510-22	551V2		03C83		878V6	/	10016172-510-23	556V8		673V0		878V7	/		
10016172-510-24	521V5		00C60		878V7	/	10016172-510-25	670V6		00C60		878V7	/		
10016172-510-26	75V50		03C83		878V6	/	10016172-510-27	562V7		00C60		878V6	/		
10016172-510-28	551V2		02C11		878V7	/	10016172-510-29	537V2		00C60		878V7	/		
10016172-510-30	524V0		03C83		878V7	/	10016172-510-32	551V2		03C83		878V7	/		
10016172-510-33	534V7		03C83		878V7	/	10016172-510-34	592V1		02C11		878V7	/		



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PRODUCT TRACEABILITY TABLE

SERIAL NO.	MATERIAL CODE AND HEAT NO.				TAG NO.	SERIAL NO.	MATERIAL CODE AND HEAT NO.				TAG NO.		
	BODY		BONNET				WEDGE/DISC		BONNET			WEDGE/DISC	
	WCB		WCB				WCB		WCB			WCB	
10016172-510-35	699V7		00C16	878V7	/	10016172-510-36	75V62		00C16	878V7	/		
10016172-510-37	75V50		00C16	878V7	/	10016172-510-38	699V7		00C16	878V7	/		
10016172-510-39	537V2		00C16	878V7	/	10016172-510-40	699V7		02C11	878V7	/		
10016172-510-41	524V0		03C31	878V7	/	10016172-510-42	592V1		02C11	878V7	/		
10016172-510-43	537V2		00C60	878V7	/	10016172-510-44	699V7		03C83	878V7	/		
10016172-510-45	679V7		03C31	878V7	/	10016172-510-46	556V8		00C16	878V7	/		
10016172-510-47	670V6		00C60	878V6	/	10016172-510-48	688V1		00C16	878V6	/		
10016172-510-49	551V2		01C91	878V6	/	10016172-510-50	521V5		03C31	878V6	/		
10016172-510-51	699V7		01C44	878V6	/	10016172-510-52	534V7		01C44	878V7	/		
10016172-510-53	562V7		03C31	878V6	/	10016172-510-54	75V62		01C91	878V6	/		
10016172-510-55	537V2		02C11	878V6	/	10016172-510-56	592V1		01C44	878V7	/		
10016172-510-57	78V45		01C44	878V6	/	10016172-510-58	75V50		03C83	878V6	/		
10016172-510-59	521V5		02C11	878V7	/	10016172-510-60	521V5		02C11	878V7	/		



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Material	Heat treatment	Temp °C (°F)	Holding time (h)	Cooling media	Furnace
2HM	QUENCH	>= 850 (1562 F)	1H/25MM, >=1H	OIL	ELECTRIC
2HM	TEMPER	>= 620 (1148 F)	1H/25MM, >=1H	AIR	ELECTRIC

We hereby certify that the material are manufactured, inspected and tested in accordance with the material specification and purchase order requirements.

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MATERIAL COMPONENTS AND PROPERTIES

Material	Heat treatment	Temp°C(°F)	Holding time(h)	Cooling media	Furnace
A105N	NORMALIZE	850-920 (1562-1688 F)	1H/25MM, >=1H	AIR	ELECTRIC FURNACE

We hereby certify that the material are manufactured, inspected and tested in accordance with the material specification and purchase order requirements.

PART NAME	MATERIAL	HEAT NO.	CHEMICAL ANALYSIS													MECHANICAL PROPERTIES							
			C %	Mn %	Si %	S %	P %	Cr %	Ni %	Mo %	Cu %	V %	C.E. %	TS MPa	YS MPa	E %	R %	HARD HB	IMPACT TEST VALUE TEMP °C:				
																			Avg.	Min:			
		MAX. MIN.	0.350 0.600	1.050 0.100	0.350 0.100	0.040	0.035	0.300	0.400	0.120	0.400	0.0800			485	250	22	30	187				
CE: C+Mn/6+ (Cr+Mo+V) /5+ (Ni+Cu) /15 ≤ 0.43																							
SEAT RING	A105N	A1001	0.200	0.920	0.220	0.011	0.016	0.170	0.080	0.030	0.200	0.0020			0.412	579	335	30	41	139			



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Material	Heat treatment	Temp°C(°F)	Holding time(h)	Cooling media	Furnace
B7M	QUENCH	>=850 (1562 F)	1H/25MM, >= 1H	OIL	ELECTRIC
B7M	TEMPER	>=620 (1148 F)	1H/25MM, >= 1H	AIR	ELECTRIC

We hereby certify that the material are manufactured, inspected and tested in accordance with the material specification and purchase order requirements.

PART NAME	MATERIAL	HEAT NO.	CHEMICAL ANALYSIS										MECHANICAL PROPERTIES									
			C %	Mn %	Si %	S %	P %	Cr %	Mo %						TS MPa	YS MPa	E %	R %	HARD HB	IMPACT TEST VALUE TEMP °C:		
																				Avg.	Min:	
		MAX. MIN.	0.480 0.380	1.000 0.750	0.350 0.150	0.040	0.035	1.100 0.800	0.250 0.150						690	550	18	50	235			
BOLT	B7M	YHK101	0.390	0.770	0.200	0.006	0.014	0.936	0.164						739	665	22	63	225			



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1000

We hereby certify that the material are manufactured, inspected and tested in accordance with the material specification and purchase order requirements.

MECHANICAL PROPERTIES							
TS MPa	YS MPa	E %	R %	HARD HB	IMPACT TEST VALUE		
					TEMP °C:		
				Avg.	Min.		
				1	2	3	
515	205	30	50	237			

142	
63	
42	
231	
529	



MATERIAL TEST REPORT

EN 10204-2004 Type 3.1

TC No. 10016172-510(80695756)
DATE: 2018.11.06
PAGE: 8 OF 10

MATERIAL COMPONENTS AND PROPERTIES

Material	Heat treatment	Temp°C(°F)	Holding time(h)	Cooling media	Furnace
WCB	NORMALIZE	920-940 (1688-1724 F)	1H/25MM, >=1H	AIR	GAS

We hereby certify that the material are manufactured, inspected and tested in accordance with the material specification and purchase order requirements.

PART NAME	MATERIAL	HEAT NO.	CHEMICAL ANALYSIS											MECHANICAL PROPERTIES													
			C	Mn	Si	S	P	Cr	Ni	Mo	Cu	V															
			%	%	%	%	%	%	%	%	%	%	%														
			0.230	1.280	0.600	0.030	0.035	0.500	0.500	0.200	0.300	0.0300						655	250	22	35	237	Avg.	Min:	1	2	3
CE: C+Mn/6+ (Cr+Mo+V) /5+ (Ni+Cu) /15 ≤ 0.43																											
BODY	WCB	510V1	0.176	1.099	0.384	0.007	0.026	0.003	0.001	0.001	0.002	0.0040						0.361	530	340	29	48	157				
BODY	WCB	521V5	0.180	1.105	0.425	0.007	0.024	0.009	0.010	0.001	0.008	0.0050						0.368	545	350	32	50	153				
BODY	WCB	524V0	0.181	1.134	0.425	0.008	0.024	0.012	0.007	0.001	0.006	0.0040						0.374	545	365	22	49	157				
BODY	WCB	534V7	0.184	1.159	0.403	0.009	0.025	0.011	0.001	0.001	0.001	0.0050						0.381	535	345	31	46	156				
BODY	WCB	537V2	0.190	1.096	0.366	0.008	0.022	0.013	0.002	0.001	0.001	0.0050						0.377	525	350	29	50	149				
BODY	WCB	551V2	0.183	1.142	0.426	0.006	0.022	0.002	0.003	0.001	0.001	0.0050						0.375	565	360	34	50	153				
BODY	WCB	556V8	0.183	1.099	0.377	0.008	0.020	0.006	0.001	0.001	0.001	0.0050						0.369	535	355	30	48	153				
BODY	WCB	560V5	0.174	1.099	0.399	0.006	0.022	0.005	0.004	0.001	0.004	0.0050						0.360	525	335	31	52	145				
BODY	WCB	562V7	0.177	1.089	0.401	0.006	0.021	0.003	0.004	0.001	0.004	0.0050						0.361	525	335	30	49	151				
BODY	WCB	592V1	0.179	1.123	0.426	0.009	0.025	0.010	0.001	0.001	0.001	0.0050						0.370	515	335	30	49	140				
BODY	WCB	606V1	0.178	1.061	0.398	0.008	0.025	0.004	0.001	0.001	0.002	0.0040						0.357	535	360	32	51	149				

NEWAY			MATERIAL TEST REPORT					TC No. 10016172-510(80695756) DATE: 2018.11.06 PAGE: 9 OF 10												
MATERIAL COMPONENTS AND PROPERTIES																				
Material	Heat treatment	Temp°C (°F)		Holding time(h)		Cooling media	Furnace	We hereby certify that the material are manufactured, inspected and tested in accordance with the material specification and purchase order requirements.												
WCB	NORMALIZE	920-940 (1688-1724 F)		1H/25MM, >=1H		AIR	GAS													
PART NAME	MATERIAL	HEAT NO.	CHEMICAL ANALYSIS										MECHANICAL PROPERTIES							
		MAX. MIN.	C %	Mn %	Si %	S %	P %	Cr %	Ni %	Mo %	Cu %	V %	C.E. %	TS MPa	YS MPa	E %	R %	HARD HB	IMPACT TEST VALUE TEMP °C: Avg. Min:	
			0.230	1.280	0.600	0.030	0.035	0.500	0.500	0.200	0.300	0.0300		655	485	250	22	35	1 2 3	
CE: C+Mn/6+ (Cr+Mo+V) / 5+ (Ni+Cu) / 15 ≤ 0.43																				
BODY	WCB	670V6	0.178	1.113	0.403	0.006	0.030	0.023	0.012	0.001	0.011	0.0050	0.371	505	330	34	54	140		
BODY	WCB	679V7	0.182	1.078	0.401	0.007	0.027	0.004	0.001	0.001	0.005	0.0050	0.364	530	350	30	54	147		
BODY	WCB	688V1	0.188	1.084	0.407	0.008	0.024	0.013	0.001	0.001	0.003	0.0050	0.373	515	345	32	59	136		
BODY	WCB	699V7	0.188	1.097	0.385	0.007	0.026	0.006	0.001	0.001	0.006	0.0050	0.374	510	325	28	54	151		
BODY	WCB	75V50	0.192	1.068	0.367	0.009	0.020	0.025	0.011	0.001	0.007	0.0010	0.377	520	335	33	55	157		
BODY	WCB	75V62	0.194	1.124	0.412	0.007	0.024	0.001	0.001	0.001	0.010	0.0010	0.383	530	335	31	52	154		
BODY	WCB	78V45	0.185	1.111	0.390	0.011	0.024	0.021	0.001	0.001	0.008	0.0010	0.375	525	330	30	50	153		
BONNET	WCB	00C16	0.199	1.151	0.424	0.007	0.017	0.044	0.018	0.005	0.023	0.0030	0.404	530	340	29	58	163		
BONNET	WCB	00C60	0.181	1.185	0.351	0.007	0.018	0.009	0.005	0.003	0.023	0.0020	0.383	540	345	31	56	156		
BONNET	WCB	01C44	0.199	1.137	0.436	0.010	0.023	0.068	0.026	0.005	0.022	0.0040	0.407	525	320	31	57	156		
BONNET	WCB	01C91	0.187	1.121	0.368	0.007	0.019	0.122	0.010	0.012	0.028	0.0040	0.404	525	255	34	51	152		



MATERIAL TEST REPORT

EN 10204-2004 Type 3.1

TC No. 10016172-510(80695756)
DATE: 2018.11.06
PAGE: 10 OF 10

MATERIAL COMPONENTS AND PROPERTIES

Material	Heat treatment	Temp°C (°F)	Holding time(h)	Cooling media	Furnace
WCB	NORMALIZE	920-940 (1688-1724 F)	1H/25MM >=1H	AIR	GAS

We hereby certify that the material are manufactured, inspected and tested in accordance with the material specification and purchase order requirements.

PART NAME	MATERIAL	HEAT NO.	CHEMICAL ANALYSIS											MECHANICAL PROPERTIES											
			C	Mn	Si	S	P	Cr	Ni	Mo	Cu	V													
			%	%	%	%	%	%	%	%	%	%	%	C.E.	TS	YS	E	R	HARD	IMPACT TEST VALUE					
			0.230	1.280	0.600	0.030	0.035	0.500	0.500	0.200	0.300	0.0300													
		MAX. MIN.												655 485	250	22	35	237	Avg.	Min:	1	2	3		
CE: C+Mn/6+ (Cr+Mo+V) /5+ (Ni+Cu) /15 ≤ 0.43																									
BONNET	WCB	02C11	0.192	1.055	0.396	0.007	0.018	0.031	0.001	0.003	0.018	0.0020							0.376	505	325	32	51	163	
BONNET	WCB	03C31	0.190	1.141	0.422	0.008	0.019	0.074	0.027	0.006	0.021	0.0030							0.400	530	350	33	58	163	
BONNET	WCB	03C83	0.182	1.099	0.375	0.010	0.026	0.046	0.021	0.007	0.023	0.0020							0.379	540	350	34	57	163	
BONNET	WCB	673V0	0.182	1.079	0.388	0.007	0.028	0.025	0.009	0.001	0.011	0.0050							0.369	520	315	32	58	142	
WEDGE	WCB	877V9	0.197	1.111	0.399	0.010	0.026	0.052	0.015	0.001	0.011	0.0010							0.395	525	330	28	53	150	
WEDGE	WCB	878V6	0.190	1.105	0.406	0.007	0.024	0.088	0.020	0.001	0.016	0.0010							0.395	515	310	27	42	149	
WEDGE	WCB	878V7	0.193	1.089	0.384	0.008	0.024	0.081	0.016	0.001	0.014	0.0010							0.393	525	330	29	55	149	
WEDGE	WCB	879V4	0.207	1.089	0.379	0.010	0.032	0.062	0.024	0.001	0.014	0.0010							0.404	530	335	28	44	160	

G O O D S R E C E I P T S L I P

No. 5003787765

Page 1

Goods Receipt date: 2019.05.24
Current Date: 2019.05.24

Plant:	2031	Description:	Sunrise Oilsands
Vendor :	0011033523	Name:	WESTLUND INDUSTRIAL
Delivery Note:	77820381-01	Bill of Lading:	
GR Slip:		Header Text:	
PO:	8401373353 / 20	Telephone:	587-779-3302
Pur. group:	726 Sunrise		

Itm	Material	Description	Qty.	Un
PO Itm	Acct.assgt.	Recipient		
0001		3 300 RF GATE VLV TRIM 12 BB HWO API600		
	F 000050066467	Neil / Tracy	2	EA
00020	Sunrise TA 2019			

YARD

1-SKID

50066467

TA 2019

Issued by: Kevin Shearer S I G N A T U R E

ESTLUND INDUSTRIAL
Division of EMCO Corporation

BR#: 778 WHSE: 778

INVOICE NO. / N° DE FACTURE
77820381-01

05 MACDONALD CRESCENT
ORT McMURRAY, AB T9H 4B3
h: (780)791-7173
ax: (780)791-7196

REQUIRES BY: 12/12/19
DATE REQUIRE:
CONTACT NAME: ASAD
NOM DU CLIENT:
CONTACT NO.:
TELEPHONE:

CUSTOMER P.O. NUMBER
N° DE COMM. DU CLIENT
8401373353

DATE / TIME PRINTED
DATE / HEURE D'IMPRESSION
05/22/19 09:16 MST

GST/HST: R101626026

BILL TO / FACTURER À:

CUST. NO. / N° DU CLIENT: 613977
PHONE NO / N° TÉL: (403)750-5069

SHIP TO / EXPÉDIER À:
HUSKY ENERGY INC

PICKER # 1

This is a B/O

AA HUSKY ENERGY INC
DD
OR
RE SUNRISE OILSANDS WAREHOUSE
ES LSD 4-15-95-7-W4M
SS
SE FORT MACKAY, AB TOP 1C0

SUNRISE OILSANDS WAREHOUSE
LSD 4-15-95-7-W4M
FORT MACKAY, AB TOP 1C0

DATE / TIME ORDERED
DATE / HEURE COMMANDE
05/07/19 14:29

SPECIAL INSTRUCTIONS
DIRECTIVES SPÉCIALES

REFER

SHIPPED/EXPÉDIÉ
PPD. PORT PAYE COL. PORT DQ PPD. PORT PAYE

LN	SKU CODE	BIN LOC CASIER N°	DESCRIPTION	UOM	ORDERED COMMANDÉ	SHIPPED EXPÉDIÉ	B/O EN. SOUFF.	LIST / LISTE	%	NET
2	WA778501	Non Stoc	3 300 RF GATE VLV TRIM 12 BB HWO API600 CF8M 300RF-12NSH-CF8M Valve, Gate, PK, 3.00 Inch, Cl 300, RF, BB, CF8M Body, API Trim 12, HWO, SP Pkg, API 600, Nace NO TAG REQUESTED CAT. C TESTING **IF VALVE FAILS CAT C TESTING, ADDITONAL COSTS MAY APPLY FOR REPAIR, RETEST OR REPLACEMENT AT CUSTOMER'S EXPENSE**	EA	2	2		2140.20	NET	4280.40

[ZC6F8, ZC6F7]

STAGING AREA AIRE RÉSERVE		PIPE TUYAUX		BAGS SACS	
BOXES BOÎTES		SKIDS PALETTES		OTHER AUTRES	
TAKEN BY / ENTRÉE PAR md - Jillian MacDonald					
SALES REP. / REPRÉSENTANT 81m-Lorne McNalley		778		FREIGHT / FRET PLACED BY / PAR ASAD	
BILL OF LADING NUMBER / N° DU CONNAISSEMENT 428427		DATE PICKED / RAMASSÉ LE 05/22/19		PICKED BY / RAMASSÉ PAR B12	
WEIGHT / POIDS 0.0		VIA Velocity Exp		DATE SHIPPED / DATE EXPÉDIÉE 1	
PAGE Last Page					

SUBTOTAL 4280.40
GST/HST 214.02
TOTAL DUE 4494.42

NO RETURNS ALLOWED ON SPECIAL ORDERS WITHOUT PERMISSION / AUCUN RETOUR SUR LES COMMANDES SPÉCIALES SANS AUTORISATION

CUSTOMER'S SIGNATURE
SIGNATURE DU CLIENT
CUSTOMER'S NAME (PRINTED)
NOM DU CLIENT (IMPRIMÉ)
PACKING SLIP
BORDEREAU D'EXPÉDITION



**Universe
MACHINE**

PRESSURE TESTING REPORT

Report Number: PTR19-6845

Customer: FORUM CANADA / PRO-TECH V

Date: 5/16/2019

Cust PO: 116714

Work Order: 78273-1

Page 1 of 1

Valve Identification

Manufacturer: PK
Type: GATE VALVE
Size/Connections: 3"RF
Rating: 300 #
Model/Figure: 300RF-12SH-CF8M

Specifications

API 598 ☒
Z.245.15 ☐
API 6A ☐
API 6D ☐
Other: ☐

Test Pressure Units

PSI ☒
KPA ☐

Gauge Identification No

Calibration Due Dates

1.- UM-36	10/11/2019
2.- UM-38	10/11/2019
3.-	
4.-	

Serial Number

ACT. S/N

Body Ht ZC6F8

Bonnet Ht ZC6F7

TAG #

Quantity 2

Shell Test - High 1125@1MIN

Closure - High

Back Seat 825@1MIN

Gauge/Medium G1&G2/WATER/GLYCOL

Steam Jacket

Shell Test - Low

Closure - Low 100@1MIN

Gauge/Medium G1&G2/AIR

Leakage Right Seat (Low) 0

Leakage Left Seat (Low) 0

Leakage Right Seat (High)

Leakage Left Seat (High)

Status

Operator

3rd Party Witness

Notes:

Pass
DA *[Signature]*

MODIFIED TO CHESTERTON "1600"

REPORT NO. : 20080211-005 1 OF 1

DATE : Feb. 11, 2008

P/O NO. : 1359

ARTICLE : GATE BB RF CL300 CF8M/316(HS)

MFG. NO. : 07-00545-014

INSPECTION CERTIFICATE (CHEMICAL, PHYSICAL & HYDROSTATIC)

PK PNEUMATIC CO., LTD.

132-1 Simcheon-dong, Changwon-city, Korea
Head Office (TEL) 055-268-3777
& Factory (TEL) 055-268-3777
FAX 055-268-2381
Homepage: http://www.pneumatic.co.kr
E-mail: jina.kim@pneumatic.co.kr

SIZE : TAG NO : TNC-1359-014
NPS 3 Qty : 13 Pcs.

PARTS NAME	Body(BD)	Disc(DS)	Body Sealing	Stem
MATERIAL	ASTM A351-CF8M	ASTM A351-CF8M	A240-316	A479-316

DIMENSION INSPECTION (ASME B16.34 & APPROVED DRAWING)					PRESSURE TEST (API 598)					VISUAL TEST	
INSPECTION	Face to Face (End to End)	Flange Diameter	Bolt Circle	Dia. of Raised Face	Flange Thickness	No. of Bolt Hole	Bolt Hole Diameter	SHELL (PSIG)	SEAT(AIR) (PSIG)	BACK SEAT (PSIG)	VISUAL
STANDARD	282.4	210.0	168.1	127.0	28.5	8	22.4	1100	80	795	GOOD
RESULT	W.T	W.T	W.T	W.T	W.T	W.T	W.T	GOOD	GOOD	GOOD	GOOD

PARTS		CHEMICAL COMPOSITION (MAX. %) (ASTM STD)														TENSION TEST (MIN.) (ASTM)				HARDNESS		REMARK
HEAT NO.	QTY	C	SI	Mn	P	S	Ni	Cr	Mo							T.S (N/mm ²)	Y.P (N/mm ²)	EL %	RA %			
STANDARD	A351 CF8M	0.08	1.50	1.50	0.040	0.040	9.00	18.00	2.00							485	205	39.0				
ZC6F8	BODY	0.07	1.03	1.12	0.028	0.011	10.10	19.90	2.24							579	315	49.0				
ZC6F9	BODY	0.06	1.06	1.17	0.023	0.012	10.30	19.92	2.22							576	319	52.0				
ZBK F1	BONNET	0.06	1.01	1.16	0.026	0.013	10.50	19.82	2.19							581	315	51.0				
ZC6F7	BONNET	0.06	1.06	1.11	0.021	0.013	10.90	19.94	2.23							576	319	55.0				
H29	DISC	0.06	0.72	0.90	0.024	0.017	9.60	19.70	2.20							539	238	51.2				
H87	DISC	0.06	1.05	1.16	0.024	0.017	10.40	19.91	2.29							580	319	54.9				
H49	DISC	0.05	1.01	1.11	0.024	0.012	10.10	19.93	2.28							580	320	49.0				

BLANK

REMARKS : IN ACCORDANCE WITH EN 10204 3.1
HEAT TREATMENT : CF8M : SOLUTION 1060 °C X 2HR(W.C)
BODY SEATING : WELDING FACED WITH STELLITE
CE MARKED AS PER THE PED 97/23/EC

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

Manager, Q.C Department J S - Moon
Witness Inspector

REPORT#: 50935

MT ☐

LT ☒

VT ☐

Date: May 16, 2019
Client: Universe Machine Corp.
Location: Rivest Technologies Inc.
Examination Standard: ASME V Art. 6 & 9
Acceptance Standard: MSS-SP-93 & MSS-SP-55
Description: Qty. (2) - 3" 300# PK Gate Valve Bodies & Bonnets

Page 1 of 1

JOB #: 50935
P.O. #: 90038
W.O. #: 78273-1

EXAMINATION CONDITIONS: ☐ As Welded ☒ Base Metal ☐ As Ground ☒ Machined ☐ Painted ☐ Shot Blasted Inspection Temp: 15°C

Minimum Light Requirements: Fluorescent = Blacklight min 1000uW/cm2 Visible = Visible Light: min100fc @ exam surface

EQUIPMENT	SERIAL NO.	MPI TECHNIQUE	LPI TECHNIQUE	TEST MEDIUM
☐ Hand Yoke		☐ AC	☒ Water Washable	☒ Penetrant: Magnaflex SKL-WP2
☐ Blacklight	<u>Spectroline BIB 150P</u>	☐ DC	☐ Solvent Removable	☒ Developer: Magnaflex SKD S2
☒ Intensity Meter	<u>Spectroline XR-1000 SN:1821145</u>	☐ Continuous	Dwell Time <u>10</u> min	☐ Cleaner:
Calibrated / Due:	<u>Meter: 9/13/18, 9/13/19</u> Daily Check ☒	☐ Residual	Develop Time <u>10</u> min	☐
Rivest Procedure:	<u>LT1</u> Revision: <u>0</u> Lighting: <u>LED</u>		Interpretation Time <u>10</u> min	Batch #:

Examination:

Visual and liquid penetrant examinations were performed on all accessible areas on the following:

Qty. (2) - 3" 300# PK Gate Valve Bodies & Bonnets

2 x Body #: ZC6F8

2 x Bonnet #: ZC6F7

RESULTS:

No relevant indications were found at time of examination.

Valves are acceptable to the above standards.

This Certificate or Report is valid only for that work which was specifically requested. The company is not responsible for any views or opinions expressed by employees performing this work which fall outside the contract terms or reference. All Certificates and/or Reports are the result of work performed in conformance with applicable specifications and standards to the best of our ability and intent. However, the Company will not be responsible for deviation within the normal limits of accuracy in accordance with the standard practices. Final Code Acceptance shall require Client and Manufacturer Representative's signatures.

A.M.		P.M.		TOTAL HOURS	KMS	SUBSISTENCE		CONSUMABLES
TIME IN	TIME OUT	TIME IN	TIME OUT	S.T. hrs		MAN DAY	OT/MEALS	
				O.T. hrs				

Interpretation is done in accordance with the specified standard, to the best of my professional ability.

Technician Daryl Rivest *Daryl Rivest* SNT/CGSB Level II Cert # 6202 Assistant

The above interpretation is a professional opinion, final interpretation is the responsibility of the client.

Client Representative (Print): Rose Kleransk Sign: Rose Date: May 16, 2019

Date: May 15, 2019
Client: Universe Machine Corp.
Location: Rivest Technologies Inc.

JOB #: 50935
P.O. #: 90038
Description: Qty. (2) - 3" 300# PK Gate Valve Bodies & Bonnets

Page 1 of 1

DEFECT LEGEND														SEVERITY				PROCEDURES				CODE LEGEND																			
IF - INCOMPLETE FUSION IP - INCOMPLETE PENETRATION UC - UNDERCUTTING S - SLAG/SAND														P - POROSITY BT - BURN THROUGH IC - INTERNAL CONCAVITY LC - LOW COVER				HB - HOLLOW BEAD C - CRACK AB - ARC BURNS SH - SHRINKAGE				AS PER ASTM E446 Radiographs				RT1 - contact RT2 - offset contact RT3 - elliptical RT4 - superimposed				RT5 - internal RT6 - offset internal RT7 - film internal				1 - ASME B31.3 NORMAL 2 - ASME B31.3 SEVERE 3 - ASME VIII DIV 1 UW51 4 - ASME VIII DIV 1 UW52				5 - ASME B16.34 6 - MSS-SP-54 7 - GP 29-03-02 8 - SCL L37 Cat.3			
	FILM NO.	LOCATION	DIA.	THK.	SOD	SYM	IF	IP	IC	UC	S	P	SH		PROC #	CODE #	✓	REMARKS	X																						
1																		WO#: 78273-1																							
2																																									
3																		Body Ht#: ZC6F8																							
4	V1																	Bonnet Ht#: ZC6F7																							
5	X1	Body	3"	300#	24"						1		3		4	5/6	✓																								
6	X2	Body	3"	300#	24"						1		3		4	5/6	✓																								
7	X3	Bonnet	3"	300#	21"										7	5/6	✓																								
8																																									
9																		Body Ht#: ZC6F8																							
10	V2																	Bonnet Ht#: ZC6F7																							
11	X1	Body	3"	300#	24"							1	2		4	5/6	✓																								
12	X2	Body	3"	300#	24"										4	5/6	✓																								
13	X3	Bonnet	3"	300#	21"										7	5/6	✓																								
14																																									
15																																									
16																																									
17																																									
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25																																									
26																																									
27																																									
28																																									

No. Of Exp.	Film Brand & Design	Screen Type & Thickness	No. of Film per Cassette	Type of Energy	Physical Size	Material	OFD	IQI	
								Type	Size
10	Kodak	0.010" Pb	1	IRI92	0.12"	P1	300#	ASTM	B

This Certificate or Report is valid only for that work which was specifically requested. The company is not responsible for any views or opinions expressed by employees performing this work which fall outside the contract terms or reference. All Certificates and/or Reports are the result of work performed in conformance with applicable specifications and standards to the best of our ability and intent. However, the Company will not be responsible for deviation within the normal limits of accuracy in accordance with the standard practices. Final Code Acceptance shall require Client and Manufacturer Representative's signatures.

A.M.		P.M.		TOTAL HOURS	KMS	SUBSISTENCE		FILM
TIME IN	TIME OUT	TIME IN	TIME OUT	S.T. hrs		MAN DAY	OT/MEALS	4 - 14" x 17"
				O.T. hrs				6 - 70 x 220mm

Film Interpretation is done in accordance with the specified code, to the best of my professional ability.

Radiographer: Daryl Rivest

Daryl Rivest

SNT/CGSB Level II CGSB # 6202

Assistant Nick

The above interpretation is a professional opinion, final film interpretation is the responsibility of the client.

I am in full agreement with the contents of this report and accept receipt of the associated film. Client Representative:

Rose Krezanoski

G O O D S R E C E I P T S L I P

No. 5003591492

Page 1

Goods Receipt date: 2019.02.18
Current Date: 2019.02.18

Plant:	2031	Description:	Sunrise Oilsands
Vendor :	0011033523	Name:	WESTLUND INDUSTRIAL
Delivery Note:	77819066-00	Bill of Lading:	
GR Slip:		Header Text:	
PO:	8401352606 / 20	Telephone:	587-779-3302
Pur. group:	726 Sunrise		

Itm	Material	Description	Qty.	Un
PO Itm	Acct.assgt.	Recipient		
0001		3 600 RF GATE VLV TRIM 12 BB OS&Y WCB		
	F 000060574136	/ D-TSyed Hassan	4	EA
00010	TA2019			
0002		2 600 RF GATE VLV TRIM 12 BB OS&Y WCB		
	F 000060574136	/ D-TSyed Hassan	4	EA
00020	TA2019			

60574136

TA 2019.

1 Pallet

Issued by: Chetan Chetankumar S I G N A T U R E

YARD

WESTLUND INDUSTRIAL
A Division of EMCO Corporation

BR#: 778 WHSE: 778

INVOICE NO. / N° DE FACTURE
77819066-00

205 MACDONALD CRESCENT
FORT MCMURRAY, AB T9H 4B3
Ph: (780)791-7173
Fax: (780)791-7196

REQUIRES BY: 12/12/19
DATE REQUISE:
CONTACT NAME: MAHER
NOM DU CLIENT:
CONTACT NO.:
TÉLÉPHONE:

CUSTOMER P.O. NUMBER
N° DE COMM. DU CLIENT
8401352606

GST/HST: R101626026

DATE / TIME PRINTED
DATE / HEURE D'IMPRESSION
02/12/19 10:13 MST

BILL TO / FACTURER À:

PICKER # 1

CUST. NO. / N° DU CLIENT: 613977
PHONE NO. / N° TÉL: (403)750-5069

SHIP TO / EXPÉDIER À:
HUSKY ENERGY INC

HUSKY ENERGY INC
SUNRISE OILSANDS WAREHOUSE
LSD 4-15-95-7-W4M
FORT MACKAY, AB TOP 1CO

SUNRISE OILSANDS WAREHOUSE
LSD 4-15-95-7-W4M
FORT MACKAY, AB TOP 1CO

DATE / TIME ORDERED
DATE / HEURE COMMANDE
02/08/19 14:14

SHIPPED/EXPÉDIÉ

**SPECIAL INSTRUCTIONS
DIRECTIVES SPÉCIALES**

REFER

PPD / PORT PAYÉ
COL / PORT DO
PPD / PORT PAYÉ/DO

LN	SKU CODE	BIN LOC CASIER N°	DESCRIPTION	UOM	ORDERED COMMANDE	SHIPPED EXPÉDIÉ	B/O EN. SOUFF.	LIST / LISTE	%	NET
1	VD778364	Non Stoc	2 600 RF GATE VLV TRIM 12 BB OS&Y WCB NEWAY 2G6RA12-NC-ULE1 CAT. A TESTING INCL. TAG: GA-611-S	EA	4	4		872.80	NET	3491.20
2	VD778366	Non Stoc	3 600 RF GATE VLV TRIM 12 BB OS&Y WCB NEWAY 3GRA12-NC-ULE1 CAT. A TESTING INCL. TAG: GA-611-S	EA	4	4		1343.70	NET	5374.80
★ SN Heat #S 10016172-510-33 [534V7,03C83] ✓ " - " - 58 [75V50,03C83] ✓ " - " - 20 [699V7,03C83] ✓ " - " - 59 [521V5,02C11] ✓ 10016172-760-4 [226V5,0V443] ✓ " - " - 8 [119V2,0V443] ✓ " - " - 10 [283V8,7593k] ✓ " - " - 27 [233V5,604V0] ✓										

RECEIVED FEB 17 2019

Chetom

STAGING AREA / AIRE RÉSERVÉ
PIPE / TUYAUX
BAGS / SACS
BOXES / BOÎTES
SKIDS / PALETTES
CRATES / CAGEOT
OTHER / AUTRES

TAKEN BY / ENTRÉE PAR
jmd - Jillian MacDonald
SALES REP. / REPRÉSENTANT
Jim-Lorne McAlley 778
FREIGHT / FRET
PLACED BY / PAR
MAHER

SUBTOTAL 8866.00
GST/HST 443.30
TOTAL DUE 9309.30

BILL OF LADING NUMBER / N° DU CONNAISSEMENT 988042
DATE PICKED / RAMASSE LE 02/12/19
PICKED BY / RAMASSE PAR BB
WEIGHT / POIDS 0.0
VIA Velocity Exp
DATE SHIPPED / DATE EXPÉDIÉE
PAGE 1 Last Page

NO RETURNS ALLOWED ON SPECIAL ORDERS WITHOUT PERMISSION / AUCUN RETOUR SUR LES COMMANDES SPÉCIALES SANS AUTORISATION

CUSTOMER'S SIGNATURE / SIGNATURE DU CLIENT
CUSTOMER'S NAME (PRINTED) / NOM DU CLIENT (IMPRIMÉ)

**PACKING SLIP
BORDEREAU D'EXPÉDITION**

JW NEWAY		MATERIAL TEST REPORT EN 10204-2004 Type 3.1				TC No. 10016172-760(80695756) DATE: 2018.11.06 PAGE: 1 OF 11			
CUSTOMER:		QTY.	PART NO.	PRODUCT CODE	PRODUCT DESCRIPTION				
		40	11472241	3G6RA12-NC-ULE1	3G6R,C00/12 [-NVL,-B7M/2HM] ASTM A216 WCB, TRIM F316/HF GATE VALVE, 3 INCH, CLASS 600, RAISED FACE END				
PO NO.:	76	PRESSURE TEST (MPa/PSI)			OTHER INSPECTION				
ITEM NO.:		HYDROSTATIC		PNEUM	RESULT	VISUAL	DIMENSION	OPERATION	MARKING
PROJECT:	N/A	SHELL	SEATS/BACKSEAT	SEATS	Accepted	Accepted	Accepted	Accepted	Accepted
PROJECT NO.:	N/A	15.4/2233	11.3/1638	0.6/87					
APPLICABLE STANDARDS AND SPECIFICATION - P/T RATING: ASME B16.34 - MAIN MATERIAL: RELEVANT ASTM STANDARD - DESIGN: API600 ASME B16.34 - TEST: API598 EN12266 - TRIM MATERIAL (SEAT/STEM) AND BOLTING ARE ACCORDING TO THE P.O. AND MATERIAL SPECIFICATION - VALVES CONFORM TO NACE MR0175/MR0103 LATEST REVISION - NOTE: ALL RELATED STANDARDS ARE THE LATEST VERSION UNLESS SPECIFIED BY PURCHASE ORDER.									
WITNESSED BY: _____ We hereby certify that the valves listed above are manufactured and tested in accordance with the requirements of valve standard and purchase order. NEWAY VALVE Q.C. Manager <i>Judy Qiao</i>									
Address: NO. 666 TaiShan Road Suzhou New District China Tel : 86-512-666-51365 Fax: 86-512-666-51360 http://www.newayvalve.com									

MATERIAL TEST REPORT EN 10204-2004 Type 3.1

TC No. 10016172-760(80695756)
DATE: 2018.11.06
PAGE: 2 OF 11

PRODUCT TRACEABILITY TABLE

SERIAL NO.	MATERIAL CODE AND HEAT NO.				TAG NO.	MATERIAL CODE AND HEAT NO.				TAG NO.
	BODY		BONNET			WEDGE/DISC		WEDGE/DISC		
	WCB		WCB			WCB		WCB		
10016172-760-1	117V0	9900K	5129A	/	10016172-760-2	119V3	0V548	4199A	/	
10016172-760-3	091V9	0V363	5129A	/	10016172-760-4	226V5	0V443	5129A	/	
10016172-760-5	117V0	233V5	23C70	/	10016172-760-6	46C35	730V1	23C70	/	
10016172-760-7	119V2	7593K	5129A	/	10016172-760-8	119V2	0V443	5129A	/	
10016172-760-9	233V4	0115X	5129A	/	10016172-760-10	283V8	7593K	5129A	/	
10016172-760-11	222V0	233V4	5129A	/	10016172-760-12	283V8	221V9	5129A	/	
10016172-760-13	219V6	0V386	5129A	/	10016172-760-14	221V9	0V548	5129A	/	
10016172-760-15	117V0	0V307	5129A	/	10016172-760-16	226V6	0V444	5129A	/	
10016172-760-17	222V0	219V5	5129A	/	10016172-760-18	119V3	089V3	23C70	/	
10016172-760-19	119V2	0V386	5129A	/	10016172-760-20	226V5	0V240	5129A	/	
10016172-760-21	744V8	221V9	5129A	/	10016172-760-22	226V6	470V0	5129A	/	
10016172-760-23	744V8	0V593	5129A	/	10016172-760-24	744V8	0V443	5129A	/	
10016172-760-25	233V4	58V75	5129A	/	10016172-760-26	119V2	224V4	5129A	/	
10016172-760-27	233V5	604V0	5129A	/	10016172-760-28	233V4	59V85	5129A	/	
10016172-760-29	091V9	219V5	5129A	/	10016172-760-30	098V5	233V4	5129A	/	



MATERIAL TEST REPORT

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PRODUCT TRACEABILITY TABLE

SERIAL NO.	MATERIAL CODE AND HEAT NO.				TAG NO.	MATERIAL CODE AND HEAT NO.				TAG NO.			
	BODY		BONNET			WEDGE/DISC		WEDGE/DISC					
	WCB		WCB			WCB		WCB					
10016172-760-31	119V2		49V22		5129A	/	10016172-760-32	283V8		470V0		5129A	/
10016172-760-33	222V0		741V1		5129A	/	10016172-760-34	233V4		221V9		5129A	/
10016172-760-35	119V3		224V4		5129A	/	10016172-760-36	098V5		233V5		5129A	/
10016172-760-37	744V9		0V386		5129A	/	10016172-760-38	744V9		9900K		5129A	/
10016172-760-39	744V8		0V444		5129A	/	10016172-760-40	098V5		0V307		5129A	/



MATERIAL TEST REPORT

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MATERIAL COMPONENTS AND PROPERTIES

Material	Heat treatment	Temp °C (°F)	Holding time (h)	Cooling media	Furnace
2HM	QUENCH	>= 850 (1562 F)	1H/25MM, >= 1H	OIL	ELECTRIC
2HM	TEMPER	>= 620 (1148 F)	1H/25MM, >= 1H	AIR	ELECTRIC

We hereby certify that the material are manufactured, inspected and tested in accordance with the material specification and purchase order requirements.

PART NAME	MATERIAL	HEAT NO.	CHEMICAL ANALYSIS												MECHANICAL PROPERTIES						
			C %	Mn %	Si %	S %	P %							TS MPa	YS MPa	E %	R %	HARD HB	IMPACT TEST VALUE TEMP °C:		
																			Avg.	Min.	
																				1	2
		MAX. MIN.	1.000 0.400	0.400 0.050	0.050 0.040												235 159				
NUT	2HM	HIA0022	0.430	0.530	0.180	0.009	0.018											195			



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Material	Heat treatment	Temp°C(°F)	Holding time(h)	Cooling media	Furnace
A105W	NORMALIZE	850-920 (1562-1688 F)	1H/25MM, >=1H	AIR	ELECTRIC FURNACE
We hereby certify that the material are manufactured, inspected and tested in accordance with the material specification and purchase order requirements.					

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PART NAME	MATERIAL	HEAT NO.	CHEMICAL ANALYSIS													MECHANICAL PROPERTIES												
			C %	Mn %	Si %	S %	P %	Cr %	Ni %	Mo %	Cu %	V %			C.E. %	TS MPa	YS MPa	E %	R %	HARD HB	IMPACT TEST VALUE TEMP °C:							
		MAX. MIN.	0.350	1.050	0.350	0.040	0.035	0.300	0.400	0.120	0.400	0.0800																
CE: C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15≤0.43																												
SEAT RING	AI05N	QC53101	0.190	0.970	0.230	0.013	0.023	0.090	0.040	0.001	0.040	0.0010					0.375	528	315	42	61	169						



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MATERIAL COMPONENTS AND PROPERTIES

Material	Heat treatment	Temp.°C (°F)	Holding time (h)	Cooling media	Furnace
B7M	QUENCH	>=850 (1562 F)	1H/25MM, >=1H	OIL	ELECTRIC
B7M	TEMPER	>=620 (1148 F)	1H/25MM, >=1H	AIR	ELECTRIC

We hereby certify that the material are manufactured, inspected and tested in accordance with the material specification and purchase order requirements.

CHEMICAL ANALYSIS

MECHANICAL PROPERTIES

[illegible][illegible]



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DATE: 2018.11.06
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MATERIAL COMPONENTS AND PROPERTIES

Material	Heat treatment	Temp °C (°F)	Holding time (h)	Cooling media	Furnace
F316	SOLUTION	Δ = 1040 (1904 F)	1H/25MM, >=1H	WATER	ELECTRIC

We hereby certify that the material are manufactured, inspected and tested in accordance with the material specification and purchase order requirements.

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PART NAME	MATERIAL	HEAT NO.	CHEMICAL ANALYSIS										MECHANICAL PROPERTIES						
			C	Mn	Si	S	P	Cr	Ni	Mo	N	TS	YS	E	R	HARD	IMPACT TEST VALUE TEMP °C:		
			%	%	%	%	%	%	%	%	%	MPa	MPa	%	%	HB			
		MAX. MIN.	0.080	2.000	1.000	0.030	0.045	18.00	14.00	3.000	0.100						Avg. Min:		
								16.00	10.00	2.000		515	205	30	50	237		1	2

[illegible]



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MATERIAL COMPONENTS AND PROPERTIES

Material	Heat treatment	Temp°C(°F)	Holding time(h)	Cooling media	Furnace
WCB	NORMALIZE	920-940 (1688-1724 F)	1H/25MM, >=1H	AIR	GAS

We hereby certify that the material are manufactured, inspected and tested in accordance with the material specification and purchase order requirements.

PART NAME	MATERIAL	HEAT NO.	CHEMICAL ANALYSIS											MECHANICAL PROPERTIES											
			C	Mn	Si	S	P	Cr	Ni	Mo	Cu	V			C.E.	TS	YS	E	R	HARD	IMPACT TEST VALUE				
			%	%	%	%	%	%	%	%	%	%	%		%	MPa	MPa	%	%	HB	TEMP °C:				
		MAX.	0.230	1.280	0.600	0.030	0.035	0.500	0.500	0.200	0.300	0.0300				655	250	22	35	237	Avg.	1	2	3	
		MIN.														485					Min:				
CE: C+Mn/6+ (Cr+Mo+V)/5+ (Ni+Cu)/15≤0.43																									
BODY	WCB	091V9	0.194	1.095	0.404	0.010	0.025	0.048	0.020	0.001	0.012	0.0040				0.389	525	330	29	49	146				
BODY	WCB	098V5	0.189	1.146	0.385	0.008	0.022	0.030	0.018	0.001	0.011	0.0020				0.389	530	335	27	50	143				
BODY	WCB	117V0	0.188	1.088	0.382	0.009	0.021	0.016	0.001	0.001	0.009	0.0010				0.374	535	340	29	52	154				
BODY	WCB	119V2	0.197	1.095	0.389	0.008	0.022	0.012	0.001	0.001	0.011	0.0010				0.383	540	345	31	43	157				
BODY	WCB	119V3	0.197	1.131	0.418	0.008	0.022	0.024	0.016	0.001	0.008	0.0020				0.393	525	335	36	53	141				
BODY	WCB	219V6	0.206	1.179	0.443	0.009	0.024	0.003	0.001	0.001	0.009	0.0010				0.404	530	340	30	56	145				
BODY	WCB	221V9	0.199	1.084	0.397	0.009	0.023	0.002	0.001	0.001	0.008	0.0010				0.381	540	360	29	49	152				
BODY	WCB	222V0	0.183	1.111	0.361	0.006	0.024	0.007	0.006	0.001	0.010	0.0010				0.371	510	335	32	53	146				
BODY	WCB	226V5	0.187	1.063	0.377	0.007	0.022	0.004	0.005	0.001	0.009	0.0010				0.366	505	335	35	50	145				
BODY	WCB	226V6	0.199	1.093	0.387	0.008	0.024	0.001	0.001	0.001	0.006	0.0010				0.382	520	340	25	50	145				
BODY	WCB	233V4	0.196	1.139	0.414	0.008	0.020	0.014	0.001	0.001	0.006	0.0010				0.390	525	330	33	59	154				

MATERIAL COMPONENTS AND PROPERTIES			CHEMICAL ANALYSIS										MECHANICAL PROPERTIES							
PART NAME	MATERIAL	HEAT NO.	C	Mn	Si	S	P	Cr	Ni	Mo	Cu	V	C.E.	TS	YS	E	R	HARD	IMPACT TEST VALUE	
		MAX.	0.230	1.280	0.600	0.030	0.035	0.500	0.500	0.200	0.300	0.0300		655	250	22	35	237	TEMP °C:	
		MIN.												485					Avg.	
																			1	
																			2	
																			3	
CE: C+Mn/6+ (Cr+Mo+V) /5+ (Ni+Cu) /15 ≤0.43																				
BODY	WCB	233V5	0.196	1.108	0.422	0.011	0.027	0.010	0.001	0.001	0.012	0.0010		0.384	520	330	29	54	145	
BODY	WCB	283V8	0.197	1.185	0.455	0.008	0.021	0.018	0.008	0.001	0.014	0.0010		0.400	530	340	32	50	151	
BODY	WCB	46C35	0.192	1.118	0.374	0.007	0.018	0.044	0.021	0.006	0.022	0.0030		0.392	550	355	31	52	159	
BODY	WCB	744V8	0.182	1.108	0.393	0.007	0.025	0.019	0.002	0.001	0.004	0.0050		0.372	515	340	32	52	163	
BODY	WCB	744V9	0.187	1.137	0.418	0.008	0.026	0.020	0.006	0.001	0.004	0.0050		0.382	520	330	30	54	151	
BONNET	WCB	0115X	0.185	1.108	0.408	0.004	0.024	0.044	0.021	0.004	0.022	0.0050		0.383	570	370	30	62	179	
BONNET	WCB	089V3	0.203	1.148	0.438	0.007	0.021	0.029	0.020	0.001	0.014	0.0010		0.403	525	340	31	55	152	
BONNET	WCB	0V240	0.201	1.130	0.455	0.008	0.028	0.067	0.036	0.001	0.013	0.0010		0.406	530	350	28	52	159	
BONNET	WCB	0V307	0.193	1.122	0.451	0.010	0.031	0.068	0.038	0.001	0.014	0.0010		0.397	510	330	30	52	154	
BONNET	WCB	0V363	0.194	1.039	0.416	0.009	0.031	0.060	0.025	0.001	0.011	0.0040		0.383	515	315	30	51	147	
BONNET	WCB	0V386	0.200	1.168	0.475	0.010	0.028	0.054	0.026	0.001	0.020	0.0010		0.409	520	345	32	56	156	

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Material	Heat treatment	Temp°C(°F)	Holding time(h)	Cooling media	Furnace
WCB	NORMALIZE	920-940 (1688~1724 F)	1H/25MM, >=1H	AIR	GAS

We hereby certify that the material are manufactured, inspected and tested in accordance with the material specification and purchase order requirements.



MATERIAL TEST REPORT

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MATERIAL COMPONENTS AND PROPERTIES

Material	Heat treatment	Temp °C (°F)	Holding time (h)	Cooling media	Furnace
WCB	NORMALIZE	920-940 (1688-1724 F)	1H/25MM, >=1H	AIR	GAS

We hereby certify that the material are manufactured, inspected and tested in accordance with the material specification and purchase order requirements.

PART NAME	MATERIAL	HEAT NO.	CHEMICAL ANALYSIS										MECHANICAL PROPERTIES					
			C	Mn	Si	S	P	Cr	Ni	Mo	Cu	V	C.E.	TS	YS	E	R	HARD
			%	%	%	%	%	%	%	%	%	%	%	MPa	MPa	%	%	HB
		MAX.	0.230	1.280	0.600	0.030	0.035	0.500	0.500	0.200	0.300	0.0300		655	250	22	35	237
		MIN.												485				
CE: C+Mn/6+ (Cr+Mo+V) / 5+ (Ni+Cu) / 15 ≤ 0.43																		
BONNET	WCB	0V443	0.207	1.155	0.442	0.011	0.031	0.055	0.021	0.001	0.020	0.0010		525	335	29	55	160
BONNET	WCB	0V444	0.200	1.140	0.440	0.009	0.029	0.056	0.017	0.001	0.013	0.0010		510	325	33	55	156
BONNET	WCB	0V548	0.191	1.099	0.422	0.007	0.029	0.067	0.017	0.001	0.013	0.0010		530	345	33	54	152
BONNET	WCB	0V593	0.195	1.071	0.461	0.007	0.027	0.061	0.018	0.001	0.014	0.0010		545	340	27	43	156
BONNET	WCB	219V5	0.202	1.099	0.405	0.008	0.025	0.010	0.005	0.001	0.010	0.0010		505	320	32	54	149
BONNET	WCB	221V9	0.199	1.084	0.397	0.009	0.023	0.002	0.001	0.001	0.008	0.0010		540	360	29	49	152
BONNET	WCB	224V4	0.187	1.100	0.401	0.007	0.024	0.005	0.004	0.001	0.005	0.0010		505	335	34	57	145
BONNET	WCB	233V4	0.196	1.139	0.414	0.008	0.020	0.014	0.001	0.001	0.006	0.0010		525	330	33	59	154
BONNET	WCB	233V5	0.196	1.108	0.422	0.011	0.027	0.010	0.001	0.001	0.012	0.0010		520	330	29	54	145
BONNET	WCB	470V0	0.178	1.110	0.424	0.007	0.029	0.034	0.027	0.001	0.007	0.0040		515	350	32	53	145
BONNET	WCB	49V22	0.204	1.158	0.460	0.010	0.025	0.055	0.039	0.001	0.012	0.0010		525	345	30	52	142



MATERIAL TEST REPORT

EN 10204-2004 Type 3.1

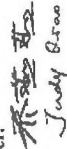
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DATE: 2018.11.06
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MATERIAL COMPONENTS AND PROPERTIES

Material	Heat treatment	Temp°C(°F)	Holding time(h)	Cooling media	Furnace
WCB	NORMALIZE	920-940 (1688-1724 F)	1H/25MM. >=1H	AIR	GAS

We hereby certify that the material are manufactured, inspected and tested in accordance with the material specification and purchase order requirements.

PART NAME	MATERIAL	HEAT NO.	CHEMICAL ANALYSIS											MECHANICAL PROPERTIES											
			C	Mn	Si	S	P	Cr	Ni	Mo	Cu	V													
			%	%	%	%	%	%	%	%	%	%	%		C.E.	TS	YS	E	R	HARD	IMPACT TEST VALUE				
		MAX.	0.230	1.280	0.600	0.030	0.035	0.500	0.500	0.200	0.300	0.0300				655	250	22	35	237	Avg.	1	2	3	
		MIN.														485					Min:				
CE: C+Mn/6+ (Cr+Mo+V) /5+ (Ni+Cu) /15 ≤ 0.43																									
BONNET	WCB	58V75	0.188	1.155	0.445	0.010	0.025	0.021	0.005	0.001	0.012	0.0010				0.386	525	340	28	53	145				
BONNET	WCB	59V85	0.203	1.101	0.403	0.008	0.023	0.017	0.006	0.001	0.009	0.0010				0.391	525	330	35	56	147				
BONNET	WCB	604V0	0.187	1.079	0.416	0.006	0.025	0.001	0.001	0.001	0.001	0.0040				0.368	520	315	31	56	151				
BONNET	WCB	730V1	0.190	1.170	0.396	0.006	0.025	0.003	0.001	0.001	0.001	0.0050				0.387	535	345	31	52	154				
BONNET	WCB	741V1	0.185	1.098	0.433	0.005	0.026	0.043	0.001	0.001	0.007	0.0050				0.378	510	315	30	52	153				
BONNET	WCB	7593K	0.185	1.125	0.410	0.006	0.021	0.050	0.027	0.004	0.024	0.0070				0.388	520	360	34	60	143				
BONNET	WCB	9900K	0.194	1.140	0.437	0.009	0.029	0.051	0.036	0.001	0.015	0.0010				0.398	520	330	31	43	158				
WEDGE	WCB	23C70	0.180	1.196	0.370	0.008	0.020	0.055	0.023	0.013	0.018	0.0060				0.397	515	345	33	55	156				
WEDGE	WCB	4199A	0.192	0.800	0.417	0.018	0.020	0.051	0.020	0.010	0.010	0.0010				0.340	526	319	25	46	166				
WEDGE	WCB	5129A	0.201	0.841	0.463	0.014	0.020	0.044	0.022	0.010	0.016	0.0010				0.355	525	340	26	53	169				

		MATERIAL TEST REPORT EN 10204-2004 Type 3.1				TC No. 10016172-510(80695756) DATE: 2018.11.06 PAGE: 1 OF 10	
CUSTOMER:		QTY.	PART NO.	PRODUCT CODE	PRODUCT DESCRIPTION		
		56	11442466	2G6RA12-NC-ULE1	2G6R,C00/12 [-NV1,-B7M/2HM] ASTM A216 WCB, TRIM F316/HF GATE VALVE, 2 INCH, CLASS 600, RAISED FACE END		
PO NO.:		PRESSURE TEST (MPa/PSI)			OTHER INSPECTION		
ITEM NO.:		HYDROSTATIC		PNEUM	RESULT	VISUAL	DIMENSION
				SEATS/BACKSEAT	SEATS	Accepted	Accepted
PROJECT:		SHELL		15.4/2233	11.3/1638	Accepted	Accepted
PROJECT NO.:		N/A		N/A			
APPLICABLE STANDARDS AND SPECIFICATION - P/T RATING: ASME B16.34 - MAIN MATERIAL: RELEVANT ASTM STANDARD - DESIGN: API600 ASME B16.34 - TEST: API598 EN12266 - TRIM MATERIAL (SEAT/STEM) AND BOLTING ARE ACCORDING TO THE P.O. AND MATERIAL SPECIFICATION - VALVES CONFORM TO NACE MR0175/MR0103 LATEST REVISION - NOTE: ALL RELATED STANDARDS ARE THE LATEST VERSION UNLESS SPECIFIED BY PURCHASE ORDER.							
WITNESSED BY: _____		We hereby certify that the valves listed above are manufactured and tested in accordance with the requirements of valve standard and purchase order.  NEWAY VALVE Q.C. Manager					

MATERIAL TEST REPORT

EN 10204-2004 Type 3.1

TC No. 10016172-510(80695756)
DATE: 2018.11.06
PAGE: 2 OF 10

PRODUCT TRACEABILITY TABLE

SERIAL NO.	MATERIAL CODE AND HEAT NO.				TAG NO.	SERIAL NO.	MATERIAL CODE AND HEAT NO.				TAG NO.				
	BODY		BONNET				WEDGE/DISC		BODY			BONNET		WEDGE/DISC	
	WCB		WCB				WCB		WCB			WCB		WCB	
10016172-510-1	537V2		02C11		879V4	/	10016172-510-2	592V1		01C44		877V9	/		
10016172-510-4	75V62		00C16		878V6	/	10016172-510-5	537V2		03C31		878V6	/		
10016172-510-6	560V5		03C31		878V7	/	10016172-510-7	537V2		03C83		878V6	/		
10016172-510-8	560V5		00C16		878V7	/	10016172-510-9	699V7		01C44		878V7	/		
10016172-510-10	524V0		03C83		878V7	/	10016172-510-11	679V7		03C31		877V9	/		
10016172-510-12	679V7		00C16		877V9	/	10016172-510-13	606V1		01C91		877V9	/		
10016172-510-14	562V7		01C44		878V6	/	10016172-510-15	537V2		00C16		878V7	/		
10016172-510-16	592V1		00C60		878V7	/	10016172-510-17	75V50		01C44		878V7	/		
10016172-510-18	510V1		03C83		878V7	/	10016172-510-20	699V7		03C83		878V7	/		
10016172-510-22	551V2		03C83		878V6	/	10016172-510-23	556V8		673V0		878V7	/		
10016172-510-24	521V5		00C60		878V7	/	10016172-510-25	670V6		00C60		878V7	/		
10016172-510-26	75V50		03C83		878V6	/	10016172-510-27	562V7		00C60		878V6	/		
10016172-510-28	551V2		02C11		878V7	/	10016172-510-29	537V2		00C60		878V7	/		
10016172-510-30	524V0		03C83		878V7	/	10016172-510-32	551V2		03C83		878V7	/		
10016172-510-33	534V7		03C83		878V7	/	10016172-510-34	592V1		02C11		878V7	/		



MATERIAL TEST REPORT

EN 10204-2004 Type 3.1

TC No. 10016172-510(80695756)
DATE: 2018.11.06
PAGE: 3 OF 10

PRODUCT TRACEABILITY TABLE

SERIAL NO.	MATERIAL CODE AND HEAT NO.				TAG NO.	SERIAL NO.	MATERIAL CODE AND HEAT NO.				TAG NO.		
	BODY		BONNET				WEDGE/DISC		BONNET			WEDGE/DISC	
	WCB		WCB				WCB		WCB			WCB	
10016172-510-35	699V7		00C16	878V7	/	10016172-510-36	75V62		00C16	878V7	/		
10016172-510-37	75V50		00C16	878V7	/	10016172-510-38	699V7		00C16	878V7	/		
10016172-510-39	537V2		00C16	878V7	/	10016172-510-40	699V7		02C11	878V7	/		
10016172-510-41	524V0		03C31	878V7	/	10016172-510-42	592V1		02C11	878V7	/		
10016172-510-43	537V2		00C60	878V7	/	10016172-510-44	699V7		03C83	878V7	/		
10016172-510-45	679V7		03C31	878V7	/	10016172-510-46	556V8		00C16	878V7	/		
10016172-510-47	670V6		00C60	878V6	/	10016172-510-48	688V1		00C16	878V6	/		
10016172-510-49	551V2		01C91	878V6	/	10016172-510-50	521V5		03C31	878V6	/		
10016172-510-51	699V7		01C44	878V6	/	10016172-510-52	534V7		01C44	878V7	/		
10016172-510-53	562V7		03C31	878V6	/	10016172-510-54	75V62		01C91	878V6	/		
10016172-510-55	537V2		02C11	878V6	/	10016172-510-56	592V1		01C44	878V7	/		
10016172-510-57	78V45		01C44	878V6	/	10016172-510-58	75V50		03C83	878V6	/		
10016172-510-59	521V5		02C11	878V7	/	10016172-510-60	521V5		02C11	878V7	/		



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DATE: 2018.11.06
PAGE: 4 OF 10

Material	Heat treatment	Temp°C(°F)	Holding time(h)	Cooling media	Furnace
2HM	QUENCH	>= 850 (1562 F)	1H/25MM,>=1H	OIL	ELECTRIC
2HM	TEMPER	>= 620 (1148 F)	1H/25MM,>=1H	AIR	ELECTRIC
We hereby certify that the material are manufactured, inspected and tested in accordance with the material specification and purchase order requirements.					

We hereby certify that the material are manufactured, inspected and tested in accordance with the material specification and purchase order requirements.

PART NAME	MATERIAL	HEAT NO.	CHEMICAL ANALYSIS										MECHANICAL PROPERTIES							
			C %	Mn %	Si %	S %	P %						TS MPa	YS MPa	E %	R %	HARD HB	IMPACT TEST VALUE TEMP °C:		
																		Avg.	Min:	
		MAX. MIN.	0.400	1.000	0.400	0.050	0.040									235 159	1	2	3	
NUT	2HM	YHK320	0.450	0.690	0.160	0.003	0.015									220				



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DATE: 2018.11.06
PAGE: 5 OF 10

MATERIAL COMPONENTS AND PROPERTIES

Material	Heat treatment	Temp°C(°F)	Holding time(h)	Cooling media	Furnace
A105N	NORMALIZE	850-920 (1562-1688 F)	1H/25MM, >=1H	AIR	ELECTRIC FURNACE

We hereby certify that the material are manufactured, inspected and tested in accordance with the material specification and purchase order requirements.

PART NAME	MATERIAL	HEAT NO.	CHEMICAL ANALYSIS													MECHANICAL PROPERTIES							
			C %	Mn %	Si %	S %	P %	Cr %	Ni %	Mo %	Cu %	V %	C.E. %	TS MPa	YS MPa	E %	R %	HARD HB	IMPACT TEST VALUE TEMP °C:				
																			Avg.	Min:			
		MAX. MIN.	0.350 0.600	1.050 0.100	0.350 0.100	0.040	0.035	0.300	0.400	0.120	0.400	0.0800			485	250	22	30	187				
CE: C+Mn/6+ (Cr+Mo+V) /5+ (Ni+Cu) /15 ≤ 0.43																							
SEAT RING	A105N	A1001	0.200	0.920	0.220	0.011	0.016	0.170	0.080	0.030	0.200	0.0020			0.412	579	335	30	41	139			



TC No. 10016172-510(80695756)
DATE: 2018.11.06
PAGE: 6 OF 10

Material	Heat treatment	Temp °C (°F)	Holding time (h)	Cooling media	Furnace
B7M	QUENCH	>=850 (1562 F)	1H/25MM, >= 1H	OIL	ELECTRIC
B7M	TEMPER	>=620 (1148 F)	1H/25MM, >= 1H	AIR	ELECTRIC

We hereby certify that the material are manufactured, inspected and tested in accordance with the material specification and purchase order requirements.

PART NAME	MATERIAL	HEAT NO.	CHEMICAL ANALYSIS											MECHANICAL PROPERTIES								
			C %	Mn %	Si %	S %	P %	Cr %	Mo %					TS MPa	YS MPa	E %	R %	HARD HB		IMPACT TEST VALUE TEMP °C:		
																		235		Avg.	Min:	1
		MAX. MIN.	0.480 0.380	1.000 0.750	0.350 0.150	0.040	0.035	1.100 0.800	0.250 0.150								50					
BOLT	B7M	YHK101	0.390	0.770	0.200	0.006	0.014	0.936	0.164								63	225				
																		</				



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DATE: 2018.11.06
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Material	Heat treatment	Temp°C (°F)	Holding time (h)	Cooling media	Furnace
F316	SOLUTION	>= 1040 (1904 F)	1H/25MM, >=1H	WATER	ELECTRIC

We hereby certify that the material are manufactured, inspected and tested in accordance with the material specification and purchase order requirements.

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[illegible][illegible]



MATERIAL TEST REPORT

EN 10204-2004 Type 3.1

TC No. 10016172-510(80695756)
DATE: 2018.11.06
PAGE: 8 OF 10

MATERIAL COMPONENTS AND PROPERTIES

Material	Heat treatment	Temp°C(°F)	Holding time(h)	Cooling media	Furnace
WCB	NORMALIZE	920-940 (1688-1724 F)	1H/25MM, >=1H	AIR	GAS

We hereby certify that the material are manufactured, inspected and tested in accordance with the material specification and purchase order requirements.

PART NAME	MATERIAL	HEAT NO.	CHEMICAL ANALYSIS											MECHANICAL PROPERTIES													
			C	Mn	Si	S	P	Cr	Ni	Mo	Cu	V															
			%	%	%	%	%	%	%	%	%	%	%														
			0.230	1.280	0.600	0.030	0.035	0.500	0.500	0.200	0.300	0.0300						655	250	22	35	237	Avg.	Min:	1	2	3
CE: C+Mn/6+ (Cr+Mo+V) /5+ (Ni+Cu) /15 ≤ 0.43																											
BODY	WCB	510V1	0.176	1.099	0.384	0.007	0.026	0.003	0.001	0.001	0.002	0.0040						0.361	530	340	29	48	157				
BODY	WCB	521V5	0.180	1.105	0.425	0.007	0.024	0.009	0.010	0.001	0.008	0.0050						0.368	545	350	32	50	153				
BODY	WCB	524V0	0.181	1.134	0.425	0.008	0.024	0.012	0.007	0.001	0.006	0.0040						0.374	545	365	22	49	157				
BODY	WCB	534V7	0.184	1.159	0.403	0.009	0.025	0.011	0.001	0.001	0.001	0.0050						0.381	535	345	31	46	156				
BODY	WCB	537V2	0.190	1.096	0.366	0.008	0.022	0.013	0.002	0.001	0.001	0.0050						0.377	525	350	29	50	149				
BODY	WCB	551V2	0.183	1.142	0.426	0.006	0.022	0.002	0.003	0.001	0.001	0.0050						0.375	565	360	34	50	153				
BODY	WCB	556V8	0.183	1.099	0.377	0.008	0.020	0.006	0.001	0.001	0.001	0.0050						0.369	535	355	30	48	153				
BODY	WCB	560V5	0.174	1.099	0.399	0.006	0.022	0.005	0.004	0.001	0.004	0.0050						0.360	525	335	31	52	145				
BODY	WCB	562V7	0.177	1.089	0.401	0.006	0.021	0.003	0.004	0.001	0.004	0.0050						0.361	525	335	30	49	151				
BODY	WCB	592V1	0.179	1.123	0.426	0.009	0.025	0.010	0.001	0.001	0.001	0.0050						0.370	515	335	30	49	140				
BODY	WCB	606V1	0.178	1.061	0.398	0.008	0.025	0.004	0.001	0.001	0.002	0.0040						0.357	535	360	32	51	149				

NEWAY			MATERIAL TEST REPORT					TC No. 10016172-510(80695756) DATE: 2018.11.06 PAGE: 9 OF 10												
MATERIAL COMPONENTS AND PROPERTIES																				
Material	Heat treatment	Temp°C (°F)		Holding time(h)		Cooling media	Furnace	We hereby certify that the material are manufactured, inspected and tested in accordance with the material specification and purchase order requirements.												
WCB	NORMALIZE	920-940 (1688-1724 F)		1H/25MM, >=1H		AIR	GAS													
PART NAME	MATERIAL	HEAT NO.	CHEMICAL ANALYSIS										MECHANICAL PROPERTIES							
		MAX. MIN.	C %	Mn %	Si %	S %	P %	Cr %	Ni %	Mo %	Cu %	V %	C.E. %	TS MPa	YS MPa	E %	R %	HARD HB	IMPACT TEST VALUE TEMP °C: Avg. Min.	
			0.230	1.280	0.600	0.030	0.035	0.500	0.500	0.200	0.300	0.0300		655	485	250	22	35	1 2 3	
CE: C+Mn/6+ (Cr+Mo+V) / 5+ (Ni+Cu) / 15 ≤ 0.43																				
BODY	WCB	670V6	0.178	1.113	0.403	0.006	0.030	0.023	0.012	0.001	0.011	0.0050	0.371	505	330	34	54	140		
BODY	WCB	679V7	0.182	1.078	0.401	0.007	0.027	0.004	0.001	0.001	0.005	0.0050	0.364	530	350	30	54	147		
BODY	WCB	688V1	0.188	1.084	0.407	0.008	0.024	0.013	0.001	0.001	0.003	0.0050	0.373	515	345	32	59	136		
BODY	WCB	699V7	0.188	1.097	0.385	0.007	0.026	0.006	0.001	0.001	0.006	0.0050	0.374	510	325	28	54	151		
BODY	WCB	75V50	0.192	1.068	0.367	0.009	0.020	0.025	0.011	0.001	0.007	0.0010	0.377	520	335	33	55	157		
BODY	WCB	75V62	0.194	1.124	0.412	0.007	0.024	0.001	0.001	0.001	0.010	0.0010	0.383	530	335	31	52	154		
BODY	WCB	78V45	0.185	1.111	0.390	0.011	0.024	0.021	0.001	0.001	0.008	0.0010	0.375	525	330	30	50	153		
BONNET	WCB	00C16	0.199	1.151	0.424	0.007	0.017	0.044	0.018	0.005	0.023	0.0030	0.404	530	340	29	58	163		
BONNET	WCB	00C60	0.181	1.185	0.351	0.007	0.018	0.009	0.005	0.003	0.023	0.0020	0.383	540	345	31	56	156		
BONNET	WCB	01C44	0.199	1.137	0.436	0.010	0.023	0.068	0.026	0.005	0.022	0.0040	0.407	525	320	31	57	156		
BONNET	WCB	01C91	0.187	1.121	0.368	0.007	0.019	0.122	0.010	0.012	0.028	0.0040	0.404	525	255	34	51	152		



MATERIAL TEST REPORT

EN 10204-2004 Type 3.1

TC No. 10016172-510(80695756)
DATE: 2018.11.06
PAGE: 10 OF 10

MATERIAL COMPONENTS AND PROPERTIES

Material	Heat treatment	Temp°C (°F)	Holding time(h)	Cooling media	Furnace
WCB	NORMALIZE	920-940 (1688-1724 F)	1H/25MM >=1H	AIR	GAS

We hereby certify that the material are manufactured, inspected and tested in accordance with the material specification and purchase order requirements.

PART NAME	MATERIAL	HEAT NO.	CHEMICAL ANALYSIS											MECHANICAL PROPERTIES											
			C	Mn	Si	S	P	Cr	Ni	Mo	Cu	V													
			%	%	%	%	%	%	%	%	%	%	%												
		MAX. MIN.	0.230	1.280	0.600	0.030	0.035	0.500	0.500	0.200	0.300	0.0300						655	250	22	35	237	Avg. Min:		
CE: C+Mn/6+ (Cr+Mo+V) /5+ (Ni+Cu) /15 ≤ 0.43																									
BONNET	WCB	02C11	0.192	1.055	0.396	0.007	0.018	0.031	0.001	0.003	0.018	0.0020						0.376	505	325	32	51	163		
BONNET	WCB	03C31	0.190	1.141	0.422	0.008	0.019	0.074	0.027	0.006	0.021	0.0030						0.400	530	350	33	58	163		
BONNET	WCB	03C83	0.182	1.099	0.375	0.010	0.026	0.046	0.021	0.007	0.023	0.0020						0.379	540	350	34	57	163		
BONNET	WCB	673V0	0.182	1.079	0.388	0.007	0.028	0.025	0.009	0.001	0.011	0.0050						0.369	520	315	32	58	142		
WEDGE	WCB	877V9	0.197	1.111	0.399	0.010	0.026	0.052	0.015	0.001	0.011	0.0010						0.395	525	330	28	53	150		
WEDGE	WCB	878V6	0.190	1.105	0.406	0.007	0.024	0.088	0.020	0.001	0.016	0.0010						0.395	515	310	27	42	149		
WEDGE	WCB	878V7	0.193	1.089	0.384	0.008	0.024	0.081	0.016	0.001	0.014	0.0010						0.393	525	330	29	55	149		
WEDGE	WCB	879V4	0.207	1.089	0.379	0.010	0.032	0.062	0.024	0.001	0.014	0.0010						0.404	530	335	28	44	160		

G O O D S R E C E I P T S L I P

No. 5004264437

Page 1

Goods Receipt date: 2020.02.05
Current Date: 2020.02.05

Plant:	2031	Description:	Sunrise Oilsands
Vendor :	0011007206	Name:	WESTLUND
Delivery Note:	77109721-00	Bill of Lading:	W296984
GR Slip:		Header Text:	
PO:	8401428043 / 10		
Pur. group:	726 Sunrise	Telephone:	587-779-3302

Itm	Material	Description	
PO Itm	Acct.assgt.	Recipient	Qty. Un

0001		8" ,VALVE,GATE,CL150,RF,A351,CF8M BODY &	
	F 000050080173	/ 20TIAN/MILES	1 EA
00010	20-EV-1102		

YARD - BY OTHER GATE

1. SKID

50080173

Issued by: Kevin Shearer S I G N A T U R E

TA 2020



PC: 771 Whse: 771
Requires By: 02/07/20
Contact Name: MINORU
Contact#: 587-774-6086
GST/HST: R101626026

Invoice Number 77109721-00
Customer P.O. Number 8401428043
Date/Time Printed 01/30/20 11:16 MST
Date/Time Ordered 01/13/20 08:24

A Division of EMCO Corporation
2165 - 70th AVENUE
EDMONTON, AB T6P 0B4
Ph: (780)463-7473
Fax: (780)462-0392

Bill To: Cust.No. 613978
Phone No. (403) -

Ship To:

A
D
D
R
E
S
S
HUSKY OIL OPERATIONS LIMITED
AGREEMENT# M036692018
707-8TH AVE SW
BOX 6525, POSTAL STATION D
CALGARY, AB T2P 3G7

HUSKY OIL OPERATIONS LIMITED
SUNRISE
CANTERRA ROAD
FT MCMURRAY, AB T2P 3G7

PICKER # 1

Shipped

Special Instructions:

Reference:

PPD	COL	PPD/ADD
	X	

Line	SKU	Bin Loc	Description	UOM	Ordered	Shipped	B/O	List	%	Net
2	XX771797	Non Stock	8 150 RF GATE VLV BB OS& Y TRIM 12 FP HWO CF8M VELAN F15-0064C-13MY 8 C.E. CAT. B TESTING INCL. NO TAG REQUESTED ASJ01D13 ASJ05D04	ea	1	1				

Staging Area _____ Pipe _____ Bags _____
Boxes _____ Skids 1 Crates _____ Other _____

Taken By
jmd - Jillian MacDonald

Sales Rep. _____ Freight _____ Placed By
Thank you for your patronage! MINORU

Bill of Lading # # 10296984 Date Picked 1/30/20 Picked By PO Weight 0.0 Via Velocity Exp Date Shipped 1/30/20 Page 1 Last Page

NO RETURNS ALLOWED ON SPECIAL ORDERS WITHOUT PERMISSION

2% PER MONTH (24% PER ANNUM) SERVICE CHARGE ON ALL OVERDUE ACCOUNTS.

Customer's Signature _____ Customer's Name(Printed) _____ Customer Copy
G.S.T. REGISTRATION NO. _____



INSPECTION AND TEST CERTIFICATE

EN-10204-3.1

Page 1 Of 2

1/20/2020 4:46:43 PM

VELAN INC.
7007 Cote de Liesse
Montreal

Customer Name : SUNBELT SUPPLY
Valve Type : Full Port Gate
Figure Number : F15-0064C-13MY
Description : 8"150 GT RF CF8M/316

Order :
Line : 1
Size : 8" (200 mm)
Pressure Class : 150 Class
Quantity : 1

Certificate : VC00048007
Date : 1/20/2020

HYDROSTATIC TEST

Test Standard :	API-598	Hydro Test Results :	ACCEPTABLE	Other Test :	ACCEPTABLE
-----------------	---------	----------------------	------------	--------------	------------

Test Type	Shell	Packing	Seat (H.P.)	Seat (L.P.)	Backseat
Duration (sec)	120	120	N/A	120	60
Pressure (psig)	425	425	N/A	80	325
Result	ACCEPTABLE	ACCEPTABLE	N/A	ACCEPTABLE	ACCEPTABLE

A351-16-CF8M-

CHEMICALS

MECHANICALS

Heat Code	Unit	Heat Treat	C	Cr	Mn	Mo	Ni	P	S	Si	ELONG	HS	IMP ENER 1	IMP ENER 3	IMP ENER 5	UTS	YIELD
			%	%	%	%	%	%	%	%	(%)	(HB)	(FT-LB)	(FT-LB)	(FT-LB)	(ksi)	(ksi)
ASJ01D13	BODY	SOL ANN/QUE N	0.071	18.488	1.209	2.172	9.416	0.027	0.009	1.219	51.8	0	0	0	0	78.9	40.76
ASJ05D04	BONNET	SOL ANN/QUE N	0.064	18.724	1.186	2.061	9.576	0.031	0.006	1.066	56.6	0	0	0	0	75.71	42.21



INSPECTION AND TEST CERTIFICATE

EN-10204-3.1

Page 2 Of 2

1/20 2020 4:46:43 PM

TEST REPORT (EN 10204 - 2.1)

Valve Item	Specification
NUTS	ASTM-A194 8M
SEAT	ASTM-A182 F316L+CoCr
STEM	ASTM-A479 SS316
STUD	ASTM-A193 B8M CL.2
WDGE	ASTM-A351 CF8M

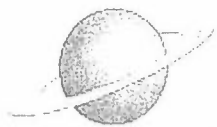
All Velan Valves are tested in accordance with specification required by the design. Valves designed to API specifications API 594, API 600, API 602, API 603, API 608, API 609 and API 623 are tested to API 598. Valves designed to B16.34 are tested to B16.34 and MSS-SP-61.

All materials are dually certifiable to ASTM / ASME.

The header information on this certificate (including customer name, valve description, figure number, and quantity) has been entered by the user of this application and he/she is therefore responsible for the accuracy of the data.

Velan certifies that valve(s) described above are in compliance with the requirements of the identified standards and specifications. This report is based on actual test results of chemical and mechanical properties as well as hydrostatic test, and is in compliance with EN 10204 3.1.

Victor Apostolescu
Vice President, QA



**Universe
MACHINE**

PRESSURE TESTING REPORT

Customer: SUNBELT SUPPLY COMPANY

Cust PO: 52798-00

Report Number: PTR20-7940

Date: 1/27/2020

Work Order: 80614-1

Page 1 of 1

Valve Identification

Manufacturer: VELAN
Type: GATE VALVE
Size/Connections: 8"RF
Rating: 150#
Model/Figure: F15-0064C-13MY

Specifications

API 598 ✓
Z.245.15
API 6A
API 6D
Other:

Test Pressure Units

PSI ✓
KPA

Gauge Identification No

1.- UM-42
2.- UM-49
3.-
4.-

Calibration Due Dates

4/22/2020
4/22/2020

Serial Number

ACT. S/N
Body Ht ASJ01D13
Bonnet Ht ASJ05D04
TAG #
Quantity 1
Shell Test - High 450@2MIN
Closure - High
Back Seat 325@1MIN
Gauge/Medium G1&G2/WATER/INHIBITOR
Steam Jacket
Shell Test - Low
Closure - Low 100@2MIN
Gauge/Medium G1&G2/AIR
Leakage Right Seat (Low) 0
Leakage Left Seat (Low) 0
Leakage Right Seat (High)
Leakage Left Seat (High)

Status Pass

Operator DA 

3rd Party Witness

Notes:

REPORT#: 53776

MT ☐

LT ☒

VT ☒

Date: January 23, 2020 Page 1 of 1
Client: Universe Machine Corp.
Location: Rivest Technologies Inc. JOB #: 53776
Examination Standard: ASME V Art. 6 & 9 P.O. #: 90850
Acceptance Standard: B16.34 & MSS-SP-55 W.O. #: 80614-1
Description: Qty. (1): 8" 150# Velan Gate Valve

EXAMINATION CONDITIONS: ☒ As Welded ☒ Base Metal ☐ As Ground ☐ Machined ☐ Painted ☐ Shot Blasted Inspection Temp: 15°C

Minimum Light Requirements: Fluorescent = Blacklight min 1000uW/cm2 Visible = Visible Light: min100fc @ exam surface

EQUIPMENT	SERIAL NO.	MPI TECHNIQUE	LPI TECHNIQUE	TEST MEDIUM
☐ Hand Yoke		☐ AC	☒ Water Washable	☒ Penetrant: Magnaflux SKL-WP2
☐ Blacklight	Spectroline BIB 150P	☐ DC	☐ Solvent Removable	☒ Developer: Magnaflux SKD S2
☒ Intensity Meter	Spectroline XR-1000 SN:1821145	☐ Continuous	Dwell Time 10 min	☐ Cleaner:
Calibrated / Due:	Meter: 9/10/19, 9/10/20 Daily Check ✓	☐ Residual	Develop Time 10 min	Batch #:
Rivest Procedure:	LT1 Revision: 0 Lighting: LED		Interpretation Time 10 min	

Examination:

Visual & liquid penetrant examinations were performed on all accessible surfaces of the following:

Qty. (1): 8" 150# Velan Gate Valve

Body HT: ASJ 01D13

Bonnet HT: ASJ 05D04

RESULTS:

No relevant indications were found at time of examination.

Valve is acceptable to the above standards.

This Certificate or Report is valid only for that work which was specifically requested. The company is not responsible for any views or opinions expressed by employees performing this work which fall outside the contract terms or reference. All Certificates and/or Reports are the result of work performed in conformance with applicable specifications and standards to the best of our ability and intent. However, the Company will not be responsible for deviation within the normal limits of accuracy in accordance with the standard practices. Final Code Acceptance shall require Client and Manufacturer Representative's signatures.

A.M.		P.M.		TOTAL HOURS	KMS	SUBSISTENCE		CONSUMABLES
TIME IN	TIME OUT	TIME IN	TIME OUT	S.T. hrs		MAN DAY	OT/MEALS	
				O.T. hrs				

Interpretation is done in accordance with the specified standard, to the best of my professional ability.

Technician Daryl Rivest SNT/CGSB Level II Cert #6202

Assistant

The above interpretation is a professional opinion, final interpretation is the responsibility of the client.

Client Representative (Print): Rose Krenowski Sign: [Signature]

Date: Jan 28, 2020

RADIOGRAPHIC INSPECTION REPORT

2450-80 Ave, Edmonton, Alberta T6P1N2
Phone: (780) 469-8333 Fax: (780) 469-8884

RT#: 53776

Date: January 23, 2020
Client: Universe Machine Corp.
Location: Rivest Technologies Inc.

JOB #: 53776
P.O. #: 90850

Page 1 of 1

Description: Qty. (1) - 8" 150# Velan Gate Valve Body & Bonnet

DEFECT LEGEND										SEVERITY				PROCEDURES				CODE LEGEND					
IF - INCOMPLETE FUSION				P - POROSITY				HB - HOLLOW BEAD				AS PER				RT1 - contact		RT5 - internal		1 - ASME B31.3 NORMAL		5 - ASME B16.34	
IP - INCOMPLETE PENETRATION				BT - BURN THROUGH				C - CRACK				ASTM E446				RT2 - offset contact		RT6 - offset internal		2 - ASME B31.3 SEVERE		6 - IOR Supplement	
UC - UNDERCUTTING				IC - INTERNAL CONCAVITY				AB - ARC BURNS				Radiographs				RT3 - elliptical		RT7 - film internal		3 - ASME VIII DIV 1 UW51		7 - GP 29-03-02	
S - SLAG/SAND				LC - LOW COVER				SH - SHRINKAGE								RT4 - superimposed				4 - ASME VIII DIV 1 UW52		8 - SCL L37 Cat.4	
	FILM NO.	LOCATION	DIA.	THK.	SOD	SYM	IF	IP	IC	UC	S	P	SH		PROC #	CODE #	✓	REMARKS	X				
1	R#																	WO#: 80614-1					
2																							
3																		Body #: ASJ 01D13					
4																		Bonnet #: ASJ 05D04					
5	X1	Body	8"	150#	4"										5	5	✓						
6	X2	Body	8"	150#	4"							1			5	5	✓						
7	X3A	Body	8"	150#	4"										5	5	✓						
8	X3B	Body	8"	150#	4"							1			5	5	✓						
9	X4	Body	8"	150#	4"										5	5	✓						
10	X5	Bonnet	8"	150#	24"								1		7	5	✓						
11																							
12																							
13																							
14																							
15																							
16																							
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25																							
26																							
27																							
28																							

No. Of Exp.	Film Brand & Design	Screen Type & Thickness	No. of Film per Cassette	Type of Energy	Physical Size	Material	OFD	IQI	
								Type	Size
16	Kodak	0.010" Pb	1	IRI92	0.12"	P1	150#	ASTM	B

This Certificate or Report is valid only for that work which was specifically requested. The company is not responsible for any views or opinions expressed by employees performing this work which fall outside the contract terms or reference. All Certificates and/or Reports are the result of work performed in conformance with applicable specifications and standards to the best of our ability and intent. However, the Company will not be responsible for deviation within the normal limits of accuracy with the standard practices. Final Code Acceptance shall require Client and Manufacturer Representative's signatures.

A.M.		P.M.		TOTAL HOURS		KMS	SUBSISTENCE		FILM
TIME IN	TIME OUT	TIME IN	TIME OUT	S.T.	hrs		MAN DAY	OT/MEALS	
				O.T.	hrs				6-70x440,8-70x220mm
									2 - 3.5" x 17"

Film Interpretation is done in accordance with the specified code, to the best of my professional ability.

Radiographer Daryl Rivest *Daryl Rivest* SNT/CGSB Level II CGSB # 6202

Assistant Nick

The above interpretation is a professional opinion, final film interpretation is the responsibility of the client.

I am in full agreement with the contents of this report and accept receipt of the associated film. Client Representative: Rose Krasnoski *Rose Krasnoski*

G O O D S R E C E I P T S L I P

No. 5004288304

Page

1

Goods Receipt date: 2020.02.18
Current Date: 2020.02.18

Plant: 2031 Description: Sunrise Oilsands

Vendor : 0011009260

Name: WOLSELEY INDUSTRIAL CANADA INC.

Delivery Note: 7160741-01

Bill of Lading: W299627

GR Slip:

Header Text:

PO: 8401436881 / 10

Pur. group: 688 Jordan Stimpson

Telephone: 403-298-7229

Itm Material

Description

PO Itm SLoc

Storage bin

Qty. Un

0001 10125111
 4010

VALVE, CHK,SWNG,3 ",150 #,RF FLG,CS,A216
RESERVE

4 EA

00010

Issued by: Ron Goetz

S I G N A T U R E

WOLSELEY

Industrial

EDMONTON



WOLSELEY INDUSTRIAL CANADA INC.
3780 - 98 STREET
EDMONTON, AB. T6E 6B4
TEL: 1-780-468-7161 TF: 1-800-661-6997

PAGE 1

SALES ORDER
BON DE COMMANDE



OUR ORDER NO.
NOTRE NUMERO DE COMMANDE

7160741-01

SOLD TO / VENDU À:
("PURCHASER / "ACHETEUR")

DIV	BRANCH/SUCC.	CUSTOMER CODE CODE DU CLIENT	SLSMN VENDEUR	G.S.T. T.P.S.	P.S.T. T.V.P.	PROV.	ORDER TYPE TYPE DU COMMANDE	ORDER DATE COMM.	SHIPPED DATE EXP.
MG	MGA MGA	3280	DM	Y	Y	AB	REGULAR ORDER	20 FEB 12	20 FEB 14

HUSKY OIL OPERATIONS LIMITED
PO BOX 4490 STATION D
CALGARY AB
T2P 3G7

SPECIAL INSTRUCTIONS - INSTRUCTIONS SPECIALES
PLEASE TAG & SHIP C/W MTRS ON
VELOCITY @ 780-465-3777.
THANK YOU, DEAN PETER

SHIPPED TO
HUSKY OIL OPERATIONS LIMITED
SUNRISE OPER. - 3KM CANTERRA
ROAD - LSD 4-15-95-7-W4M
FORT MACKAY AB
A TOP 1C0

W299627

CUST. P.O. NO./N° DE COMM. CLIENT 8401436881				VIA VELOCITY EX		FREIGHT/FRET COLLECT		FED. TAX NO./N° TAXE FED.		PROV. TAX NO./N° TAXE PROV.		
SEQ.	QTY. ORD. QTE. COMM.	QTY. SHIPPED QTE. EXPEDIEE	QTY. B/O QTE. A VENIR	CODE	DESCRIPTION	LOCATION/EMPLACEMENT	U/M	UNIT PRICE PRIX UNITAIRE	DISC. ESC.	%	P.S.T. T.V.P.	EXTENSION
					ORDERED BY : JORDAN STIMPSON CHARGE TO : E-MAIL ORDER #: CN-54705							
001	4	(4)			VELF100114C02TY L 024L F10-0114C-02TY 3" CL150 RF VELAN OS - L 076R SWING CHECK VALVE, API 594 BOLTED CAP, WCB BODY, 13CR WEDGE/ DISC SURFACE, STELLITE 6 SEAT SURFACE, 13CR DISC, 316L/GRAPHITE SPIRAL WOUND GASKET, B7/2H BOLTING, API TRIM 8, NON-PIGABLE		EA					
002	4	(4)			MERTAGREC B 001 MERIDIAN SS TAG - RECTANGULAR ***** PO # 8401436881 ✓ Item # 10125111 ✓ *****		EA					
PREPARED BY PRÉPARÉ PAR DEAN PETER				CHECKED BY VÉRIFIÉ PAR		QUANTITY TOTAL QTE.		WEIGHT/POIDS		SKID BUNDL BATH COIL GALVR		
WRITTEN BY/ÉCRIT PAR				BILL OF LADING/CONNAISSANCEMENT		CRATE TANK PIPE FURN		CTNS PIECE BAGS A/C		TOTAL ▶		

PACKING SLIP
FEUILLE D'EMBALLAGE

200213 123128

NAME
NOM

X

SIGNATURE

FSPS1_R14
200213 1231

CONT/...

This Sales Order is subject to Wolseley Canada's Terms and Conditions of Sale ("Wolseley Terms"), available at <https://wolseleyinc.ca/terms-and-conditions-sale.html> ("Site"), which are incorporated herein by reference and form an integral part hereof. The Wolseley Terms are subject to change from time to time and the Wolseley Terms applicable to this Sales Order shall be those made available on the Site as of the date of this Sales Order. / Cette commande est assujétie aux Conditions de vente de Wolseley Canada ("Conditions de Wolseley"), que vous trouverez à <https://wolseleyinc.ca/terms-and-conditions-sale.html> ("Site"), lesquelles sont incorporées ci-après par référence et forment une partie intégrale de ce document. Les conditions de vente de Wolseley sont sujettes à changement de temps à autre et les conditions de vente de Wolseley applicables à cette commande sont celles qui figurent sur le site au date de cette commande.

WOLSELEY

Industrial

EDMONTON



WOLSELEY INDUSTRIAL CANADA INC.
3780 - 98 STREET
EDMONTON, AB, T6E 6B4
TEL: 1-780-468-7161 TF: 1-800-661-6997

**SALES ORDER
BON DE COMMANDE**



OUR ORDER NO.
NOTRE NUMÉRO DE COMMANDE

7160741-01

SOLD TO / VENDU À:
("PURCHASER / "ACHETEUR")

DIV	BRANCH/SUCC.	CUSTOMER CODE CODE DU CLIENT	SLSMN VENDEUR	G.S.T. T.P.S.	P.S.T. T.V.P.	PROV.	ORDER TYPE TYPE DU COMMANDE	ORDER DATE COMM.	SHIPPED DATE EXP.
MG	MGA MGA	3280	DM	Y	Y	AB	REGULAR ORDER	20 FEB 12	20 FEB 14

HUSKY OIL OPERATIONS LIMITED
PO BOX 4490 STATION D
CALGARY AB
T2P 3G7

SPECIAL INSTRUCTIONS - INSTRUCTIONS SPÉCIALES
PLEASE TAG & SHIP C/W MTRS ON
VELOCITY @ 780-465-3777.
THANK YOU, DEAN PETER

SHIPPED TO
HUSKY OIL OPERATIONS LIMITED
SUNRISE OPER. - 3KM CANTERRA
ROAD - LSD 4-15-95-7-W4M
FORT MACKAY AB
À TOP 1C0

CUST. P.O. NO./N° DE COMM. CLIENT				VIA		FREIGHT/FRÊT		FED. TAX NO./N° TAXE FED.		PROV. TAX NO./N° TAXE PROV.		
8401436881				VELOCITY EX		COLLECT						
SEQ.	QTY. ORD. QTE. COMM.	QTY. SHIPPED QTE. EXPÉDIEE	QTY. B/O QTE. A VENIR	CODE	DESCRIPTION	LOCATION/EMPLACEMENT	U/M	UNIT PRICE PRIX UNITAIRE	DISC. ESC.	%	P.S.T T.V.P.	EXTENSION
003	1	1	1	MTR	MILL TEST REPORT		EA					
=====												
MATERIAL PREPARED BY _____												
DOCUMENT PREPARED BY _____												
=====												
PREPARED BY PRÉPARÉ PAR		CHECKED BY VÉRIFIÉ PAR		QUANTITY TOTAL QTE.		WEIGHT/POIDS		SKID	BUNDL	BATH	COIL	GALVR
				8		142		CRATE	TANK	PIPE	FURN	
WRITTEN BY/ÉCRIT PAR				BILL OF LADING/CONNAISSEMENT				CTNS	PIECE	BAGS	A/C	
DEAN PETER												TOTAL ▶

PACKING SLIP

FEUILLE D'EMBALLAGE

200213 123128

NAME
NOM

X

SIGNATURE

FSFS1_R14
200213 1231

This Sales Order is subject to Wolseley Canada's Terms and Conditions of Sale ("Wolseley Terms"), available at <https://wolseleyinc.ca/terms-and-conditions-sale.html> ("Site"), which are incorporated herein by reference and form an integral part hereof. The Wolseley Terms are subject to change from time to time and the Wolseley Terms applicable to this Sales Order shall be those made available on the Site as of the date of this Sales Order. / Cette commande est assujettie aux Conditions de vente de Wolseley Canada ("Conditions de vente de Wolseley"), que vous trouverez à <https://wolseleyinc.ca/terms-and-conditions-sale.html> ("Site"), lesquelles sont incorporées ci-après par référence et forment une partie intégrante de ce document. Les conditions de vente de Wolseley sont sujettes à changement de temps à autre et les conditions de vente de Wolseley applicables à cette commande sont celles qui figurent sur le site en date de cette commande.

DATE Feb. 14/20

WOLSELEY SALES ORDER: 7160741

[illegible]



INSPECTION AND TEST CERTIFICATE

EN-10204-3.1

Page 1 Of 5

Certificate #: 139313

Plant 89 VELAN LTD.
74, Sinwon-ro 133 Beon-gil
Danwon-gu, Ansan-si
Gyeonggi-do, Korea
Phone +82-31-491-2811
Fax +82-31-491-2813

Customer Name : WOLSELEY INDUSTRIAL CANADA INC.
Customer Po # : MGA0185359
Design Spec : API 594
Drawing Number : 9916-002 Rev. 0
Tag Number(s) : NONE

Velan Order # : 320-0-
Item Number : 16 Position No : 80
Quantity : 40
Figure Number : F10-0114C-02TY-X320
Description : 3" 150 S.C. VALVE RF

NOTES : VISUAL INSPECTION ACCEPTABLE
DIMENSIONAL INSPECTION ACCEPTABLE

Test Standard: API 598

Dimensional Examination: ACCEPTABLE

Markings MSS SP-25: ACCEPTABLE

Visual: ACCEPTABLE

Test Type		Shell	Packing	Seat (H.P.)	Seat (L.P.)	Backseat
Duration	(sec)	60	N/A	60	N/A	N/A
Pressure	(barg)	30	N/A	22	N/A	N/A
Result		ACCEPTABLE	N/A	ACCEPTABLE	N/A	N/A

MATERIAL TEST RESULTS SHOWN BELOW:

CHEMICALS

MECHANICALS

Supplier : BN	Carbon (C) 0.200	Manganese (Mn) 0.980	Phosphorous (P) 0.025	Tensile (MPa) 550.000	Tensile (ksi) 79.771
Heat Code : BNJ04K18	Sulfur (S) 0.010	Silicon (Si) 0.411	Copper (Cu) 0.018	Yield (MPa) 345.000	Yield (ksi) 50.038
ASTM Code: A216-16-WCB-	Nickel (Ni) 0.134	Chromium (Cr) 0.029	Molybdenum (Mo) 0.006	Elongation (%) 29.000	Reduction Of Area (%) 56.000
Description: BODY	Vanadium (V) 0.004	Aluminum (Al) 0.039		Heat Treatment: NORMALIZED	
	C.E. 0.381				
Supplier : BN	Carbon (C) 0.203	Manganese (Mn) 0.941	Phosphorous (P) 0.024	Tensile (MPa) 508.000	Tensile (ksi) 73.679
Heat Code : BNJ14M03	Sulfur (S) 0.008	Silicon (Si) 0.426	Copper (Cu) 0.025	Yield (MPa) 316.000	Yield (ksi) 45.832
ASTM Code: A216-18-WCB-	Nickel (Ni) 0.042	Chromium (Cr) 0.065	Molybdenum (Mo) 0.006	Elongation (%) 33.000	Reduction Of Area (%) 60.000
Description: BODY	Vanadium (V) 0.009	Aluminum (Al) 0.034		Heat Treatment: NORMALIZED	
	C.E. 0.380				

WOLSELEY INDUSTRIAL

ITEM # 1
P.O. # 8401436881
S.O. # 7160741-01



INSPECTION AND TEST CERTIFICATE

EN-10204-3.1

Page 2 Of 5

Certificate #: 139313

CHEMICALS

MECHANICALS

Supplier : BN	Carbon (C) 0.181	Manganese (Mn) 0.845	Phosphorous (P) 0.020	Tensile (MPa) 525.000	Tensile (ksi) 76.145
Heat Code : BNJ16H24	Sulfur (S) 0.006	Silicon (Si) 0.354	Copper (Cu) 0.024	Yield (MPa) 333.000	Yield (ksi) 48.298
ASTM Code: A216-16-WCB-	Nickel (Ni) 0.022	Chromium (Cr) 0.047	Molybdenum (Mo) 0.005	Elongation (%) 29.000	Reduction Of Area (%) 60.000
Description: BODY	Vanadium (V) 0.006	Aluminum (Al) 0.032		Heat Treatment	NORMALIZED
	C.E. 0.337				
Supplier : BN	Carbon (C) 0.194	Manganese (Mn) 0.826	Phosphorous (P) 0.021	Tensile (MPa) 522.000	Tensile (ksi) 75.710
Heat Code : BNJ17H22	Sulfur (S) 0.006	Silicon (Si) 0.420	Copper (Cu) 0.024	Yield (MPa) 336.000	Yield (ksi) 48.733
ASTM Code: A216-16-WCB-	Nickel (Ni) 0.048	Chromium (Cr) 0.041	Molybdenum (Mo) 0.011	Elongation (%) 31.000	Reduction Of Area (%) 58.000
Description: BODY	Vanadium (V) 0.007	Aluminum (Al) 0.040		Heat Treatment	NORMALIZED
	C.E. 0.348				
Supplier : BN	Carbon (C) 0.183	Manganese (Mn) 0.970	Phosphorous (P) 0.023	Tensile (MPa) 509.000	Tensile (ksi) 73.824
Heat Code : BNJ22K13	Sulfur (S) 0.009	Silicon (Si) 0.419	Copper (Cu) 0.020	Yield (MPa) 333.000	Yield (ksi) 48.298
ASTM Code: A216-16-WCB-	Nickel (Ni) 0.149	Chromium (Cr) 0.033	Molybdenum (Mo) 0.005	Elongation (%) 29.000	Reduction Of Area (%) 58.000
Description: BODY	Vanadium (V) 0.001	Aluminum (Al) 0.039		Heat Treatment	NORMALIZED
	C.E. 0.364				
Supplier : BN	Carbon (C) 0.190	Manganese (Mn) 0.880	Phosphorous (P) 0.026	Tensile (MPa) 540.000	Tensile (ksi) 78.320
Heat Code : BNJ22L05	Sulfur (S) 0.011	Silicon (Si) 0.353	Copper (Cu) 0.020	Yield (MPa) 355.000	Yield (ksi) 51.488
ASTM Code: A216-18-WCB-	Nickel (Ni) 0.248	Chromium (Cr) 0.035	Molybdenum (Mo) 0.009	Elongation (%) 33.000	Reduction Of Area (%) 57.000
Description: BODY	Vanadium (V) 0.002	Aluminum (Al) 0.042		Heat Treatment	NORMALIZED
	C.E. 0.364				
Supplier : BN	Carbon (C) 0.182	Manganese (Mn) 0.990	Phosphorous (P) 0.024	Tensile (MPa) 564.000	Tensile (ksi) 81.801
Heat Code : BNJ24K13	Sulfur (S) 0.009	Silicon (Si) 0.489	Copper (Cu) 0.020	Yield (MPa) 357.000	Yield (ksi) 51.778
ASTM Code: A216-16-WCB-	Nickel (Ni) 0.154	Chromium (Cr) 0.030	Molybdenum (Mo) 0.005	Elongation (%) 31.000	Reduction Of Area (%) 60.000
Description: BODY	Vanadium (V) 0.002	Aluminum (Al) 0.035		Heat Treatment	NORMALIZED
	C.E. 0.366				



INSPECTION AND TEST CERTIFICATE

EN-10204-3.1

Page 3 Of 5

Certificate #: 139313

CHEMICALS

MECHANICALS

Supplier : BN	Carbon (C) 0.193	Manganese (Mn) 0.973	Phosphorous (P) 0.017	Tensile (MPa) 521.000	Tensile (ksi) 75.565
Heat Code : BNJ27H30	Sulfur (S) 0.006	Silicon (Si) 0.403	Copper (Cu) 0.025	Yield (MPa) 319.000	Yield (ksi) 46.267
ASTM Code: A216-16-WCB-	Nickel (Ni) 0.030	Chromium (Cr) 0.027	Molybdenum (Mo) 0.006	Elongation (%) 31.000	Reduction Of Area (%) 58.000
Description: BODY	Vanadium (V) 0.013	Aluminum (Al) 0.047		Heat Treatment	NORMALIZED
	C.E. 0.368				
Supplier : BN	Carbon (C) 0.187	Manganese (Mn) 0.868	Phosphorous (P) 0.021	Tensile (MPa) 525.000	Tensile (ksi) 76.145
Heat Code : BNJ27J04	Sulfur (S) 0.007	Silicon (Si) 0.428	Copper (Cu) 0.028	Yield (MPa) 335.000	Yield (ksi) 48.588
ASTM Code: A216-18-WCB-	Nickel (Ni) 0.027	Chromium (Cr) 0.036	Molybdenum (Mo) 0.005	Elongation (%) 29.000	Reduction Of Area (%) 59.000
Description: BODY	Vanadium (V) 0.014	Aluminum (Al) 0.037		Heat Treatment	NORMALIZED
	C.E. 0.346				
Supplier : BN	Carbon (C) 0.188	Manganese (Mn) 0.980	Phosphorous (P) 0.026	Tensile (MPa) 565.000	Tensile (ksi) 81.946
Heat Code : BNJ28H30	Sulfur (S) 0.006	Silicon (Si) 0.463	Copper (Cu) 0.028	Yield (MPa) 360.000	Yield (ksi) 52.214
ASTM Code: A216-16-WCB-	Nickel (Ni) 0.066	Chromium (Cr) 0.047	Molybdenum (Mo) 0.014	Elongation (%) 29.000	Reduction Of Area (%) 57.000
Description: BODY	Vanadium (V) 0.018	Aluminum (Al) 0.048		Heat Treatment	NORMALIZED
	C.E. 0.373				
Supplier : BN	Carbon (C) 0.195	Manganese (Mn) 0.963	Phosphorous (P) 0.018	Tensile (MPa) 552.000	Tensile (ksi) 80.061
Heat Code : BNJ32H23	Sulfur (S) 0.004	Silicon (Si) 0.432	Copper (Cu) 0.027	Yield (MPa) 350.000	Yield (ksi) 50.763
ASTM Code: A216-16-WCB-	Nickel (Ni) 0.020	Chromium (Cr) 0.033	Molybdenum (Mo) 0.007	Elongation (%) 29.000	Reduction Of Area (%) 58.000
Description: COVER	Vanadium (V) 0.006	Aluminum (Al) 0.036		Heat Treatment	NORMALIZED
	C.E. 0.368				
Supplier : BN	Carbon (C) 0.199	Manganese (Mn) 0.875	Phosphorous (P) 0.024	Tensile (MPa) 548.000	Tensile (ksi) 79.481
Heat Code : BNK04B15	Sulfur (S) 0.008	Silicon (Si) 0.392	Copper (Cu) 0.028	Yield (MPa) 321.000	Yield (ksi) 46.557
ASTM Code: A216-18-WCB-	Nickel (Ni) 0.020	Chromium (Cr) 0.038	Molybdenum (Mo) 0.003	Elongation (%) 29.000	Reduction Of Area (%) 62.000
Description: BODY	Vanadium (V) 0.002	Aluminum (Al) 0.037		Heat Treatment	NORMALIZED
	C.E. 0.357				



INSPECTION AND TEST CERTIFICATE

EN-10204-3.1

Page 4 Of 5

Certificate #: 139313

CHEMICALS

MECHANICALS

Supplier : BN	Carbon (C) 0.209	Manganese (Mn) 0.820	Phosphorous (P) 0.028	Tensile (MPa) 528.000	Tensile (ksi) 76.580
Heat Code : BNK05B15	Sulfur (S) 0.009	Silicon (Si) 0.472	Copper (Cu) 0.031	Yield (MPa) 310.000	Yield (ksi) 44.962
ASTM Code: A216-18-WCB-	Nickel (Ni) 0.028	Chromium (Cr) 0.046	Molybdenum (Mo) 0.005	Elongation (%) 29.000	Reduction Of Area (%) 60.000
Description: BODY	Vanadium (V) 0.004	Aluminum (Al) 0.045		Heat Treatment NORMALIZED	
	C.E. 0.361				
Supplier : BN	Carbon (C) 0.180	Manganese (Mn) 0.930	Phosphorous (P) 0.021	Tensile (MPa) 524.000	Tensile (ksi) 76.000
Heat Code : BNK15C01	Sulfur (S) 0.008	Silicon (Si) 0.398	Copper (Cu) 0.025	Yield (MPa) 315.000	Yield (ksi) 45.687
ASTM Code: A216-18-WCB-	Nickel (Ni) 0.036	Chromium (Cr) 0.042	Molybdenum (Mo) 0.007	Elongation (%) 33.000	Reduction Of Area (%) 58.000
Description: COVER	Vanadium (V) 0.004	Aluminum (Al) 0.042		Heat Treat Condition 0.000	
	C.E. 0.350			Heat Treatment NORMALIZED	
Supplier : BN	Carbon (C) 0.185	Manganese (Mn) 0.855	Phosphorous (P) 0.026	Tensile (MPa) 557.000	Tensile (ksi) 80.786
Heat Code : BNK16A19	Sulfur (S) 0.009	Silicon (Si) 0.415	Copper (Cu) 0.023	Yield (MPa) 355.000	Yield (ksi) 51.488
ASTM Code: A216-18-WCB-	Nickel (Ni) 0.031	Chromium (Cr) 0.041	Molybdenum (Mo) 0.004	Elongation (%) 33.000	Reduction Of Area (%) 57.000
Description: BODY	Vanadium (V) 0.002	Aluminum (Al) 0.035		Heat Treatment NORMALIZED	
	C.E. 0.341				
Supplier : BN	Carbon (C) 0.193	Manganese (Mn) 0.920	Phosphorous (P) 0.015	Tensile (MPa) 562.000	Tensile (ksi) 81.511
Heat Code : BNK37B26	Sulfur (S) 0.008	Silicon (Si) 0.418	Copper (Cu) 0.022	Yield (MPa) 371.000	Yield (ksi) 53.809
ASTM Code: A216-18-WCB-	Nickel (Ni) 0.031	Chromium (Cr) 0.031	Molybdenum (Mo) 0.007	Elongation (%) 33.000	Reduction Of Area (%) 54.000
Description: COVER	Vanadium (V) 0.005	Aluminum (Al) 0.037		Heat Treat Condition 0.000	
	C.E. 0.358			Heat Treatment NORMALIZED	



INSPECTION AND TEST CERTIFICATE
EN-10204-3.1

Page 5 Of 5

Certificate #: 139313

Velan certifies that all valve(s) described above are in compliance with purchase order and specification requirements.

A handwritten signature in black ink, appearing to read "J. S. Kim".

J. S. Kim for

Manager of Q.C. Documentation

03-JUN-2019

Date

Customer Representative

Date

G O O D S R E C E I P T S L I P

No. 5004187897

Page

1

Goods Receipt date: 2019.12.17
Current Date: 2019.12.17

Plant:	2031	Description:	Sunrise Oilsands
Vendor	: 0011010403	Name:	DNOW CANADA ULC
Delivery Note:	311517368	Bill of Lading:	
GR Slip:		Header Text:	
PO:	8401419960 / 10		
Pur. group:	688 Mike Mccaffery	Telephone:	587-747-8351

Itm	Material	Description
PO Itm	SLoc	Storage bin
Qty.	Un	

0001	10125118	VALVE, GATE,FLEX WDG,3 ",150 #,RF FLG,CS	
	4010		
00010			

1 EA

Issued by: Ron Goetz

S I G N A T U R E

Packing Slip 311517368

Customer PO 8401419960	Sales Order 19365173	Shipment Refer to Item	Packing Slip	**** THIS IS NOT AN INVOICE DO NOT PAY FROM THIS DOCUMENT	Date: 12/13/2019
Bill to HUSKY ENERGY POD - CORTEX INVOICING BOX 4490, STATION D CALGARY AB T2P 3G7		Ship To HUSKY OIL OPERATIONS SUNRISE OPERATIONS LSD 4-15-95-7-W4M 3KM CANTERRA ROAD FORT MACKAY AB T0P 1C0		Interim Ship To	
PO Number: 8401419960		Approver Code: N/A		Requisitioner: MIKE MCCAFFERY	
AFE: N/A		Ordered By: MIKE MCCAFFERY		Location: HUSKY SUNRISE	
GL Code: N/A					

DELIVERY IS 3-4 BUSINESS DAYS
WILL REQUIRE MTRS/ HYDROSTATIC TEST REPORT AND MPI REPORT

Contact Velocity Supply Chain Solutions to arrange pickup or schedule a delivery appointment for Truckload and Flatdeck deliveries:
1-855-467-3777 or 780-465-3777
HuskyFreight@truckloadlogistics.com
Sort Seq: Order Confirmation

Item	Material Description	Qty	Unit	Unit Price	Disc%	Net Price	Net Total
10	ZA1 VALVE GATE 3 IN RAISED FACE CLASS 150 FULL PORT BOLTED BONNET BODY A216 WCB CAST CARBON STEEL BODY TRIM 8 STELLITE SEATS API 600 VELAN F10-0064C-02TY COMES WITH CAT B TESTING (MPI and visual inspection and hydro report) /Shipment 821803794 / Heat Code: BNJ17L12/BNJ27L08	1	EA	0.00		579.76	579.76

Item Subtotal.....	579.76
Subtotal for Taxes.....	28.99
Packing Slip Amount.....	608.75

Pricing Include
GST TAX 28.99



DISTRIBUTION**NOW**

We Distribute Products That Deliver Energy to the World™
GST Registration# 12168 4302 RT0001

Packing Slip 311517368

Subject to Terms on Back Payment Terms: Net 60 Days Delivery Terms: EXW FROM PLANT Currency: CAD

DELIVERY ON TIME? YES ☐ NO ☐ / **DELIVERY ACCURATE?** YES ☐ NO ☐

X

Signature _____ Print Name Here _____ Date _____

GST Registration# 12168 4302 RT0001
To access the MTR(s) for products sold to you by DNOW please visit <http://metaltrace.distributionnow.com>

RECEIVED

DEC 17 2019

Ron Goetz

Questions: DNOW Canada ULC 380 MACKENZIE BLVD - BLDG 1C FORT MCMURRAY AB T9H 4C4 Phone: 780-791-7000
3E 24 Hour Emergency Response Contact +1-800-451-8346 (ACCESS# 334115) DNOW

We want to hear from you! Please send customer service comments and questions to cpl@dnow.com

PRESSLINGJH NOP
Page 2 of 2
12/13/2019 09:13:04





INSPECTION AND TEST CERTIFICATE

EN-10204-3.1

12/12/2019 10:42:48 AM

VELAN INC.
7007 Cote de Liesse
Montreal

Customer Name : DNOW

Valve Type : Full Port Gate

Figure Number : F10-0064C-02TY

Description : 3"150 GT RF WCB/13CR

Certificate : VC00044112

Date : 12/12/2019

Order :

Line :

Size : 3" (80 mm)

Pressure Class : 150 Class

Quantity : 1

HYDROSTATIC TEST

Test Standard : API-598	Hydro Test Results : ACCEPTABLE	Other Test : ACCEPTABLE
-------------------------	---------------------------------	-------------------------

Test Type	Shell	Packing	Seat (H.P.)	Seat (L.P.)	Backseat
Duration (sec)	60	60	N/A	60	60
Pressure (psig)	450	450	N/A	80	325
Result	ACCEPTABLE	ACCEPTABLE	N/A	ACCEPTABLE	ACCEPTABLE

A216-16-WCB-

				CHEMICALS										MECHANICALS				
Heat Code	Unit	Heat Treat	CE	Al	C	Cr	Cu	Mn	Mo	Ni	P	S	Si	V	ELONG	RED	UTS	YIELD
BNJ17L12	BODY	NORMALIZED	0.37	0.049	0.19	0.043	0.024	0.964	0.004	0.079	0.023	0.009	0.461	0.007	33	57	80.64	53.37
BNJ27L08	BONNET	NORMALIZED	0.37	0.048	0.2	0.042	0.032	0.933	0.018	0.052	0.032	0.01	0.477	0.006	31	58	77.31	48.73



INSPECTION AND TEST CERTIFICATE

EN-10204-3.1

Page 2 Of 2

12/12/2019 10:42:48 AM

TEST REPORT (EN 10204 - 2.1)

Valve Item	Specification
NUTS	ASTM-A194 2H
SEAT	ASTM-A105/A106+CoCr
STEM	ASTM-A479 SS410 CL.2
STUD	ASTM-A193 B7
WDGE	ASTM-A217 CA15

All Velan Valves are tested in accordance with specification required by the design. Valves designed to API specifications API 594, API 600, API 602, API 603, API 608, API 609 and API 623 are tested to API 598. Valves designed to B16.34 are tested to B16.34 and MSS-SP-61.

All materials are dually certifiable to ASTM / ASME.

The header information on this certificate (including customer name, valve description, figure number, and quantity) has been entered by the user of this application and he/she is therefore responsible for the accuracy of the data.

Velan certifies that valve(s) described above are in compliance with the requirements of the identified standards and specifications. This report is based on actual test results of chemical and mechanical properties as well as hydrostatic test, and is in compliance with EN 10204 3.1.

Victor Apostolescu
Vice President, QA

NDE EXAMINATION REPORT

REPORT# 53395
 MT ☒ LT ☐ VT ☒

Page 1 of 1

Date: December 11, 2019
 Client: DNOW Canada ULC
 Location: Rivest Technologies Inc.
 Examination Standard: ASME V Art. 7 & 9
 Acceptance Standard: Husky Cat. B
 Description: Item 10: Qty. (1): 3" 150# Gate Valve, Velan F10-0064C-02TY
 W.O. # 660919442
 P.O. # 53395
 JOB # 53395

EXAMINATION CONDITIONS: ☒ As Welded ☐ Base Metal ☐ As Ground ☒ Machined ☐ Painted ☐ Shot Blasted Inspection Temp: 15C

Minimum Light Requirements: Fluorescent = Blacklight $\geq 1000 \text{ uW/cm}^2$ Visible = Visible Light: $\geq 100 \text{ fc}$ @ exam surface

EQUIPMENT	SERIAL NO.	MPI TECHNIQUE	LPI TECHNIQUE	TEST MEDIUM
☒ Hand Yoke	Magnafix Y6 43530	☒ AC	☐ Water Washable	☒ Wet: Bayol
☒ Blacklight	Spectroline BIB 150P	☐ DC	☐ Solvent Removable	☒ Dry: Magnafix 14A
☒ Intensity Meter	Spectroline XR-1000 SN:1821145	☒ Continuous	Dwell Time 10 min	Batch #:
Calibrated / Due:	Yoke 12/11/19 Meter 9/10/19, 9/10/20 Daily Check OK	☐ Residual	Develop Time 10 min	
Rivest Procedure: MT-2-VT-1 Revision: 0 Lighting: LED				
☒ 10lb Bar TB0013				
Interpretation Time 10 min				

A visual and wet fluorescent particle examination was performed on all accessible areas of the following:

Item 10: Qty. (1): 3" 150# Gate Valve, Velan F10-0064C-02TY
 Serial #: V1
 Body Ht #: BNJ17L12
 Bonnet Ht #: BNJ27L08

No rejectable indications were noted during examination.
 Valve is acceptable to the above standards.

This Certificate or Report is valid only for that work which was specifically requested. The company is not responsible for any views or opinions expressed by employees performing this work which fall outside the contract terms or reference. All Certificates and/or Reports are the result of work performed in accordance with the standard practices. Final Code Acceptance shall require Client and Manufacturer Representative's signatures.

A.M.	P.M.	TOTAL HOURS	KMS	SUBSISTENCE	CONSUMABLES
TIME IN	TIME IN	TIME OUT	S.T.	MAN DAY	OT/MEALS
			hrs		
			O.T.		
			hrs		

Interpretation is done in accordance with the specified standard, to the best of my professional ability.

Technician Bill Parry SNT/CGSB Level CGSB II # 18188 Assistant

The above interpretation is a professional opinion, final interpretation is the responsibility of the client.

Client Representative (Print):

Sign:

Date: December 11, 2019

G O O D S R E C E I P T S L I P

No. 5003991126

Page 1

Goods Receipt date: 2019.09.10
Current Date: 2019.09.10

Plant:	2031	Description:	Sunrise Oilsands
Vendor :	0011029833	Name:	KELVION INC
Delivery Note:	7573	Bill of Lading:	
GR Slip:		Header Text:	
PO:	8401396813 / 20	Telephone:	587-747-8351
Pur. group:	688 Mike Mccaffery		

Itm	Material	Description	
PO Itm	SLoc	Storage bin	
Qty.	Un		
0001	18005885	PLUG,GEA RAINEY,P-9-8-LF2,SHLDR	
	4010	126C01	30 EA
00010			
0002	18005886	GASKET, XCHGR,GEA RAINEY,PLUG,1 1/8 "	
	4010	126C03	382 EA
00020			

Issued by: Kevin Shearer S I G N A T U R E

Kelvion**COMMERCIAL INVOICE**

QF-FAB-850-4

CUSTOMER PO #8401396813		INVOICE NO: 7573
KELVION JOB NO: R-11987	KELVION ITEM NO: N/A	INVOICE DATE: 9/3/19

SOLD TO:	HUSKY OIL OPERATIONS LTD BOX 4490, STATION D CALGARY AB T2P 3G7 CANADA	SHIP TO:	HUSKY OIL OPERATIONS, SUNRISE OPS 3KM CANTERRA RD, LSD 4-15-95-7 W4M FORT MCKAY AB T0P 1C0 CANADA
----------	---	----------	--

FOB CATOOSA, OK	DATE SHIPPED: 9/4/19
SHIPPED VIA: COURIER	PPD: COL: X

ITEM	QTY	DESCRIPTION	NET UNIT PRICE (U.S. DOLLARS)	AMOUNT (U.S. DOLLARS)
001	30	PLUG, P-9-8	5.15	154.50
002	382	GASKET, G-9	.25	95.50
ANY APPLICABLE SALES/USE TAX IS THE RESPONSIBILITY OF THE BUYER			TOTAL:	\$250.00
CUSTOMS BROKER:	FARROW, TRICIA MILTON: 780-423-5468 EXT. 266, edmontonteam1@farrow.com			
COUNTRY OF ORIGIN:	UNITED STATES OF AMERICA			
TERMS: NET 30 DAYS	REMITTANCE ADDRESS: KELVION, INC. THERMAL SOLUTIONS DEPARTMENT NO. 1170 TULSA, OK 74182			
SHIPPING COORDINATOR: ROGER HAIRE				

QUALITY FORM: QF-FAB-850-1

CUSTOMER PURCHASE ORDER NO:	8401396813
CUSTOMER ITEM NO:	N/A
KELVION JOB NO:	R-11987
BUNDLE NUMBER:	1

PACKING LIST

Kelvion Inc. Thermal Solutions
5202 West Channel Road
Catoosa, Oklahoma 74015
Tel. 918-266-3060, www.kelvion.com
ISO 9001:2008 QMS Certified

U.S. DEPARTMENT OF HOMELAND SECURITY
Bureau of customs and border protection

OMB NO. 1651-0098

See back of form for paper
work reduction act notice

NORTH AMERICAN FREE TRADE AGREEMENT
CERTIFICATE OF ORIGIN

19 CFR 181.11, 181.22

1. EXPORTER NAME AND ADDRESS Kelvion Inc. 5202 West Channel Road Catoosa, OK 74015 TAX IDENTIFICATION NUMBER 51-0268494		2. BLANKET PERIOD (mm/dd/yy) FROM: 9/3/2019 To: 9/2/2020				
3. PRODUCER NAME AND ADDRESS SAME AS BOX 1 TAX ID NUMBER:		4. IMPORTER NAME AND ADDRESS HUSKY OIL OPERATIONS LTD, SUNRISE OPS 3 KM CANTERRA RD, LSD 4-15-95-7 W4M FORT MCKAY AB T0P 1C0 CANADA TAX ID NUMBER: UNKNOWN				
5. DESCRIPTION OF GOODS SPARE PARTS FOR AIR COOLED HEAT EXCHANGERS		6. HS TARIFF CLASSIFICATION NUMBER	7 PREFERENCE CRITERIA	8 PRODUCER	9 NET COST	10 COUNTRY OF ORIGIN
		8419.50	n/c	YES	no	U.S.A

I CERTIFY THAT:

- THE INFORMATION ON THIS DOCUMENT IS TRUE AND ACCURATE AND I ASSUME THE RESPONSIBILITY FOR PROVING SUCH REPRESENTATIONS. I UNDERSTAND THAT I AM LIABLE FOR FALSE STATEMENTS OR MATERIAL OMISSIONS MADE ON OR IN CONNECTION WITH THIS DOCUMENT;
- I AGREE TO MAINTAIN, AND PRESENT UPON REQUEST, DOCUMENTATION NECESSARY TO SUPPORT THIS CERTIFICATE AND TO INFORM, IN WRITING, ALL PERSON TO WHOM THE CERTIFICATE WAS GIVEN OF ANY CHANGES THAT COULD AFFECT THE ACCURACY OR VALIDITY OF THIS CERTIFICATE;
- THE GOODS ORIGINATED IN THE TERRITORY OF ONE OR MORE OF THE PARTIES, AND COMPLY WITH THE ORIGIN REQUIREMENTS SPECIFIED FOR THOSE GOODS IN THE NORTH AMERICAN FREE TRADE AGREEMENT, AND UNLESS SPECIFICALLY EXEMPTED IN ARTICLE 411 OR ANNEX 401, THERE HAS BEEN NO FURTHER PRODUCTION OR ANY OTHER OPERATION OUTSIDE THE TERRITORIES OF THE PARTIES; AND
- THIS CERTIFICATE CONSISTS _____ PAGES, INCLUDING ALL ATTACHMENTS.

11.	11a. AUTHORIZED SIGNATURE: 		11b. COMPANY: KELVION INC.	
	11c. NAME (print or type): ROGER HAIRE		11d. TITLE: SHIPPING COORDINATOR	
	11e. Date 9/3/2019	11f. Telephone:	(Voice) 918-266-3060 ext. 282	(Facsimile) 918-266-9285

G O O D S R E C E I P T S L I P

No. 5004818262

Page 1

Goods Receipt date: 2021.04.16
Current Date: 2021.04.16

Plant:	2031	Description:	Sunrise Oilsands
Vendor	: 0011028490	Name:	DNOW CANADA ULC
Delivery Note:	312395152	Bill of Lading:	W361883
GR Slip:		Header Text:	
PO:	8401501249 / 10	Telephone:	587-774-2891
Pur. group:	688 Jordan Driessen		

Itm	Material	Description	
PO Itm	SLoc	Storage bin	
Qty.	Un		
0001	18047572	VALVE, BALL,10 ",150 #,RF,SS,A351,CF8M	
	4010	RESERVE	2 EA
00010			

Issued by: Kevin Shearer S I G N A T U R E

DISTRIBUTION **NOW**

We Distribute Products That Deliver Energy to the World™

Packing Slip 312395152

W361883

Customer PO 8401501249	Sales Order 100635179	Shipment Refer to Item	Packing Slip	**** THIS IS NOT AN INVOICE DO NOT PAY FROM THIS DOCUMENT	Date: 04/14/2021
Bill To HUSKY ENERGY POD - CORTEX INVOICING BOX 4490, STATION D CALGARY AB T2P 3G7		Cust Num: 101995 Ship To HUSKY OIL OPERATIONS SUNRISE OPERATIONS LSD 4-15-95-7-W4M 3KM CANTERRA ROAD FORT MACKAY AB T0P 1C0		Interim Ship To 1 SKID 4X4X3 1600 LBS	
PO Number: 8401501249 Cost Center: 111111 Location: SUNRISE		Approver Code: 111111 LSD: LSD 4-15-95-7-W4M GL Code: 111111		Requisitioner: JORDAN DRIESSEN Ordered By: AMANDA CLIFT	

DELIVERY 1- 2 DAYS

REQUIRED

MTRS

VALVE TAGS

All Shipments within Canada or International

Contact TF Truckload and Logistics to arrange pickup or schedule a delivery appointment for Truckload and Flatdeck deliveries:

For same day pick-up in Calgary, please contact TF Truckload and Logistics before 2:00 p.m.

1-855-467-3777 or 780-465-3777

HuskyFreight@tftruckloadlogistics.com

Sort Seq: Order Confirmation

Item Material Description

Item	Material	Description	Qty	UM
5	ZA1	BALL VALVE 10 KF E3768-229F636A1 CLASS 150 316SS RAISED FACE 316 FULL PORT FORGED STEEL TM GEAR OPERATED DEVLON SEATS WITH EOL 985 LOW TEMP SEALS **BOLTS ARE B7M WITH XYLON COATING **SEATS ARE DEVLON ----- OFFERING FOR VALVE, BALL, VALVE SIZE: 10 IN, PRESSURE RATING: 150 LB, CONNECTION TYPE: RF, BODY MATERIAL: STAINLESS STEEL, MATERIAL SPECIFICATION: ASTM A351, GRADE: CF8M, BALL	2	EA

Questions: DNOW Canada ULC 380 MACKENZIE BLVD - BLDG 1C FORT MCMURRAY AB T9H 4C4 Phone: 780-791-7000

3E 24 Hour Emergency Response Contact + 1-800-451-8346 (ACCESS# 334115) DNOW

We want to hear from you! Please send customer service comments and questions to cpl@dnw.com

PINNOMN NOP

Page 1 of 2

04/14/2021 13:50:26



PLEASE REPORT DISCREPANCIES WITHIN 72 HOURS OF RECEIPT.

Item	Material	Description	Qty	UM
------	----------	-------------	-----	----

~~MATERIAL: 316 STAINLESS STEEL,~~
SEAT MATERIAL: GRAPHITE REINFORCED PTFE SEAT,
SEAL MATERIAL: PTFE CUP AND CONE PACKING,
STEM MATERIAL: 316 STAINLESS STEEL,
OPERATOR: GEAR,
PORT TYPE: FULL BORE TRUNNION MOUNTED BALL,
INDUSTRY STANDARD: B16.34 ,
B16.5 FLANGES,
ADDITIONAL DETAILS: RTFE ST, A193 B7M CL 2 BOLTS,A194 2HM NUTS, 316
SS/GRAPHITE SP WD GASKET, NACE MR0175/ ISO15156,CAT A, TRUN, BB, TE,
RP,

TAG INFO
18047572
8401501249

/Shipment 823579384 /

Customer Mat. No. 18047572

Heat Code: N3866-1/N4224-2 N9861-1/N8740-2 •

Subject to Terms on Back Payment Terms: Net 60 Days Delivery Terms: EXW FROM PLANT Currency: CAD

DELIVERY ON TIME? YES [] NO [] / DELIVERY ACCURATE? YES [] NO []

X

Signature

Print Name Here

Date

GST Registration# 12168 4302 RT0001

To access the MTR(s) for products sold to you by DNOW please visit <https://metaltrace.dnow.com>

Questions: DNOW Canada ULC 380 MACKENZIE BLVD - BLDG 1C FORT MCMURRAY AB T9H 4C4 Phone: 780-791-7000

3E 24 Hour Emergency Response Contact + 1-800-451-8346 (ACCESS# 334115) DNOW

We want to hear from you! Please send customer service comments and questions to cp1@dnow.com

PINNOMN NOP
Page 2 of 2
04/14/2021 13:50:26



**VALVE CERTIFICATION**11327 TANNER ROAD
HOUSTON, TX 77041

ISO 10474 (2013)

DIN EN 10204 (2004)

MATERIAL CERTIFICATION 3.1

Page 1 OF 2

SOLD TO	AIV, L.P. - CANADA	KF TICKET	T87563	QTY	2
SHIPPED TO	AIV CANADA	CUSTOMER PO	1128306	ITEM NO	12
PART NO.	E3768-229F636A1	REF. PO		TAG NO	

VALVE DESCRIPTION			
VALVE SIZE (IPS)	10" FP	SERIES	FAE
VALVE PRESSURE CLASS	ANSI CL150	BALL VALVE	
VALVE END CONNECTION	RF X RF	TYPE	Trunnion

VALVE COMPONENT PARTS	VALVE COMPONENT MATERIAL	MIL	MTR
BODY	STAINLESS STEEL	N/A	X
ADAPTER	STAINLESS STEEL	N/A	X
BALL	STAINLESS STEEL		X
SEAT INSERTS	DEVLON		
SEALS	ELAST-O-LION 985		

VALVE REQUIREMENTS
NON NACE [] NACE-MRO175-2015 (ISO 15156) [X]
MONOGRAM: API 6D 24TH ed. [X]
FIRE SAFE CERTIFIED: API 607 6th ed. [X] API 6FD 1ST ed. []

OPTIONS	
BARE STEM	
HANDLE	
GEAR OPERATOR	X
ACTUATION	
INTERNAL COATING	
EXTERNAL COATING	
QSL 1	X
HIGH HEAD EXTENSION	

CERTIFICATE OF CONFORMANCE
IT IS CERTIFIED THAT THE ABOVE REFERENCED PRODUCTS HAVE BEEN MANUFACTURED, INSPECTED AND TESTED IN ACCORDANCE WITH ALL APPLICABLE SPECIFICATIONS-ADDENDA, DRAWINGS AND/OR OTHER PURCHASE ORDER REQUIREMENTS.

CERTIFICATE OF ORIGIN
IT IS CERTIFIED THAT THE ABOVE REFERENCED PRODUCTS WERE PRODUCED IN THE USA FROM GLOBALLY SOURCED PARTS.
THE PRODUCTS DO NOT CONTAIN ANY MERCURY AND/OR ASBESTOS CONTAMINATION IN THE MATERIALS.

CERTIFIED TEST RECORD API 6D[X] API 598[] ANSI B16.34[X] OTHER/SPECIFY[] 49 CFR Ch. 1 PART192 CLASS 3[X]

TEST TYPE	PRESSURE (PSIG)	TIME IN MINUTES	TEST MEDIA	TEST RESULTS	INSPECTION	INSPECTION RESULTS
HYDROSTATIC SHELL			WATER W/INHIBITOR	ZERO LEAKAGE	DIMENSIONAL	GOOD

IT IS CERTIFIED THAT THE ABOVE INFORMATION IS TRUE AND CORRECT AS CONTAINED IN THE RECORDS OF CIRCOR ENERGY PRODUCTS.

KF QUALITY ASSURANCE:

C. GinterPrepared By:
SC

DATE

01/28/2021

CUSTOMER INSPECTOR:

N/A

DATE

**VALVE CERTIFICATION**11327 TANNER ROAD
HOUSTON, TX 77041

ISO 10474 (2013)

DIN EN 10204 (2004)

MATERIAL CERTIFICATION 3.1

Page 2 OF 2

PART NO	E3768-229F636A1	QTY	2	ITEM NO	12	KF TICKET	T87563
---------	-----------------	-----	---	---------	----	-----------	--------

	VALVE S/N	Body	Adapter 1	Ball
1	851939-001	N9861-2	N8740	SZ13711
2	851939-002	N9861-1	N8740	SZ13711

IT IS CERTIFIED THAT THE ABOVE INFORMATION IS TRUE AND CORRECT AS CONTAINED IN THE RECORDS OF CIRCOR ENERGY PRODUCTS.

KF QUALITY ASSURANCE:

C. Giner

Prepared By:

SC

DATE

01/28/2021

CUSTOMER INSPECTOR:

N/A

DATE



CIRCOR MEXICO S.A.DE C.V.
AVENIDA AVANTE MONTERREY 401
PARQUE INDUSTRIAL AVANTE MON
GARCIA NIEVO LEON
MEXICO

MATERIAL TEST REPORT

SECTION 3 OF 3

PART NO.	03264-219
P.O. NO.	P50626-1.1
QUANTITY	1
HEAT CODE/NO.	N9861-1
VENDOR NO.	V11122

DATE	2020.03.11
INDUSTRY SPEC.	ASTM A351,2018 CF8M
MATERIAL TYPE	CF8M
CERTIFICATE NO	MA13697

CHEMICAL TEST RESULTS

C	MN	SI	P	S	CR	NI	MO	V	CU	W	CE
0.060	0.850	1.140	0.030	0.010	18.400	9.300	2.100				

NEW CHEMICAL TEST RESULTS

PHYSICAL TEST RESULTS

TENSILE (PSI)	75419.62
YIELD (PSI)	37274.7
% ELONGATION	53
% REDUCTION OF AREA	

HARDNESS

(BHN) BRINNELL	170 TO	179
(RB) ROCKWELL B SCALE		
(RC) ROCKWELL C SCALE		

CHARPY IMPACT TEST RESULTS (FT-LBS).(IF APPLICABLE)

TEST TEMP.	1	2	3

HEAT TREATMENT OR HEAT TREAT CONDITION (IF APPLICABLE)

Solution Annealing: Heated to 1100°C, 2.3 hours Water Quenched.

Reviewed
CIRCOR
Inspector Quality
Name: Sathish Kumar P
Date: P. Sathish

Prepared by CIRCOR VALVE CO.

Sathish Kumar P
Review & Approved by:

Gothandaraman.S
AUTHORIZED SIGNATURE



CIRCOR MEXICO S.A.DE C.V.
AVENIDA AVANTE MONTERREY 401
PARQUE INDUSTRIAL AVANTE MON
GARCIA NIEVO LEON
MEXICO

MATERIAL TEST REPORT

SECTION 3 OF 3

PART NO.	03264-219
P.O. NO.	P50626-1.1
QUANTITY	1
HEAT CODE/NO.	N9861-2
VENDOR NO.	V11122

DATE	2020.03.11
INDUSTRY SPEC.	ASTM A351,2018 CF8M
MATERIAL TYPE	CF8M
CERTIFICATE NO	MA13698

CHEMICAL TEST RESULTS

C	MN	SI	P	S	CR	NI	MO	V	CU	W		CE
0.060	0.850	1.140	0.030	0.010	18.400	9.300	2.100					

NEW CHEMICAL TEST RESULTS

PHYSICAL TEST RESULTS

TENSILE (PSI)	75419.62
YIELD (PSI)	37274.7
% ELONGATION	53
% REDUCTION OF AREA	

HARDNESS

(BHN) BRINNELL	170 TO	179	
(RB) ROCKWELL B SCALE			
(RC) ROCKWELL C SCALE			

CHARPY IMPACT TEST RESULTS (FT-LBS).(IF APPLICABLE)

TEST TEMP.	1	2	3

HEAT TREATMENT OR HEAT TREAT CONDITION (IF APPLICABLE)

Solution Annealing: Heated to 1100°C,2.3 hours Water Quenched.

Reviewed
CIRCOR
Inspector Quality
Name: Sathish Kumar P
Date:
P. Sathish

Prepared by CIRCOR VALVE CO.

Sathish Kumar P
Review & Approved by:

Gothandaraman.S
AUTHORIZED SIGNATURE



CIRCOR ENERGY PRODUCT, INC
775 Spartan Blvd, Suite 209
Spartanburg, SC 29301
United States

MATERIAL TEST REPORT

SECTION 3 OF 3

PART NO.	03299-219
P.O. NO.	S80025-9
QUANTITY	1
HEAT CODE/NO.	N8740-2
VENDOR NO.	V1381

DATE	2019.07.29
INDUSTRY SPEC.	ASTM A351 , 2018 CF8M
MATERIAL TYPE	CF8M
CERTIFICATE NO	MA12025

CHEMICAL TEST RESULTS

C	MN	SI	P	S	CR	NI	MO	V	CU	W		CE
0.070	1.190	1.280	0.020	0.010	18.300	9.800	2.100					

NEW CHEMICAL TEST RESULTS

PHYSICAL TEST RESULTS

TENSILE (PSI)	75999.77
YIELD (PSI)	38144.93
% ELONGATION	60
% REDUCTION OF AREA	

HARDNESS

(BHN) BRINNELL	170 TO	179	
(RB) ROCKWELL B SCALE			
(RC) ROCKWELL C SCALE			

CHARPY IMPACT TEST RESULTS (FT-LBS).(IF APPLICABLE)

TEST TEMP.	1	2	3

HEAT TREATMENT OR HEAT TREAT CONDITION (IF APPLICABLE)

Solution Annealing: Heated to 1100°C, Three hours Water Quenched.

Inspected OK
OKC QA

CIRCOR

Supplier Quality
Name: Praveen Kumar B.
Date:

Praveen Kumar B
Review & Approved by:

Gothandaraman.S
AUTHORIZED SIGNATURE

Prepared by CIRCOR VALVE CO.



CIRCOR ENERGY PRODUCT, INC
775 Spartan Blvd, Suite 209
Spartanburg, SC 29301
United States

MATERIAL TEST REPORT

SECTION 3 OF 3

PART NO.	03299-219
P.O. NO.	S80025-9
QUANTITY	1
HEAT CODE/NO.	N8740-3
VENDOR NO.	V1381

DATE	2019.07.30
INDUSTRY SPEC.	ASTM A351 , 2018 CF8M
MATERIAL TYPE	CF8M
CERTIFICATE NO	MA12036

CHEMICAL TEST RESULTS

C	MN	SI	P	S	CR	NI	MO	V	CU	W		CE
0.070	1.190	1.280	0.020	0.010	18.300	9.800	2.100					

NEW CHEMICAL TEST RESULTS

PHYSICAL TEST RESULTS

TENSILE (PSI)	75999.77
YIELD (PSI)	38144.93
% ELONGATION	60
% REDUCTION OF AREA	

HARDNESS

(BHN) BRINELL	170 TO	179	
(RB) ROCKWELL B SCALE			
(RC) ROCKWELL C SCALE			

CHARPY IMPACT TEST RESULTS (FT-LBS), (IF APPLICABLE)

TEST TEMP.	1	2	3

HEAT TREATMENT OR HEAT TREAT CONDITION (IF APPLICABLE)

Solution Annealing: Heated to 1100°C, Three hours Water Quenched.

Inspected OK
OKC QA



Prepared by CIRCOR VALVE CO.

Praveen Kumar. B
Review & Approved by:

Gothandaraman.S
AUTHORIZED SIGNATURE



Circor Energy
1500 S.E. 89TH STREET
OKLAHOMA CITY, OK 73149
405-631-1533

MATERIAL TEST REPORT

SECTION 3 OF 3

PART NO.	05042-002
P.O. NO.	D78667
QUANTITY	4
HEAT CODE/NO.	SZ13711
VENDOR NO.	V4239

DATE	2020.10.10
INDUSTRY SPEC.	ASTM A182 Gr. 316
MATERIAL TYPE	SS
CERTIFICATE NO	
(BALL)	05042-002

CHEMICAL TEST RESULTS

C	MN	SI	P	S	CR	NI	MO	V	CU	W		CE
0.014	0.810	0.350	0.040	0.001	16.240	10.050	2.050					

NEW CHEMICAL TEST RESULTS

PHYSICAL TEST RESULTS

TENSILE (PSI)	78880
YIELD (PSI)	47415
% ELONGATION	43
% REDUCTION OF AREA	69

HARDNESS

(BHN) BRINNELL	159	167	
(RB) ROCKWELL B SCALE			
(RC) ROCKWELL C SCALE			

CHARPY IMPACT TEST RESULTS (FT-LBS), (IF APPLICABLE)

TEST TEMP.	1	2	3

HEAT TREATMENT OR HEAT TREAT CONDITION (IF APPLICABLE)

Austenitizing: Temp. up to 1050°C (Min), retaining 4Hours and water cooling

jin.jian

Review & Approved by:

zhou.wei

AUTHORIZED SIGNATURE

Prepared by CIRCOR VALVE CO.

**VALVE CERTIFICATION**

Avenida Avante Monterrey 401 Parque Industrial Avante Monterrey

Garcia, NL, Mexico C.P. 66023

ISO 10474 (2013)

DIN EN 10204 (2004)

MATERIAL CERTIFICATION 3.1

PAGE 1 OF 2

SOLD TO:	CIRCOR COMPANY	CEP TICKET	P34539	QTY	3	TAG NO.:
SHIPPED TO:	AIV LP CANADA	CUSTOMER PO	1109325			
PART NO.:	E3768-229F636A1	REF. PO		ITEM NO.	1882	

VALVE DESCRIPTION				VALVE REQUIREMENTS			
VALVE SIZE (IPS)	10" FP	SERIES	FAE	NON NACE [] NACE-MRO175-2015 (ISO 15156) [X]			
VALVE PRESSURE CLASS	ANSI CL150	BALL VALVE		{MONOGRAM: API 6D 24th ed [] API 6A 20th ed [] NON API [X]			
VALVE END CONNECTION	RF X RF	Type	Trunnion	FIRE SAFE CERTIFIED: API 6FA 3 RD ed. [X] API 6FD 1 ST ed. []			
VALVE COMPONENT PARTS	VALVE COMPONENT MATERIAL	ENP	MTR	OPTIONS		CERTIFICATE OF CONFORMANCE	
BODY	STAINLESS STEEL	N/A	X	BARE STEM:		IT IS CERTIFIED THAT THE ABOVE REFERENCED PRODUCTS HAVE BEEN MANUFACTURED, INSPECTED AND TESTED IN ACCORDANCE WITH ALL APPLICABLE SPECIFICATIONS, DRAWINGS AND/OR OTHER PURCHASE ORDER REQUIREMENTS.	
ADAPTER	STAINLESS STEEL	N/A	X	HANDLE:			
BALL	STAINLESS STEEL	N/A	X	GEAR OPERATOR:	X		
SEAT INSERTS	DEVLO			ACTUATION:			
SEALS	ELAST-O-LION 985			HIGH HEAD EXTENSION		CERTIFICATE OF ORIGIN	
				INTERNAL COATING:		IT IS CERTIFIED THAT THE ABOVE REFERENCED PRODUCTS WERE ASSEMBLED IN MEXICO.	
				EXTERNAL COATING:			
				QSL 1	X	THE PRODUCTS DO NOT CONTAIN ANY MERCURY OR ASBESTOS CONTAMINATION IN THE MATERIALS	
				CAT II M45C ISO-FT	X		
				CSA Z245.15-13 COMPLIANT	X		
				SOUR SERVICE	X		

CERTIFIED TEST RECORD API 6D [X] API 598 [] ANSI B16.34 [] OTHER / SPECIFY [] 49 CFR Ch.1 PART192 CLASS 3 [X]

TEST TYPE	PRESSURE (PSIG)	TIME IN MINUTES	TEST MEDIA	TEST RESULTS	INSPECTION	INSPECTION RESULTS
HYDROSTATIC SHELL	425	5 MIN	WATER W/INHIBITOR [X] 60/40 GLYCOL/WATER []	ZERO LEAKAGE	DIMENSIONAL	GOOD
HYDROSTATIC SEAT	325	5 MIN	SAME SAME	SAME	VISUAL	GOOD
DOUBLE BLOCK	325	5 MIN	SAME SAME	SAME	VISUAL	GOOD
AIR SEAT	N/A					

IT IS CERTIFIED THAT THE ABOVE INFORMATION IS TRUE AND CORRECT AS CONTAINED IN THE RECORDS OF CIRCOR MX PRODUCTS.

CIRCOR MX QUALITY ASSURANCE:

Be Aha De z

Prepared By:

BR

DATE

02-9-19

CUSTOMER INSPECTOR:

N/A

DATE

**VALVE CERTIFICATION**

Avenida Avante Monterrey 401 Parque Industrial Avante Monterrey
Garcia, NL, Mexico C.P. 66023

ISO 10747 (2013)

DIN EN 10204 (2004)

MATERIAL CERTIFICATION 3.1

PAGE 2 OF 2

PART NO.:

E3768-229F636A1

QTY:

3

ITEM NO.:

1882

CEP SHIP TKT NO:

P34539

COMPONENT HEAT CODES

	VALVE S/N	BODY	ADAPTER	BALL
1	20910-21-1-001	N3861-1	N4224-3	FD3358
2	20910-21-1-002	N3866-1	N4224-2	FD3358
3	20910-21-1-003	R6JX90	N4224-1	FD3358
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				

COMPONENT HEAT CODES

	VALVE S/N	BODY	ADAPTER	BALL
26				
27				
28				
29				
30				
31				
32				
33				
34				
35				
36				
37				
38				
39				
40				
41				
42				
43				
44				
45				
46				
47				
48				
49				
50				

COMPONENT HEAT CODES

	VALVE S/N	BODY	ADAPTER	BALL
51				
52				
53				
54				
55				
56				
57				
58				
59				
60				
61				
62				
63				
64				
65				
66				
67				
68				
69				
70				
71				
72				
73				
74				
75				

IT IS CERTIFIED THAT THE ABOVE INFORMATION IS TRUE AND CORRECT AS CONTAINED IN THE RECORDS OF CIRCOR MX PRODUCTS.

CIRCOR MX QUALITY ASSURANCE:

Beatha Rodriguez

DATE

02-9-19

CUSTOMER INSPECTOR:

N/A

DATE



Circor Energy
1500 S.E. 89TH STREET
OKLAHOMA CITY, OK 73149
405-631-1533

MATERIAL TEST REPORT

SECTION 3 OF 3

PART NO.	C3264-219
P.O. NO.	S60704
QUANTITY	1
HEAT CODE/NO.	N3861
VENDOR NO.	V1381

DATE	2017.07.28
INDUSTRY SPEC.	ASTM A351,2016 CF8M
MATERIAL TYPE	CF8M
CERTIFICATE NO	AA26520

CHEMICAL TEST RESULTS

C	MN	SI	P	S	CR	NI	MO	V	CU	W		CE
0.030	1.100	0.770	0.030	0.010	18.100	10.200	2.500					
NEW CHEMICAL TEST RESULTS												

PHYSICAL TEST RESULTS

TENSILE (PSI)	74985
YIELD (PSI)	38290
% ELONGATION	59
% REDUCTION OF AREA	

HARDNESS

(BHN) BRINNELL	174TO 1	183	
(RB) ROCKWELL B SCALE			
(RC) ROCKWELL C SCALE			

CHARPY IMPACT TEST RESULTS (FT-LBS),(IF APPLICABLE)

TEST TEMP.	1	2	3

HEAT TREATMENT OR HEAT TREAT CONDITION (IF APPLICABLE)

Solution Annealing: Heated to 1100°C, five hours Water Quenched.

Raja Subramaniam
Review & Approved by:

Prakash Selvaraj
AUTHORIZED SIGNATURE

Prepared by CIRCOR VALVE CO.



Circor Energy
1500 S.E. 89TH STREET
OKLAHOMA CITY, OK 73149
405-631-1533

MATERIAL TEST REPORT

SECTION 3 OF 3

PART NO.	C3264-219
P.O. NO.	S60704
QUANTITY	1
HEAT CODE/NO.	N3866
VENDOR NO.	V1381

DATE	2017.07.29
INDUSTRY SPEC.	ASTM A351,2016 CF8M
MATERIAL TYPE	CF8M
CERTIFICATE NO	AA26575

CHEMICAL TEST RESULTS

C	MN	SI	P	S	CR	NI	MO	V	CU	W		CE
0.060	1.060	0.860	0.030	0.010	18.300	10.400	2.200					

NEW CHEMICAL TEST RESULTS

PHYSICAL TEST RESULTS

TENSILE (PSI)	74404
YIELD (PSI)	37275
% ELONGATION	59
% REDUCTION OF AREA	

HARDNESS

(BHN) BRINNELL	170TO 1	179	
(RB) ROCKWELL B SCALE			
(RC) ROCKWELL C SCALE			

CHARPY IMPACT TEST RESULTS (FT-LBS).(IF APPLICABLE)

TEST TEMP.	1	2	3

HEAT TREATMENT OR HEAT TREAT CONDITION (IF APPLICABLE)

Solution Annealing: Heated to 1100°C, five hours Water Quenched.

Raja Subramaniam

Review & Approved by:

Prakash Selvaraj

AUTHORIZED SIGNATURE

Prepared by CIRCOR VALVE CO.

**ARUNA ALLOY STEELS PVT.LIMITED Unit 1**

Super B3 & B6, Industrial Estate, Madurai - 625 007

Phone :0452 - 256 4300, 301, Fax :0452 - 256 6644, Mail :aruna@arunasteel.com, Division : Madurai II

Division, Range : North Range, TIN No.:33384882329, CST No.:149795 DT. 16.04.2004

Certified Material Test Report (After Machining)**(Inspection Certificate - EN 10204 3.1)**

Customer : CIRCOR ENERGY PRODUCT,INC 1500 SE 89TH STREET OKLAHOMA CITY OK 73149-4607 United States	T.C. # : MA03932 T.C. Date : 29-Sep-17
P. Order # : D66947 P.O. SI.# 4. Date 18/08/2017	Heat # : N4224 Qty : 1 Pour Date : 02-Sep-17
Specification : ASTM A351 , 2016 CF8M	Casting Processed By Induction Melting Foundry Identification : AMT
TDC # : 9290001 Rev. 15354	

Item Description	Product Identification
Part Name : ADPT-RF 10FP CL150 SS/PMI SER FA	Fry. : Heat - SI.# : N4224 - 1 P.T.# : ADA07116
Drawing # : C2693/15509	Mcg. : Heat - SI.# : N4224 - 1
Cast.Wt(kgs) : 108	
Model / Part # : C3299-219D1	
Mech.Test Std : ASTM A370	
Mcg. Draw # : C3299/15509	
Sub Draw # :	
Hard.Ref.Std : ASTM E10,NACE MR0175	

Chemical Composition %

Element	C	Mn	Si	P	S	Ni	Cr	Mo
Minimum						9.0	18.0	2.0
Maximum	0.08	1.50	1.50	0.04	0.04	12.0	21.0	3.0
Actual	0.07	1.17	0.96	0.03	0.00	9.5	18.3	2.1

Heat Treatment

Process	Cycle		Soaking			Cool Media
	No.	Date	Temp °C	Temp °F	Hrs	
Solution Annealing	J1957	07/09/2017	1100	2012	5	Water

Room Temperature Tensile Test Analysis

Mechanical Test	Test Temp.	UOM	Min	Max	Actual	UOM	Min	Max	Actual
Yield Strength (0.2%Rp)	R.T	MPa	241		274	Kgf/Sq.mm	25		28
Tensile Strength	R.T	MPa	485		529	Kgf/Sq.mm	49		54
Elongation (50mm)	R.T	%	30		53				
Hardness Test	R.T	HBW		237	(174 - 183)	HRC		22	9 - 11

Welding status : No Weld Performed**Remarks**

1. Certified that Acid Pickling and Passivation done on Casting.
2. Certified that the Supplied Castings are free from Radioactive Contamination
3. Visual inspection as per EN 1370 and MSS-SP-55 Type - I defect unacceptable and type II to XII fig "a" acceptable .

The Certification shall affirm that contents of the report are correct and accurate and that all test results and operations performed by Aruna are in compliance with the material specification


 Raja. C (Incharge-Lab)

Quality Control



**ARUNA ALLOY STEELS PVT.LIMITED Unit 1**

Super B3 & B6, Industrial Estate, Madurai - 625 007

Phone :0452 - 256 4300, 301, Fax :0452 - 256 6644, Mail :aruna@arunasteel.com, Division : Madurai II
Division, Range : North Range, TIN No.:33384882329, CST No.:149795 DT. 16.04.2004**Certified Material Test Report (After Machining)****(Inspection Certificate - EN 10204 3.1)**Customer : CIRCOR ENERGY PRODUCT,INC
1500 SE 89TH STREET
OKLAHOMA CITY OK 73149-4607
United StatesT.C. # : MA03933
T.C. Date : 29-Sep-17

P. Order # : D66947 P.O. SI.# 4. Date 18/08/2017

Heat # : N4224 Qty : 1
Pour Date : 02-Sep-17

Specification : ASTM A351 , 2016 CF8M

Casting Processed By Induction Melting

TDC # : 9290001 Rev. 15354

Foundry Identification : AMT

Item Description
Part Name : ADPT-RF 10FP CL150 SS/PMI SER FA**Product Identification**Drawing # : C2693/15509
Cast.Wt(kgs) : 108
Model / Part # : C3299-219D1
Mech.Test Std : ASTM A370
Mcg. Draw # : C3299/15509
Sub Draw # :
Hard.Ref.Std : ASTM E10,NACE MR0175Fry. : Heat - SI.# : P.T.#
N4224 - 3 ADA07114Mcg. : Heat - SI.#
N4224 - 3**Chemical Composition %**

Element	C	Mn	Si	P	S	Ni	Cr	Mo
Minimum						9.0	18.0	2.0
Maximum	0.08	1.50	1.50	0.04	0.04	12.0	21.0	3.0
Actual	0.07	1.17	0.96	0.03	0.00	9.5	18.3	2.1

Heat Treatment

Process	Cycle		Soaking			Cool Media
	No.	Date	Temp °C	Temp °F	Hrs	
Solution Annealing	J1957	07/09/2017	1100	2012	5	Water

Room Temperature Tensile Test Analysis

Mechanical Test	Test Temp.	UOM	Min	Max	Actual	UOM	Min	Max	Actual
Yield Strength (0.2%Rp)	R.T	MPa	241		274	Kgf/Sq.mm	25		28
Tensile Strength	R.T	MPa	485		529	Kgf/Sq.mm	49		54
Elongation (50mm)	R.T	%	30		53				
Hardness Test	R.T	HBW		237	(174 - 183)	HRC		22	9 - 11

Welding status : No Weld Performed**Remarks**

1. Certified that Acid Pickling and Passivation done on Casting.
2. Certified that the Supplied Castings are free from Radioactive Contamination
3. Visual inspection as per EN 1370 and MSS-SP-55 Type - I defect unacceptable and type II to XII fig "a" acceptable .

The Certification shall affirm that contents of the report are correct and accurate and that all test results and operations performed by Aruna are in compliance with the material specification

Raja. C (Incharge-Lab)

Quality Control



**ARUNA ALLOY STEELS PVT.LIMITED Unit 1**

Super B3 & B6, Industrial Estate, Madurai - 625 007

Phone :0452 - 256 4300, 301, Fax :0452 - 256 6644, Mail :aruna@arunasteel.com, Division : Madurai II

Division, Range : North Range, TIN No.:33384882329, CST No.:149795 DT. 16.04.2004

Certified Material Test Report**(Inspection Certificate - EN 10204 3.1)**

Customer : CIRCOR ENERGY PRODUCT,INC
1500 SE 89TH STREET
OKLAHOMA CITY OK 73149-4607
United States

T.C. # : AA27447
T.C. Date : 14-Sep-17

P. Order # : D66947 P.O. SI.# 4. Date 18/08/2017

Heat # : N4224 Qty : 3
Pour Date : 02-Sep-17

Specification : ASTM A351 , 2016 CF8M

Casting Processed By Induction Melting

TDC # : 9290001 Rev. 15354

Foundry Identification : AMT

Item Description**Product Identification**

Part Name : ADPT-RF 10FP CL150 SS/PMI SER FA

Heat - SI.#

P.T.#

N4224 - 1

ADA07116

N4224 - 2

ADA07120

N4224 - 3

ADA07114

Drawing # : C2693/15509

Cast.Wt(kgs) : 108

Model / Part # : C3299-219D1

Mech.Test Std : ASTM A370

Hard.Ref.Std : ASTM E10,NACE MR0175

Chemical Composition %

Element	C	Mn	Si	P	S	Ni	Cr	Mo
Minimum						9.0	18.0	2.0
Maximum	0.08	1.50	1.50	0.04	0.04	12.0	21.0	3.0
Actual	0.07	1.17	0.96	0.03	0.00	9.5	18.3	2.1

Heat Treatment

Process	Cycle		Temp °C			Cool Media	Heating Rate	Cooling Rate	Furnace Cool Upto °C
	No.	Date	Temp °C	Temp °F	Hrs				
Solution Annealing	J1957	07/09/2017	1100	2012	5	Water			

Room Temperature Tensile Test Analysis

Mechanical Test	Test Temp.	UOM	Min	Max	Actual	UOM	Min	Max	Actual
Yield Strength (0.2%Rp)	R.T	MPa	241		274	Kgf/Sq.mm	25		28
Tensile Strength	R.T	MPa	485		529	Kgf/Sq.mm	49		54
Elongation (50mm)	R.T	%	30		53				
Hardness Test	R.T	HBW		237	(174 - 183)	HRC		22	9 - 11

Remarks

1. Certified that Acid Pickling and Passivation done on Casting.
2. Certified that the Supplied Castings are free from Radioactive Contamination
3. Visual inspection as per EN 1370 and MSS-SP-55 Type - I defect unacceptable and type II to XII fig "a" acceptable .

The Certification shall affirm that contents of the report are correct and accurate and that all test results and operations performed by Aruna are in compliance with the material specification

c.haji
Raja. C (Incharge-Lab)
Quality Control



江苏万恒铸业有限公司 JIANGSU WANHENG CASTING INDUSTRY GROUP				 材质合格证 MATERIAL TEST CERTIFICATE EN 10204:2004-3.1																PED证书编号: PED Certificate No:										
																				01 202 CHI/Q-02 0019										
顾客: Customer		Circor Valve Co., Ltd				材料: Material		CF8M		标准: Specification		ASTM A351M				MTR No. 报告编号		WH161113-1												
订单号 PO No	零件号 Part Number	规范号 Specification	数量 Qty	炉号 Heat Number	化学成份%(Max.) Chemical Composition														机械性能(Min.) ASTM A370 Mechanical Properties ASTM A370				硬度 Hardness		冲击试验 Impact Test					
					C	Si	Mn	P	S	Cr	Mo	Ni	Cu	V	Nb	N	Al	Fe	Co	W	抗拉强度 TS(Mpa)	屈服 YS(Mpa)	延伸 E(%) GL=50mm	收缩 R(%)	(FIB)		℃			
					≤0.08	≤1.50	≤1.50	≤0.040	≤0.040	18.0-21.0	2.0-3.0	9.0-12.0										≥482.6	≥241.3	≥30		≤237				
		9290001		CR6JN90	0.045	0.944	0.859	0.028	0.003	19.087	2.249	9.420									558	335	46		162					
	→	9290001		CR6JX90	0.045	0.918	0.774	0.026	0.005	19.250	2.218	9.420									552	345	46		166					
		9290001		CR90S87	0.039	0.778	0.946	0.030	0.009	19.013	2.207	9.751									497	271	46		158					
		9290001		CR90S89	0.043	0.809	0.849	0.026	0.007	19.065	2.140	9.410									504	304	44		152					
		9290001		CR90S94	0.041	0.789	0.872	0.026	0.008	19.876	2.139	9.428									567	382	45		154					
		9290001		CR91591	0.039	0.856	0.821	0.025	0.007	19.102	2.144	9.378									556	345	45		159					
热处理 Heat Treatment					温度 Temp℃		保温时间 Hold time		冷却方式 Cooling		炉设备 Furnace		兹证明材料已按标准 GB/T 228.1-2010 进行了抽样、检验和试验，结果材料与采购合同符合要求。 We hereby certify that the material was received, sampled, tested and inspected in accordance with the contract specification and met the requirements, and was found to meet the requirements.																	
固溶Solution					1080		3H		Water		罩式炉		检验专用章 Test Seal																	
检验员 Inspector (QA/QC):		王永海 Wang Yonghai			批准 Approved (QA/QC):		常宏 Chang Hong		日期 Date:		2016-11-13																			

Goods Receipt date: 2021.04.09
Current Date: 2021.04.09

Plant:	2031	Description:	Sunrise Oilsands
Vendor :	0011007206	Name:	WESTLUND
Delivery Note:	77112011-00	Bill of Lading:	W360660
GR Slip:		Header Text:	
PO:	8401497066 / 10	Telephone:	587-774-2891
Pur. group:	688 Jordan Driessen		

Itm	Material	Description	
PO Itm	SLoc	Storage bin	
Qty.	Un		
0001	10125122	VALVE, GATE,FLEX WDG,3 ",300 #,RF FLG,CS	
	4010		1 EA
00010			

Issued by: Braden Dean S I G N A T U R E



PC: 771 Whse: 771

Requires By: 03/22/21
Contact Name: JORDAN DRIESSEN
Contact#: 587-774-2891
GST/HST: R101626026

A Division of EMCO Corporation
2165 - 70th AVENUE
EDMONTON, AB T6P 0B4
Ph: (780)463-7473
Fax: (780)462-0392

Invoice Number 77112011-00
Customer P.O. Number 8401497066
Date/Time Printed 04/07/21 09:24 MST
Date/Time Ordered 03/16/21 07:57

Bill To: Cust.No. 613978
Phone No. (403) -

Ship To:

A
D
D
R
E
S
S
HUSKY OIL OPERATIONS LIMITED
AGREEMENT# M036692018
707-8TH AVE SW
BOX 6525, POSTAL STATION D
CALGARY, AB T2P 3G7

HUSKY OIL - SUNRISE OPERATIONS
3KM CANTERRA ROAD
LSD 4-15-95-7-W4M

~~FORT SASKATCHEWAN, AB S0N 0A0~~
FORT MACKAY, AB

PICKER # 1

Shipped

Special Instructions:

Reference:

PPD	COL	PPD/ADD
☐	☒	☐

Line	SKU	Bin Loc	Description	UOM	Ordered	Shipped	B/O	List	%	Net
1	BK771121	Non Stock	CONTRACT M036692018 AGREEMENT CW2292641 3" VELAN#F1064C-02NB, CL300 RF GATE VALVE A216-WCB BODY & BB., OS&Y., API#12 TRIM, C/W HUSKY CAT 'C' TESTING C/W SS TAG: 10125122	ea	1	1				

BNK24M25
BNK57K05

Staging Area _____ Pipe _____ Bags _____
Boxes _____ Skids _____ Crates _____ Other _____

Taken By
tsh - Teresa Sheppard

Sales Rep. _____ Freight _____ Placed By
Thank you for your patronage! JORDAN D

Bill of Lading # #779643	Date Picked 4/7/21	Picked By JB	Weight 0.0	Via Velocity Exp	Date Shipped 4/7/21	Page 1 Last Page
-----------------------------	-----------------------	-----------------	---------------	---------------------	------------------------	---------------------

NO RETURNS ALLOWED ON SPECIAL ORDERS WITHOUT PERMISSION

2% PER MONTH (24% PER ANNUM) SERVICE CHARGE ON ALL OVERDUE ACCOUNTS.

Customer's
Signature

Customer's
Name(Printed)

Customer
Copy

G.S.T. REGISTRATION NO.
R101626026

TERMS AND CONDITIONS OF SALE

1. **PRICE** - All prices are subject to change without notice. All prices are tax extra. GST, HST and Provincial Tax are not included. Prices are FOB our warehouse location unless otherwise quoted in writing. Delivery charge will apply to all delivered orders. Incorrect prices in the price catalogue due to calculation or human error will not be honoured and will be corrected at the earliest possible date.
2. **TERMS OF SALE** - Net 30 days unless otherwise stated. Accounts past due will be suspended. A service charge of 2% per month (24% per annum) will be applied to all overdue accounts. Shipments and deliveries shall at all times be subject to our acceptance and credit approval. Title to the goods does not pass until invoice is paid in full. You agree to pay us all costs, charges and expenses (including, without limitation, legal fees and expenses on a solicitor-client full indemnity basis) incurred by or on behalf of us in connection with the collection of any outstanding amounts and/or our enforcement of any of our rights against you.
3. **DEPOSITS AND RETURNS** - Orders may require a deposit and may not be cancelled without prior written approval. All deposits and down payments are non-refundable. A cancellation charge may apply on cancelled orders. No goods may be returned without prior written approval. A minimum handling charge of 25% will apply to goods returned. This may vary depending upon factory return goods policy.
4. **CLAIMS** - All damage claims must be made to the transportation company as applicable; we are not responsible for any such damaged goods. Shortage claims must be made within 7 days of receipt of shipment. Notification of any invoice errors must be made within 60 days of date of invoice.
5. **AVAILABILITY** - All goods quoted are subject to prior sale. Goods shown in price catalogue may not be available in all locations and extra freight costs will apply. Contact our applicable location for availability and price confirmation.
6. **WARRANTY DISCLAIMER AND LIMITATION OF LIABILITY** - We warrant that we have title to the goods sold. Applicable goods are accompanied by manufacturers' warranties. We hereby assign to you any warranties so extended by such manufacturers to which we are entitled as permitted by law. Except as specifically set out herein, we do not make any guarantees, representations or warranties of any kind or nature, whether expressed or implied, by statute or otherwise, and specifically disclaim any implied guarantees, representations and warranties, whether of merchantability, suitability, fitness for a particular purpose (even if we have been advised of such purpose) or otherwise. In no event will we be responsible or liable for any indirect, special, consequential or punitive damages or any other costs or expenses resulting from the use of or inability to use any of the goods. Notwithstanding the foregoing, in no event shall our liability exceed the amount of the price paid by you for the goods.
7. **GOVERNING LAW** - These terms and conditions are made under and shall be governed by and interpreted in accordance with the laws of the province in which our location that made the sale is located (without regard to conflict of law provisions) and the laws of Canada applicable therein. The United Nations Convention on Contracts for the International Sales of Goods shall not apply to this transaction.
8. **TERMS AND CONDITIONS SUPERSEDE ALL OTHERS** - The terms and conditions herein, and on any Credit Application signed by you, shall supersede any purchase order submitted by you. The terms and conditions of any purchase order submitted by you are null and void and of no legal effect, other than with respect to the identity of and quantity of the goods being purchased.

CONDITIONS ET MODALITÉS DE VENTE

1. **PRIX** - Tous les prix peuvent changer sans préavis. Tous les prix sont hors taxes. La TPS, la TVH et la taxe provinciale sont en sus. Les prix sont FAB à notre entrepôt, sauf l'avis contraire par écrit sur une soumission. Des frais de livraisons seront ajoutés à toutes les commandes livrées. Les prix incorrects dans le catalogue de prix en raison d'une erreur de calcul ou humaine ne seront pas respectés et seront rectifiés dès que possible.
2. **MODALITÉS DES VENTES** - Net 30 jours, sauf indication contraire. Les comptes en souffrance seront suspendus. Des frais de service seront ajoutés sur tous les comptes en souffrance au taux de 2 % chaque mois (24 % par an). Les envois et les livraisons seront en tout temps sujets à notre approbation et à l'approbation du crédit. La propriété de la marchandise n'est reconnue que lorsque la facture est entièrement payée. Vous acceptez de payer tous les coûts, frais et dépenses (y compris, sans s'y limiter, les frais juridiques et pour l'indemnisation complète des dépenses procureurs-clients) engagés en notre nom ou autre pour la collecte de tous les montants non payés et/ou l'exécution de tous nos droits contre vous.
3. **DÉPÔTS ET RETOURS DE MARCHANDISE** - Un dépôt peut être requis pour une commande et elle ne peut pas être annulée sans approbation écrite au préalable. Tous les dépôts et les acomptes sont non remboursables. Des frais d'annulation sont possibles pour les commandes annulées. Aucune marchandise ne peut être retournée sans autorisation écrite au préalable. Des frais de manutention minimum de 25 % sont applicables sur la marchandise retournée. Cela peut varier selon la politique de retour de marchandise du fabricant.
4. **RÉCLAMATIONS** - Toutes les réclamations pour des produits endommagés doivent être demandées auprès de la compagnie de transport, le cas échéant; nous ne sommes pas responsables des produits endommagés pendant le transport. Les réclamations pour les produits manquants doivent être présentées dans les sept jours qui suivent la réception de la marchandise. Il faut signaler toutes les erreurs de facturation dans les 60 jours suivant la date de la facture.
5. **DISPONIBILITÉ** - Tous les produits mentionnés sont sous réserve de prévente. La marchandise présentée dans le catalogue de prix n'est peut-être pas offerte dans tous les centres et des frais de transport additionnels sont possibles. Communiquez avec notre centre le plus près pour vérifier la disponibilité et pour confirmer le prix.
6. **EXCLUSION DE GARANTIE ET LIMITE DE RESPONSABILITÉ** - Nous garantissons que nous sommes propriétaires de la marchandise vendue. La marchandise admissible est accompagnée de la garantie du fabricant. Nous vous cédon toute garantie offerte par ces à laquelle nous avons droit et selon ce qui est permis par la loi. Sauf ce quelconques, expressément ou implicitement, que ce soit par fabricants la loi ou autrement, et déclare expressément n'accorder aucune garantie ou représentation, que ce soit de commercialité et d'aptitude pour un but précis (même si on vous a conseillé sur ce but) ou autre. Nous ne serons responsables dans aucun cas des frais indirects, spéciaux, ultérieurs ou punitifs ou de tous autres frais ou dépenses découlant de l'usage ou de l'incapacité d'utiliser un produit quelconque. En dépit de ce qui précède, dans aucun cas notre responsabilité ne dépassera le prix que vous avez payé pour la marchandise.
7. **LOI APPLICABLE** - Ces modalités respectent les lois de la province où notre centre qui a vendu le produit est situé (sans égard aux conflits des provisions de la loi) et les lois du Canada applicables et elles seront régies et interprétées selon ces lois. La Convention des Nations Unies sur les contrats de vente internationale de marchandises ne s'applique pas à cette transaction.
8. **LES PRÉSENTES MODALITÉS REMPLACENT TOUTES AUTRES MODALITÉS** - Les modalités exprimées dans le présent document et sur toute demande de crédit que vous avez signée régiront cette transaction et remplaceront toutes les modalités inscrites sur le bon de commande que vous avez envoyé. Les modalités de tout bon de commande que vous avez envoyé sont nulles et n'ont aucun droit juridique, sauf l'identité et la quantité de la marchandise commandée.



TEST CERTIFICATE

Page 1 Of 1

3/29/2021 5:32:32 PM

VELAN INC.
7007 Cote de Liesse
Montreal

Customer Name : Sunbelt Supply

Valve Type : GATE

Figure Number : F1064C02NB

Size : 3"

Pressure Class : 300#

Quantity : 1

Certificate : VC00093146

Date : 3/29/2021

MATERIAL TEST RESULTS SHOWN BELOW:

IMPERIAL

A216-18-WCB-(IT)Q

			CHEMICALS											MECHANICALS							
Heat Code	Unit	Heat Treat	Al	C	Cr	Cu	Mn	Mo	Ni	P	S	Si	V	ELONG	IMP ENER 1	IMP ENER 3	IMP ENER 5	IMP TEMP	RED	UTS	YIE
			%	%	%	%	%	%	%	%	%	%	%	(%)	(FT-LB)	(FT-LB)	(FT-LB)	(°F)	(%)	(ksi)	(ks
BNK24M2 S	BODY	QUEN & TEMP	0.041	0.201	0.043	0.022	0.837	0.005	0.025	0.022	0.005	0.468	0.005	31	39.83	49.42	33.93	-20.2	62	78.32	46.
BNK57K05	BONNET	QUEN & TEMP	0.038	0.191	0.042	0.018	0.887	0.005	0.025	0.024	0.005	0.44	0.005	29	50.89	51.63	37.62	-20.2	62	84.99	47.

All Velan Valves are tested in accordance with specification required by the design. Valves designed to API specifications API 594, API 600, API 602, API 603, API 608, API 609 and API 623 are tested to API 598. Valves designed to B16.34 are tested to B16.34 and MSS-SP-61.

Valves meet the material requirement of the current NACE MR0103 and NACE MR0175 / ISO 15156. Its is the equipment user's responsibility to ensure that the materials are suitable for the intended service.

All materials are dually certifiable to ASTM / ASME.

The header information on this certificate (including customer name, valve description, figure number, and quantity) has been entered by the user of this application and he/she is therefore responsible for the accuracy of the data.

Velan certifies that valve(s) described above are in compliance with the requirements of the identified standards and specifications. This report is based on actual test results of chemical and mechanical properties as well as hydrostatic test, and is in compliance with EN 10204 3.1.



Passed Pressure Test Report

TCM Modifications Canada, Inc.
22, 3250 - 51 Avenue NW
Edmonton AB T6P 0E1
Canada

TEL 780-490-5144
FAX 780-490-6244

Date: 04/06/2021	Work Order#: 145040	Line #: 01		
Customer: SUNBELT SUPPLY - EDMONTON	Customer PO#: 58976-00			
customer address #26, 6194 - 50TH STREET NW EDMONTON, AB T6B 2N7				
work performed VELAN F10-1064C-02NB 3" 300#: Perform Visual of Body and Bonnet as per MSS-SP-55 3" 300# : Perform MT inspection of Body and Bonnet Per: ASME B16.34 Appendix II 3" 300# : Perform RT inspection of Critical Areas 3" 300#: API 598 Pressure Test				
type of test API 598	tested by Guang Wei			
line item description 3" 300 VELAN WCB Gate				
item#	body heat#	bonnet heat#	serial#	notes
1XK696	BNK24M25	BNK57K05		

The above items were tested in accordance with
and passed all the criterion as listed below

API 598 10-Min Shell Test

Test parameters: **L/P Seats:** N/A Duration: N/A
H/P Seats: N/A Duration: N/A

Backseat: N/A Duration: N/A
Shell: 1125 PSI Duration: 10 MIN

Perform customer required API598 Hydro 10 minute Shell Test

Reference Gauge:

3000 PSI Main Gauge: KCL-7348 EXP: Feb 17, 2022

3000 PSI AUX Gauge: KCL-5308 EXP: Dec 04, 2021

Test certified by:

Guang Wei

Test witnessed by:

of



Visual Test Report

Customer	SUNBELT SUPPLY - EDMONTON	PO #:	58976-00	Date:	03/30/2021
Wo:	145040	Code:	GCM VT-003	Standard:	MSS SP-55
Remarks:	LINE ITEM 1 - VT BODY BONNET				

Item	Description	Heat#	Acc.	Rej.	Remarks
1XK696	3" 300 VELAN WCB Gate	Body heat #BNK24M25 Bonnet heat #BNK57K05	✓		VT BODY BONNET NO RELEVANT INDICATIONS OR DISCONTINUITIES FOUND AT TIME OF INSPECTION VT OK.

Allan McCullough -ASNT L2

Carsten Bogner
Carsten Bogner -ASNT L-II



Magnetic Particle Test Report

Customer: SUNBELT SUPPLY - EDMONTON		PO #: 58976-00	Date: 03/31/2021
Wo: 145040	Code: GCM MT-003		Standard: ASME B16.34 / MSS SP-53
Equipment Make: Sentinel	Model: MP - A 2L	Batch: MP 3695	Notes: 110V/60Hz 2.8A
Test Medium Brand: Circle Systems Inc.	Model: RED #63	Batch: 20511	Notes: GCM CANADA RED
Material: LINE ITEM 1 - MT BODY BONNET			

Item	Description	Heat#	Acc.	Rej.	Remarks
1XK696	3" 300 VELAN WCB Gate	Body heat #BNK24M25 Bonnet heat #BNK57K05	✓		MT BODY BONNET NO RELEVANT INDICATIONS FOUND AT TIME OF INSPECTION MT OK.

Allan McCullough -ASNT L2

Carsten Bogner -ASNT L-II

Film No.	Size/SCH	Wldr Sym	SOD	OFD	Exp. Time	OP1	OP2	Tech #	Accepted	Remarks	Rejected
X-2	R FLG		4.0"	.500"	20sec			T01	✓	POR A2,SAND B119.5-22	
X-3	L Seat		8.5"	.750"	55sec			T03	✓	POR A2@11-17	
X-4	R Seat		8.5"	.750"	55sec			T03	✓	POR A1@12	
X-5	Neck		6.0"	.750"	40sec			T03	✓	POR A2,SAND B2@48.5	
X-6	Bonnet		15"	1"	30sec			T07	✓		
X-7	Bonnet		15"	1"	30sec			T07	✓	SHRINKAGE CB2@3-5	
X-8	Body		29"	6"	30sec			T07	✓		

SIGNATURES

* Client representative's signature indicates acceptance of the reports and results. Nortech Advanced NDT Ltd. is liable for examination costs only.

CLIENT REPRESENTATIVE* (PRINT/SIGN) /

Technician (PRINT) Leo Novak

CGSB: 2

CGSB REG#: 13690

SNT-TC-1A: II

Technician (PRINT) Lyonel Struthers

CGSB: CEDO

CGSB REG#: 7830

SNT-TC-1A: II

Technician (SIGN)





RADIOGRAPHIC TESTING REPORT - 293191

7100 - 8th Street NW
Edmonton, AB T6P 1V1
Ph: 780-449-5013 Fax: 780-449-5036
www.nortechadvanced.com

CLIENT: GCM CANADA
Unit 22, 3250 51 Ave NW
Edmonton, Alberta T6P 0E1

GCM Valve ID: 1XK696

DATE: April 4, 2021
INVOICE #:
JOB #: W.O.# 145040
P.O. #: 93721

LOCATION: Nortech Advanced NDT Ltd.

TECHNIQUE DETAILS

PROCEDURE #: RTP 01 REV 6

TEST METHOD: ASME Sec V, Art 2.

ACCEPTANCE STANDARD: ASME B16.34 APPENDIX I

ITEMS TESTED

1) 3" 300# VELAN GATE VALVE

ITEM #	BODY HT#	BONNET HT#	Accept	Reject
1XK696	BNK24M25	BNK57K05	✓	

Film Brand/Class: AGFA D4 / D5 / I Screens: 0.010" (Pb Front, Back) I.Q.I.: ASTM B (F) / ASTM B Isotope: Ir 192 Exp Device: D9033
Film Quantity / Size: 6) 2 3/4" x 5 1/2", 2) 2 3/4" x 8 1/2", 2) 4 1/2" x 8 1/2", 2) 4 1/2" x 17", 1) 7" x 17" Material: WCB U.G.: <0.020" Activity: 93Ci EFSS: .125"
Film Per Cassette: 1 Processing: 5 min @ 20°C (68°F)

Defect Legend

IF INCOMPLETE FUSION
IP INCOMPLETE PENETRATION
IC INTERNAL CONCAVITY
EP EXCESS PENETRATION

BT BURN THROUGH
P POROSITY
UC UNDERCUTTING
SH SHRINKAGE

AC ARC BURNS
HL HIGH LOW
LC LOW COVER
FA FILM ARTIFACT

W WINDOW
HB HOLLOW BEAD
C CRACK
S SLAG
SA SAND

1 SLIGHT
2 MEDIUM
3 SEVERE

Film No.	Size/SCH	Wldr Sym	SOD	OFD	Exp. Time	OP1	OP2	Tech #	Accepted	Remarks	Rejected
Valve-1 (1XK696) X-1	L FLG		4.0"	.500"	20sec			T01	✓	Critical areas coverage as accessible POR A1@14,16.5	

Continued on next page...

SIGNATURES

* Client representative's signature indicates acceptance of the reports and results. Nortech Advanced NDT Ltd. is liable for examination costs only.

CLIENT REPRESENTATIVE* (PRINT/SIGN) /

Technician (PRINT) Leo Novak
Technician (PRINT) Lyonal Struthers

CGSB: 2
CGSB: CEDO

CGSB REG#: 13690
CGSB REG#: 7830

SNT-TC-1A: II
SNT-TC-1A: II

Technician (SIGN)

Goods Receipt date: 2021.06.23
Current Date: 2021.06.23

Plant:	2031	Description:	Sunrise Oilsands
Vendor :	0011005540	Name:	A R THOMSON GROUP
Delivery Note:	347990	Bill of Lading:	
GR Slip:		Header Text:	
PO:	8401511953 / 30	Telephone:	587-774-2891
Pur. group:	688 Jordan Driessen		

Itm	Material	Description	Qty.	Un
PO Itm	Acct.assgt.	Recipient		
0001		Cap,1-1/2", 3000#,FNPT,316		
	F 000060759133	/ 61TCory/Kevin	20	EA
00030	TA2021 61-LT-3601/3601			

60759133

1 Box

105A02

TA 2021

Cory / Kevin

Issued by: Clay Harrison

S I G N A T U R E

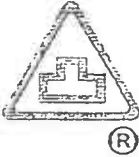
001P2F02

1 Box

102A05

1505 AT

Corey / Kevin



BOTH-WELL STEEL FITTINGS CO., LTD.



NO.303, REN-SIN ROAD, REN-WU DISTRICT, KAOHSIUNG CITY, TAIWAN, R.O.C.(814020)

TEL : (886)7-3711536, 3710497, 3720260

FAX : (886)7-371-3864, 3713882

WEB SITE : http://www.bothwell.com.tw

E-Mail : box@bothwell.com.tw

An ISO 9001 : 2015 Registered Manufacturer

MILL TEST & INSPECTION CERTIFICATE

ACCORDING TO EN 10204 3.1

CUSTOMER : PINACLE STAINLESS STEEL INC.

CERT NO. : 202293

ORDER NO. : 109504

INVOICE NO. : 5200017155

L/C NO. :

PAGE : 65

DATE : 12/02/2020

ORIGIN : TAIWAN

ITEM	RAW HEAT NO. HEAT NO.	QTY	DESC/GRADE OR SPECIFICATION NO. CHEMICAL COMPOSITION(%) MECHANICAL PROPERTIES.
126	9SK0086 HT0681	91 PCS	CAP F316L 1-1/2" 3000# NPT 316L3MTC15 C:0.023 Si:0.44 Mn:1.60 P:0.034 S:0.025 Cu:0.28 Cr:17.26 Ni:10.47 Mo:2.04 N:0.068 TS(KSI):86.2 YS 0.2%(KSI):40.9 EL(%) :61.2 R.A.(%) :76.9 HARDNESS 1(HBW):152 HARDNESS 2(HBW):155

REMARK :

THE MATERIAL SUPPLIED IDENTIFIED AS ASTM A182 -20, ASME SA182-2019ED, F316/F316L

THE FITTING SUPPLIED IDENTIFIED AS ASME B16.11 - 2016

THE PRODUCT SUPPLIED WAS INSPECTED IN ACCORDANCE WITH SPECIFICATION(SURFACE & DIM) : GOOD

STANDARD : CHEMICAL COMPOSITION(%) & MECHANICAL PROPERTIES.

	C	Si	Mn	P	S	Cu	Cr	Ni	Mo	V	Cb(Nb)
MIN	-	-	-	-	-	-	16.0	10.0	2.00	-	-
MAX	0.030	1.00	2.00	0.045	0.030	-	18.0	14.0	3.00	-	-
	N	Al	Ti	Zr	CE	TS(KSI)	YS(KSI)	YS 0.2%(KSI)	EL(%)	R of A(%)	HARDNESS(HBW)
MIN	-	-	-	-	-	75	-	30	30	50	-
MAX	0.10	-	-	-	-	-	-	-	-	-	235

HEAT TREATMENT : SOLUTION: 1060°C(1940°F) W.Q.

CONFORMS TO NACE MRO175-15/ISO 15156-15/MRO103-15

FREE FROM RADIATION CONTAMINATION AND MERCURY FREE

CONFORMS TO ASTM A262 PRACTICE E SPECIFICATION

PROVINCE / CRN

ALBERTA-OA11939.52 MANITOBA-OA11939.56 NEW BRUNSWICK-OA11939.57 NEWFOUNDLAND-OA11939.50

ONTARIO-OA11939.5 P.E.I.-OA11939.59 NOVA SCOTIA-OA11939.58 SASKATCHEWAN-OA11939.56

QUEBEC-OA11939.56 N.W.T.-OA11939.5T YUKON-OA11939.5Y NUNAVUT-OA11939.5N

WE CERTIFY THE ABOVE MENTIONED FITTINGS HAVE BEEN MANUFACTURED,
SAMPLED, TESTED, AND INSPECTED IN ACCORDANCE WITH THE
SPECIFICATIONS SHOWN

Q.C. MANAGER

INSPECTOR

PO#8401511953

line# 30

Qty: 20

HT# 0681

10030 - 31 Avenue
Edmonton T6N 1G4
Tel: (780) 450-8080 Fax: (780)463-2021
Website: www.arthomson.com

Delivery note

Ship to

HUSKY OIL OPERATIONS LTD.
SUNRISE OPERATIONS
LSD 4-15-95-7-W4M
FORT MACKAY AB TOP 1CO
CANADA

Sold to

HUSKY OIL LTD.
PO BOX 4490 STATION D
CALGARY AB T2P 3G7
CANADA

Shipping information

Delivery note 80556715 / 21.06.2021
number/date
Customer's PO 8401512196 8401511953
number/date
Order number/date 347990 / 21.06.2021
Customer number 1006136

Conditions

Delivery EXW SHIPPING POINT

MTR#s REQUIRED FOR FASTNERS. HYDRO TEST(S) & MTR#S REQUIRED FOR ALL HOSES. SHIP VIA TF
TRUCKLOAD HuskyFreight@tftruckloadlogistics.com

Item	Material/Description	Open	Shipped	B/O	Net price	U/M	Extension
10	3238305 CAP 1-1/2" 3000# FNPT 316	20.000	20	0.000		EA	

Note: Taxes will be determined at the time of invoice.

- Shortages must be reported within 7 days of receipt of goods.
- All returned goods will not be accepted unless returned in original packing accompanied by "returned Goods authorization" and a copy of original packing slip. If returns are acceptable, a re-stocking charge may apply.

Ship Date: 21.06.2021

QUALITY CONTROL

FILLED CHECKED

Received by: _____

Nov. 7

G O O D S R E C E I P T S L I P

No. 5004298043

Page

1

Goods Receipt date: 2020.02.24
Current Date: 2020.02.24

Plant:	2031	Description:	Sunrise Oilsands
Vendor :	0011033523	Name:	WESTLUND
Delivery Note:	77110116-00	Bill of Lading:	
GR Slip:		Header Text:	
PO:	8401437215 / 20		
Pur. group:	688 Jordan Stimpson	Telephone:	403-298-7229

Itm	Material
PO Itm	SLoc
Qty.	Un

Description
Storage bin

0001	10125131	VALVE, BALL,4 ",150 #,REG PORT,RF FLGD
	4010	
00020		

 6 EA

Issued by: Dan Drescher

S I G N A T U R E

HEAT SHEET

ORDER # 3279215

[illegible]

**VALVE CERTIFICATION**

Avenida Avante Monterrey 401 Parque Industrial Avante Monterrey

Garcia, NL, Mexico C.P. 66023

ISO 10474 (2013)

DIN EN 10204 (2004)

MATERIAL CERTIFICATION 3.1

PAGE 1 OF 2

SOLD TO:	CIRCOR COMPANY	CEP TICKET	P34733	QTY	5	TAG NO.:
SHIPPED TO:	AIV LP CANADA	CUSTOMER PO	1121507			
PART NO.:	E3762-E29F614A1	REF. PO		ITEM NO.	5109	

VALVE DESCRIPTION

VALVE SIZE (IPS)	4" FP	SERIES	FAE
VALVE PRESSURE CLASS	ANSI CL150	BALL VALVE	
VALVE END CONNECTION	RF X RF	Type	Trunnion

VALVE COMPONENT PARTS	VALVE COMPONENT MATERIAL	ENP	MTR
BODY	STAINLESS STEEL	N/A	X
ADAPTER	STAINLESS STEEL	N/A	X
BALL	STAINLESS STEEL	N/A	X
SEAT INSERTS	DEVLOX		
SEALS	ELAST-O-LION 985		

VALVE REQUIREMENTS

NON NACE [] NACE-MRO175-2015 (ISO 15156) [X]
MONOGRAM: API 6D 24th ed [] API 6A 20th ed [] NON API [X]
FIRE SAFE CERTIFIED: API 6FA 3 RD ed. [X] API 6FD 1 ST ed. []

OPTIONS

BARE STEM:	
HANDLE:	X
GEAR OPERATOR:	
ACTUATION:	
HIGH HEAD EXTENSION	
INTERNAL COATING:	
EXTERNAL COATING:	
QSL 1	X
CAT II M45C ISO-FT	X
CSA Z245.15-13 COMPLIANT	X
SOUR SERVICE	X

CERTIFICATE OF CONFORMANCE

IT IS CERTIFIED THAT THE ABOVE REFERENCED PRODUCTS HAVE BEEN MANUFACTURED, INSPECTED AND TESTED IN ACCORDANCE WITH ALL APPLICABLE SPECIFICATIONS, DRAWINGS AND/OR OTHER PURCHASE ORDER REQUIREMENTS.

CERTIFICATE OF ORIGIN

IT IS CERTIFIED THAT THE ABOVE REFERENCED PRODUCTS WERE ASSEMBLED IN MEXICO.

THE PRODUCTS DO NOT CONTAIN ANY MERCURY OR ASBESTOS CONTAMINATION IN THE MATERIALS

CERTIFIED TEST RECORD API 6D [X] API 598 [] ANSI B16.34 [] OTHER / SPECIFY [] 49 CFR Ch.1 PART192 CLASS 3 [X]

TEST TYPE	PRESSURE (PSIG)	TIME IN MINUTES	TEST MEDIA	TEST RESULTS	INSPECTION	INSPECTION RESULTS
HYDROSTATIC SHELL	425	2 MIN	WATER W/INHIBITOR [X] 60/40 GLYCOL/WATER []	ZERO LEAKAGE	DIMENSIONAL	GOOD
HYDROSTATIC SEAT	325	2 MIN	SAME SAME	SAME	VISUAL	GOOD
DOUBLE BLOCK	325	2 MIN	SAME SAME	SAME	VISUAL	GOOD
AIR SEAT	N/A					

IT IS CERTIFIED THAT THE ABOVE INFORMATION IS TRUE AND CORRECT AS CONTAINED IN THE RECORDS OF CIRCOR MX PRODUCTS.

CIRCOR MX QUALITY ASSURANCE:

CUSTOMER INSPECTOR:

N/A

Prepared By:

BR

DATE

DATE

8-25-19

**VALVE CERTIFICATION**

Avenida Avante Monterrey 401 Parque Industrial Avante Monterrey
Garcia, NL, Mexico C.P. 66023

ISO 10747 (2013)

DIN EN 10204 (2004)

MATERIAL CERTIFICATION 3.1

PAGE 2 OF 2

PART NO.:**E3762-E29F614A1****QTY:****5****ITEM NO.:****5109****CEP SHIP TKT NO:****P34733****COMPONENT HEAT CODES**

	VALVE S/N	BODY	ADAPTER	BALL
1	19460-13-1-001	P0121-4	P0112-5	SZ13460
2	19460-13-1-002	P0120-5	N1472	SZ13460
3	19460-13-1-003	P0120-6	P0141-4	SZ13460
4	19460-13-1-004	P0093-3	P0141-5	SZ13460
5	19460-13-1-005	P0121-3	P0112-3	SZ13460
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				

COMPONENT HEAT CODES

	VALVE S/N	BODY	ADAPTER	BALL
26				
27				
28				
29				
30				
31				
32				
33				
34				
35				
36				
37				
38				
39				
40				
41				
42				
43				
44				
45				
46				
47				
48				
49				
50				

COMPONENT HEAT CODES

	VALVE S/N	BODY	ADAPTER	BALL
51				
52				
53				
54				
55				
56				
57				
58				
59				
60				
61				
62				
63				
64				
65				
66				
67				
68				
69				
70				
71				
72				
73				
74				
75				

IT IS CERTIFIED THAT THE ABOVE INFORMATION IS TRUE AND CORRECT AS CONTAINED IN THE RECORDS OF CIRCOR MX PRODUCTS.**CIRCOR MX QUALITY ASSURANCE:****DATE**

8-25-19

CUSTOMER INSPECTOR:

N/A

DATE



CIRCOR MEXICO S.A.DE C.V.
AVENIDA AVANTE MONTERREY 401
PARQUE INDUSTRIAL AVANTE MON
GARCIA NIEVO LEON
MEXICO

MATERIAL TEST REPORT

SECTION 3 OF 3

PART NO.	05035-239
P.O. NO.	P34873-1
QUANTITY	1
HEAT CODE/NO.	P0121-4
VENDOR NO.	V11067

DATE	2019.05.11
INDUSTRY SPEC.	ASTM A351,2016 CF8M
MATERIAL TYPE	CF8M
CERTIFICATE NO	CM/P0121/19

CHEMICAL TEST RESULTS

C	MN	SI	P	S	CR	NI	MO	V	CU	W		CE
0.053	1.190	1.290	0.027	0.010	19.820	10.020	2.200					

NEW CHEMICAL TEST RESULTS

PHYSICAL TEST RESULTS

TENSILE (PSI)	89301
YIELD (PSI)	50038
% ELONGATION	53.88
% REDUCTION OF AREA	

HARDNESS

(BHN) BRINNELL	170 TO	170
(RB) ROCKWELL B SCALE		
(RC) ROCKWELL C SCALE		

CHARPY IMPACT TEST RESULTS (FT-LBS).(IF APPLICABLE)

TEST TEMP.	1	2	3

HEAT TREATMENT OR HEAT TREAT CONDITION (IF APPLICABLE)

Sollution Annealing: Heated to 1100°C, FOUR hours Water Quenched.

P. C. H.

Prepared by CIRCOR VALVE CO.

Sathish kumar.P

Review & Approved by:

Prakash Selvaraj

AUTHORIZED SIGNATURE



CIRCOR MEXICO S.A. DE C.V.
AVENIDA AVANTE MONTERREY 401
PARQUE INDUSTRIAL AVANTE MON
GARCIA NIEVO LEON
MEXICO

MATERIAL TEST REPORT

SECTION 3 OF 3

PART NO.	05035-239
P.O. NO.	P34873-1
QUANTITY	1
HEAT CODE/NO.	P0121-3
VENDOR NO.	V11067

DATE	2019.05.11
INDUSTRY SPEC.	ASTM A351, 2016 CF8M
MATERIAL TYPE	CF8M
CERTIFICATE NO.	CM/P0121/19

CHEMICAL TEST RESULTS

C	MN	SI	P	S	CR	NI	MO	V	CU	W		CE
0.053	1.190	1.290	0.027	0.010	19.820	10.020	2.200					

NEW CHEMICAL TEST RESULTS

PHYSICAL TEST RESULTS

TENSILE (PSI)	89301
YIELD (PSI)	50038
% ELONGATION	53.88
% REDUCTION OF AREA	

HARDNESS

(BHN) BRINNELL	170 TO	170
(RB) ROCKWELL B SCALE		
(RC) ROCKWELL C SCALE		

CHARPY IMPACT TEST RESULTS (FT-LBS), (IF APPLICABLE)

TEST TEMP.	1	2	3

HEAT TREATMENT OR HEAT TREAT CONDITION (IF APPLICABLE)

Solution Annealing: Heated to 1100°C, FOUR hours Water Quenched.

Prepared by
CIRCOR
P. CH

Prepared by CIRCOR VALVE CO.

Sathish kumar.P

Review & Approved by:

Prakash Selvaraj

AUTHORIZED SIGNATURE



CIRCOR MEXICO S.A.DE C.V.
AVENIDA AVANTE MONTERREY 401
PARQUE INDUSTRIAL AVANTE MON
GARCIA NIEVO LEON
MEXICO

MATERIAL TEST REPORT

SECTION 3 OF 3

PART NO.	05035-239
P.O. NO.	P34873-1
QUANTITY	1
HEAT CODE/NO.	P0120-5
VENDOR NO.	V11067

DATE	2019.05.11
INDUSTRY SPEC.	ASTM A351,2016 CF8M
MATERIAL TYPE	CF8M
CERTIFICATE NO	CM/P0120/19

CHEMICAL TEST RESULTS

C	MN	SI	P	S	CR	NI	MO	V	CU	W		CE
0.054	1.060	1.300	0.025	0.011	19.100	10.230	2.090					

NEW CHEMICAL TEST RESULTS

PHYSICAL TEST RESULTS

TENSILE (PSI)	82609
YIELD (PSI)	48443
% ELONGATION	52.5
% REDUCTION OF AREA	

HARDNESS

(BHN) BRINNELL	163 TO	159
(RB) ROCKWELL B SCALE		
(RC) ROCKWELL C SCALE		

CHARPY IMPACT TEST RESULTS (FT-LBS).(IF APPLICABLE)

TEST TEMP.	1	2	3

HEAT TREATMENT OR HEAT TREAT CONDITION (IF APPLICABLE)

Solution Annealing: Heated to 1100°C, FOUR hours Water Quenched.

Reviewed
CIRCOR
VALVE CO.
P. C. H.

Prepared by CIRCOR VALVE CO.

Sathish kumar.P

Review & Approved by:

Prakash Selvaraj

AUTHORIZED SIGNATURE



CIRCOR MEXICO S.A.DE C.V.
AVENIDA AVANTE MONTERREY 401
PARQUE INDUSTRIAL AVANTE MON
GARCIA NIEVO LEON
MEXICO

MATERIAL TEST REPORT

SECTION 3 OF 3

PART NO.	05035-239
P.O. NO.	P34873-1
QUANTITY	1
HEAT CODE/NO.	P0120-6
VENDOR NO.	V11067

DATE	2019.05.11
INDUSTRY SPEC.	ASTM A351,2016 CF8M
MATERIAL TYPE	CF8M
CERTIFICATE NO	CM/P0120/19

CHEMICAL TEST RESULTS

C	MN	SI	P	S	CR	NI	MO	V	CU	W		CE
0.054	1.060	1.300	0.025	0.011	19.100	10.230	2.090					
NEW CHEMICAL TEST RESULTS												

PHYSICAL TEST RESULTS

TENSILE (PSI)	82609
YIELD (PSI)	48443
% ELONGATION	52.5
% REDUCTION OF AREA	

HARDNESS

(BHN) BRINNELL	163 TO	159
(RB) ROCKWELL B SCALE		
(RC) ROCKWELL C SCALE		

CHARPY IMPACT TEST RESULTS (FT-LBS),(IF APPLICABLE)

TEST TEMP.	1	2	3

HEAT TREATMENT OR HEAT TREAT CONDITION (IF APPLICABLE)

Solution Annealing: Heated to 1100°C, FOUR hours Water Quenched.

Reviewed
CIRCOR
P. CH

Prepared by CIRCOR VALVE CO.

Sathish kumar.P

Review & Approved by:

Prakash Selvaraj

AUTHORIZED SIGNATURE



CIRCOR MEXICO S.A. DE C.V.
AVENIDA AVANTE MONTERREY 401
PARQUE INDUSTRIAL AVANTE MON
GARCIA NIEVO LEON
MEXICO

MATERIAL TEST REPORT

SECTION 3 OF 3

PART NO.	05035-239
P.O.-NO.	P34873-1
QUANTITY	1
HEAT CODE/NO.	P0093-3
VENDOR NO.	V11067

DATE	2019.05.11
INDUSTRY SPEC.	ASTM A351,2016 CF8M
MATERIAL TYPE	CF8M
CERTIFICATE NO	CM/P0093/19

CHEMICAL TEST RESULTS

C	MN	SI	P	S	CR	NI	MO	V	CU	W		CE
0.046	0.915	1.080	0.029	0.007	18.950	9.580	2.160					

NEW CHEMICAL TEST RESULTS

PHYSICAL TEST RESULTS

TENSILE (PSI)	71108
YIELD (PSI)	40611
% ELONGATION	53.48
% REDUCTION OF AREA	

HARDNESS

(BHN) BRINNELL	160 TO	163
(RB) ROCKWELL B SCALE		
(RC) ROCKWELL C SCALE		

CHARPY IMPACT TEST RESULTS (FT-LBS),(IF APPLICABLE)

TEST TEMP.	1	2	3

HEAT TREATMENT OR HEAT TREAT CONDITION (IF APPLICABLE)

Solution Annealing: Heated to 1100°C, FOUR hours Water Quenched.

Reviewed
CIRCOR
Prepared by
P. CH

Prepared by CIRCOR VALVE CO.

Sathish kumar.P
Review & Approved by:

Prakash Selvaraj
AUTHORIZED SIGNATURE



CIRCOR MEXICO S.A. DE C.V.
AVENIDA AVANTE MONTERREY 401
PARQUE INDUSTRIAL AVANTE MON
GARCIA NIEVO LEON
MEXICO

MATERIAL TEST REPORT

SECTION 3 OF 3

PART NO.	05081-239
P.O. NO.	P35678-9-1
QUANTITY	1
HEAT CODE/NO.	P0112-5
VENDOR NO.	V11067

DATE	2019.05.29
INDUSTRY SPEC.	ASTM A351,2016 CF8M
MATERIAL TYPE	CF8M
CERTIFICATE NO	CM/P0112C/19

CHEMICAL TEST RESULTS

C	MN	SI	P	S	CR	NI	MO	V	CU	W		CE
0.051	1.180	1.280	0.025	0.009	19.820	10.120	2.200					

NEW CHEMICAL TEST RESULTS

PHYSICAL TEST RESULTS

TENSILE (PSI)	88079
YIELD (PSI)	48008
% ELONGATION	51.56
% REDUCTION OF AREA	

HARDNESS

(BHN) BRINNELL	163 TO	167
(RB) ROCKWELL B SCALE		
(RC) ROCKWELL C SCALE		

CHARPY IMPACT TEST RESULTS (FT-LBS), (IF APPLICABLE)

TEST TEMP.	1	2	3

HEAT TREATMENT OR HEAT TREAT CONDITION (IF APPLICABLE)

Solution Annealing: Heated to 1100°C, FOUR hours Water Quenched.

Reviewed
CIRCOR
P. Selvaraj

Prepared by CIRCOR VALVE CO.

Sathish kumar.P
Review & Approved by:

Prakash Selvaraj
AUTHORIZED SIGNATURE



CIRCOR MEXICO S.A.DE C.V.
AVENIDA AVANTE MONTERREY 401
PARQUE INDUSTRIAL AVANTE MON
GARCIA NIEVO LEON
MEXICO

MATERIAL TEST REPORT

SECTION 3 OF 3

PART NO.	05081-239
P.O. NO.	P35678-9-1
QUANTITY	1
HEAT CODE/NO.	P0112-3
VENDOR NO.	V11067

DATE	2019.05.29
INDUSTRY SPEC.	ASTM A351,2016 CF8M
MATERIAL TYPE	CF8M
CERTIFICATE NO	CM/P0112C/19

CHEMICAL TEST RESULTS

C	MN	SI	P	S	CR	NI	MO	V	CU	W		CE
0.051	1.180	1.280	0.025	0.009	19.820	10.120	2.200					

NEW CHEMICAL TEST RESULTS

PHYSICAL TEST RESULTS

TENSILE (PSI)	88079
YIELD (PSI)	48008
% ELONGATION	51.56
% REDUCTION OF AREA	

HARDNESS

(BHN) BRINNELL	163 TO	167
(RB) ROCKWELL B SCALE		
(RC) ROCKWELL C SCALE		

CHARPY IMPACT TEST RESULTS (FT-LBS),(IF APPLICABLE)

TEST TEMP.	1	2	3

HEAT TREATMENT OR HEAT TREAT CONDITION (IF APPLICABLE)

Solution Annealing: Heated to 1100°C, FOUR hours Water Quenched.

Reviewed
CIRCOR
P. CH

Prepared by CIRCOR VALVE CO.

Sathish kumar.P
Review & Approved by:

Prakash Selvaraj
AUTHORIZED SIGNATURE



Circor Energy
1500 S.E. 89TH STREET
OKLAHOMA CITY, OK 73149
405-631-1533

MATERIAL TEST REPORT

SECTION 3 OF 3

PART NO.	05081-239
P.O. NO.	D70371-5
QUANTITY	2
HEAT CODE/NO.	N1472
VENDOR NO.	V6875

DATE	2018.10.16
INDUSTRY SPEC.	ASTM A351,2016 CF8M
MATERIAL TYPE	CF8M
CERTIFICATE NO	CE/N1472A/18

CHEMICAL TEST RESULTS

C	MN	SI	P	S	CR	NI	MO	V	CU	W		CE
0.058	1.020	0.978	0.022	0.011	19.060	9.320	2.120					

NEW CHEMICAL TEST RESULTS

PHYSICAL TEST RESULTS

TENSILE (PSI)	80979
YIELD (PSI)	50183
% ELONGATION	51.84
% REDUCTION OF AREA	

HARDNESS

(BHN) BRINNELL	170 TO	170
(RB) ROCKWELL B SCALE		
(RC) ROCKWELL C SCALE		

CHARPY IMPACT TEST RESULTS (FT-LBS),(IF APPLICABLE)

TEST TEMP.	1	2	3

HEAT TREATMENT OR HEAT TREAT CONDITION (IF APPLICABLE)

Solution Annealing: Heated to 1100°C, Four hours Water Quenched.

Reviewed

CIRCOR
ENERGY

P. Q. H.

Prepared by CIRCOR VALVE CO.

Sathish Kumar P

Review & Approved by:

Prakash Selvaraj

AUTHORIZED SIGNATURE



CIRCOR MEXICO S.A.DE C.V.
AVENIDA AVANTE MONTERREY 401
PARQUE INDUSTRIAL AVANTE MON
GARCIA NIEVO LEON
MEXICO

MATERIAL TEST REPORT

SECTION 3 OF 3

PART NO.	05081-239
P.O. NO.	P35678-9-1
QUANTITY	1
HEAT CODE/NO.	P0141-4
VENDOR NO.	V11067

DATE	2019.05.29
INDUSTRY SPEC.	ASTM A351,2016 CF8M
MATERIAL TYPE	CF8M
CERTIFICATE NO	CM/P0141C/19

CHEMICAL TEST RESULTS

C	MN	SI	P	S	CR	NI	MO	V	CU	W		CE
0.051	1.020	1.150	0.018	0.009	18.340	9.540	2.140					

NEW CHEMICAL TEST RESULTS

PHYSICAL TEST RESULTS

TENSILE (PSI)	81981
YIELD (PSI)	43656
% ELONGATION	59.4
% REDUCTION OF AREA	

HARDNESS

(BHN) BRINNELL	174 TO	179
(RB) ROCKWELL B SCALE		
(RC) ROCKWELL C SCALE		

CHARPY IMPACT TEST RESULTS (FT-LBS),(IF APPLICABLE)

TEST TEMP.	1	2	3

HEAT TREATMENT OR HEAT TREAT CONDITION (IF APPLICABLE)

Solution Annealing: Heated to 1100°C, FOUR hours Water Quenched.

Retained
CIRCOR
P. Selvaraj

Prepared by CIRCOR VALVE CO.

Sathish kumar.P
Review & Approved by:

Prakash Selvaraj
AUTHORIZED SIGNATURE



CIRCOR MEXICO S.A. DE C.V.
AVENIDA AVANTE MONTERREY 401
PARQUE INDUSTRIAL AVANTE MON
GARCIA NIEVO LEON
MEXICO

MATERIAL TEST REPORT

SECTION 3 OF 3

PART NO.	05081-239
P.O. NO.	P35678-9-1
QUANTITY	1
HEAT CODE/NO.	P0141-5
VENDOR NO.	V11067

DATE	2019.05.29
INDUSTRY SPEC.	ASTM A351,2016 CF8M
MATERIAL TYPE	CF8M
CERTIFICATE NO	CM/P0141C/19

CHEMICAL TEST RESULTS

C	MN	SI	P	S	CR	NI	MO	V	CU	W	CE
0.051	1.020	1.150	0.018	0.009	18.340	9.540	2.140				
NEW CHEMICAL TEST RESULTS											

PHYSICAL TEST RESULTS

TENSILE (PSI)	81981
YIELD (PSI)	43656
% ELONGATION	59.4
% REDUCTION OF AREA	

HARDNESS

(BHN) BRINNELL	174 TO	179
(RB) ROCKWELL B SCALE		
(RC) ROCKWELL C SCALE		

CHARPY IMPACT TEST RESULTS (FT-LBS),(IF APPLICABLE)

TEST TEMP.	1	2	3

HEAT TREATMENT OR HEAT TREAT CONDITION (IF APPLICABLE)

Solution Annealing: Heated to 1100°C, FOUR hours Water Quenched.

Reviewed
CIRCOR
P. Selvaraj

Prepared by CIRCOR VALVE CO.

Sathish kumar.P
Review & Approved by:

Prakash Selvaraj
AUTHORIZED SIGNATURE



CIRCOR ENERGY PRODUCTS
1500 S.E. 89TH STREET
OKLAHOMA CITY, OK 73149
405-631-1533

MATERIAL TEST REPORT

Circor Quality Inspected

SECTION 3 OF 3

PART NO.	05039-002
P.O. NO.	D68440
QUANTITY	234
HEAT CODE/NO.	SZ13460
VENDOR NO.	V4239

DATE	04-02-2018
INDUSTRY SPEC.	ASTM A182 F316/F316L API 6D & 6A/ 3160001
MATERIAL TYPE	Stainless Steel
CERTIFICATE NO.	
RAW MATERIAL	

CHEMICAL TEST RESULTS

C	MN	SI	P	S	CR	NI	MO	V	CU	W		CE
0.017	0.87	0.542	0.036	0.002	16.58	10.08	2.065					

NEW CHEMICAL TEST RESULTS

PHYSICAL TEST RESULTS

TENSILE (PSI)	83375
YIELD (PSI)	48285
% ELONGATION	44
% REDUCTION OF AREA	64

HARDNESS

(BHN) BRINNELL			
(RB) ROCKWELL B SCALE			
(RC) ROCKWELL C SCALE	5.1	6.8	

CHARPY IMPACT TEST RESULTS (FT-LBS)(IF APPLICABLE)

TEST TEMP.	1	2	3	Average

HEAT TREATMENT OR HEAT TREAT CONDITION (IF APPLICABLE)

Austenitizing: Temp. up to 1050?(Min), retaining 4Hours and water cooling

CHECKED
04/02/2018



Prepared By

Timothy W. Heston

Approval Signature

Prepared By Circor Energy Products



VALVE CERTIFICATION

Avenida Avante Monterrey 401 Parque Industrial Avante Monterrey.

Garcia, NL, Mexico C.P. 66023

ISO 10474 (2013)

DIN EN 10204 (2004)

MATERIAL CERTIFICATION 3.1

PAGE 1 OF 2

SOLD TO:	CIRCOR COMPANY	CEP TICKET	P34755	QTY	3	TAG NO.:
SHIPPED TO:	AIV LP CANADA	CUSTOMER PO	1122223			
PART NO.:	E3762-E29F614A1	REF. PO		ITEM NO.	5108	

VALVE DESCRIPTION

VALVE SIZE (IPS)	4" FP	SERIES	FAE
VALVE PRESSURE CLASS	ANSI CL150	BALL VALVE	
VALVE END CONNECTION	RF X RF	Type	Trunnion

VALVE REQUIREMENTS

NON-NACE [] NACE-MRO175-2015 (ISO 15156) [X]
MONOGRAM: API 6D 24th ed [] API 6A 20th ed [] NON API [X]
FIRE SAFE CERTIFIED: API 6FA 3RD ed. [X] API 6FD 1ST ed. []

[illegible]

OPTIONS

BARE STEM:	
HANDLE:	X
GEAR OPERATOR:	
ACTUATION:	
HIGH HEAD EXTENSION	
INTERNAL COATING:	
EXTERNAL COATING:	
QSL 1	X
CAT II M45C ISO-FT	X
CSA Z245.15-13 COMPLIANT	X
SOUR SERVICE	X

CERTIFICATE OF CONFORMANCE

IT IS CERTIFIED THAT THE ABOVE REFERENCED PRODUCTS HAVE BEEN MANUFACTURED, INSPECTED AND TESTED IN ACCORDANCE WITH ALL APPLICABLE SPECIFICATIONS, DRAWINGS AND/OR OTHER PURCHASE ORDER REQUIREMENTS.

CERTIFICATE OF ORIGIN

IT IS CERTIFIED THAT THE ABOVE REFERENCED
PRODUCTS WERE ASSEMBLED IN MEXICO.

THE PRODUCTS DO NOT CONTAIN ANY MERCURY OR
ASBESTOS CONTAMINATION IN THE MATERIALS.

CERTIFIED TEST RECORD		API 6D [X]	API 598 []	ANSI B16.34 []	OTHER / SPECIFY []	49 CFR Ch.1 PART192 CLASS 3 [X]		
TEST TYPE	PRESSURE (PSIG)	TIME IN MINUTES		TEST MEDIA		TEST RESULTS	INSPECTION	INSPECTION RESULTS
HYDROSTATIC SHELL	425	2 MIN		WATER W/INHIBITOR [X] 60/40 GLYCOL/WATER []		ZERO LEAKAGE	DIMENSIONAL	GOOD
HYDROSTATIC SEAT	325	2 MIN		SAME	SAME	SAME	VISUAL	GOOD
DOUBLE BLOCK	325	2 MIN		SAME	SAME	SAME	VISUAL	GOOD
AIR SEAT	N/A							

IT IS CERTIFIED THAT THE ABOVE INFORMATION IS TRUE AND CORRECT AS CONTAINED IN THE RECORDS OF CIRCOR MX PRODUCTS.

CIRCOR MX QUALITY ASSURANCE:

Prepared By:

BR

DATE _____

8-75-19

CUSTOMER INSPECTOR:

N/A

DATE _____

**VALVE CERTIFICATION**

Avenida Avante Monterrey 401 Parque Industrial Avante Monterrey

García, NL, Mexico C.P. 66023

ISO 10747 (2013)

DIN EN 10204 (2004)

MATERIAL CERTIFICATION 3.1

PAGE 2 OF 2

PART NO.:

E3762-E29F614A1

QTY:

3

ITEM NO.:

5108

CEP SHIP TKT NO.:

P34755

COMPONENT HEAT CODES

	VALVE S/N	BODY	ADAPTER	BALL
1	22353-63-1-001	P0093-6	P0112-1	SZ13460
2	22353-63-1-002	P0093-2	P0112-2	SZ13460
3	22353-63-1-003	P0093-8	P0141-1	SZ13460
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				

COMPONENT HEAT CODES

	VALVE S/N	BODY	ADAPTER	BALL
26				
27				
28				
29				
30				
31				
32				
33				
34				
35				
36				
37				
38				
39				
40				
41				
42				
43				
44				
45				
46				
47				
48				
49				
50				

COMPONENT HEAT CODES

	VALVE S/N	BODY	ADAPTER	BALL
51				
52				
53				
54				
55				
56				
57				
58				
59				
60				
61				
62				
63				
64				
65				
66				
67				
68				
69				
70				
71				
72				
73				
74				
75				

IT IS CERTIFIED THAT THE ABOVE INFORMATION IS TRUE AND CORRECT AS CONTAINED IN THE RECORDS OF CIRCOR MX PRODUCTS.

CIRCOR MX QUALITY ASSURANCE:

DATE 8-25-19

CUSTOMER INSPECTOR:

N/A

DATE



CIRCOR MEXICO S.A.DE C.V.
AVENIDA AVANTE MONTERREY 401
PARQUE INDUSTRIAL AVANTE MON
GARCIA NIEVO LEON
MEXICO

MATERIAL TEST REPORT

SECTION 3 OF 3

PART NO.	05035-239
P.O. NO.	P34873-1
QUANTITY	1
HEAT CODE/NO.	P0093-6
VENDOR NO.	V11067

DATE	2019.05.11
INDUSTRY SPEC.	ASTM A351,2016 CF8M
MATERIAL TYPE	CF8M
CERTIFICATE NO	CM/P0093/19

CHEMICAL TEST RESULTS

C	MN	SI	P	S	CR	NI	MO	V	CU	W		CE
0.046	0.915	1.080	0.029	0.007	18.950	9.580	2.160					

NEW CHEMICAL TEST RESULTS

PHYSICAL TEST RESULTS

TENSILE (PSI)	71108
YIELD (PSI)	40611
% ELONGATION	53.48
% REDUCTION OF AREA	

HARDNESS

(BHN) BRINNELL	160 TO	163	
(RB) ROCKWELL B SCALE			
(RC) ROCKWELL C SCALE			

CHARPY IMPACT TEST RESULTS (FT-LBS),(IF APPLICABLE)

TEST TEMP.	1	2	3

HEAT TREATMENT OR HEAT TREAT CONDITION (IF APPLICABLE)

Solution Annealing: Heated to 1100°C, FOUR hours Water Quenched.

Reviewed
CIRCOR
Inspector Quality
Name: Sathish Kumar P
Date:
P. Selvaraj

Prepared by CIRCOR VALVE CO.

Sathish kumar.P
Review & Approved by:

Prakash Selvaraj
AUTHORIZED SIGNATURE



CIRCOR MEXICO S.A. DE C.V.
AVENIDA AVANTE MONTERREY 401
PARQUE INDUSTRIAL AVANTE MON
GARCIA NIEVO LEON
MEXICO

MATERIAL TEST REPORT

SECTION 3 OF 3

PART NO.	05035-239
P.O. NO.	P34873-1
QUANTITY	1
HEAT CODE/NO.	P0093-2
VENDOR NO.	V11067

DATE	2019.05.11
INDUSTRY SPEC.	ASTM A351, 2016 CF8M
MATERIAL TYPE	CF8M
CERTIFICATE NO	CM/P0093/19

CHEMICAL TEST RESULTS

C	MN	SI	P	S	CR	NI	MO	V	CU	W		CE
0.046	0.915	1.080	0.029	0.007	18.950	9.580	2.160					

NEW CHEMICAL TEST RESULTS

PHYSICAL TEST RESULTS

TENSILE (PSI)	71108
YIELD (PSI)	40611
% ELONGATION	53.48
% REDUCTION OF AREA	

HARDNESS

(BHN) BRINNELL	160 TO	163
(RB) ROCKWELL B SCALE		
(RC) ROCKWELL C SCALE		

CHARPY IMPACT TEST RESULTS (FT-LBS) (IF APPLICABLE)

TEST TEMP.	1	2	3

HEAT TREATMENT OR HEAT TREAT CONDITION (IF APPLICABLE)

Solution Annealing: Heated to 1100°C, FOUR hours Water Quenched.

Reviewed
CIRCOR
Inspector Quality
Name: Sathish Kumar P
Date: P. Sathish

Prepared by CIRCOR VALVE CO.

Sathish kumar.P
Review & Approved by:

Prakash Selvaraj
AUTHORIZED SIGNATURE



CIRCOR MEXICO S.A.DE C.V.
AVENIDA AVANTE MONTERREY 401
PARQUE INDUSTRIAL AVANTE MON
GARCIA NIEVO LEON
MEXICO

MATERIAL TEST REPORT

SECTION 3 OF 3

PART NO.	05035-239
P.O. NO.	P34873-1
QUANTITY	1
HEAT CODE/NO.	P0093-8
VENDOR NO.	V11067

DATE	2019.05.11
INDUSTRY SPEC.	ASTM A351,2016 CF8M
MATERIAL TYPE	CF8M
CERTIFICATE NO	CM/P0093/19

CHEMICAL TEST RESULTS

C	MN	SI	P	S	CR	NI	MO	V	CU	W		CE
0.046	0.915	1.080	0.029	0.007	18.950	9.580	2.160					
NEW CHEMICAL TEST RESULTS												

PHYSICAL TEST RESULTS

TENSILE (PSI)	71108
YIELD (PSI)	40611
% ELONGATION	53.48
% REDUCTION OF AREA	

HARDNESS

(BHN) BRINELL	160 TO	163	
(RB) ROCKWELL B SCALE			
(RC) ROCKWELL C SCALE			

CHARPY IMPACT TEST RESULTS (FT-LBS),(IF APPLICABLE)

TEST TEMP.	1	2	3

HEAT TREATMENT OR HEAT TREAT CONDITION (IF APPLICABLE)

Solution Annealing: Heated to 1100°C, FOUR hours Water Quenched.

Reviewed
CIRCOR
Inspector Quality
Name: Sathish Kumar.P
Date:

Prepared by CIRCOR VALVE CO.

Sathish kumar.P
Review & Approved by:

Prakash Selvaraj
AUTHORIZED SIGNATURE



CIRCOR MEXICO S.A.DE C.V.
AVENIDA AVANTE MONTERREY 401
PARQUE INDUSTRIAL AVANTE MON
GARCIA NIEVO LEON
MEXICO

MATERIAL TEST REPORT

SECTION 3 OF 3

PART NO.	05081-239
P.O. NO.	P35678-9-1
QUANTITY	1
HEAT CODE/NO.	P0112-1
VENDOR NO.	V11067

DATE	2019.05.29
INDUSTRY SPEC.	ASTM A351,2016 CF8M
MATERIAL TYPE	CF8M
CERTIFICATE NO	CM/P0112C/19

CHEMICAL TEST RESULTS

C	MN	SI	P	S	CR	NI	MO	V	CU	W		CE
0.051	1.180	1.280	0.025	0.009	19.820	10.120	2.200					

NEW CHEMICAL TEST RESULTS

PHYSICAL TEST RESULTS

TENSILE (PSI)	88079
YIELD (PSI)	48008
% ELONGATION	51.56
% REDUCTION OF AREA	

HARDNESS

(BHN) BRINNELL	163 TO	167	
(RB) ROCKWELL B SCALE			
(RC) ROCKWELL C SCALE			

CHARPY IMPACT TEST RESULTS (FT-LBS).(IF APPLICABLE)

TEST TEMP.	1	2	3

HEAT TREATMENT OR HEAT TREAT CONDITION (IF APPLICABLE)

Solution Annealing: Heated to 1100°C, FOUR hours Water Quenched.

Reviewed
CIRCOR
Signature: Sathish Kumar P
Date: P. C. H.

Prepared by CIRCOR VALVE CO.

Sathish kumar.P
Review & Approved by:

Prakash Selvaraj
AUTHORIZED SIGNATURE



CIRCOR MEXICO S.A.DE C.V.
AVENIDA AVANTE MONTERREY 401
PARQUE INDUSTRIAL AVANTE MON
GARCIA NIEVO LEON
MEXICO

MATERIAL TEST REPORT

SECTION 3 OF 3

PART NO.	05081-239
P.O. NO.	P35678-9-1
QUANTITY	1
HEAT CODE/NO.	P0112-2
VENDOR NO.	V11067

DATE	2019.05.29
INDUSTRY SPEC.	ASTM A351,2016 CF8M
MATERIAL TYPE	CF8M
CERTIFICATE NO	CM/P0112C/19

CHEMICAL TEST RESULTS

C	MN	SI	P	S	CR	NI	MO	V	CU	W		CE
0.051	1.180	1.280	0.025	0.009	19.820	10.120	2.200					
NEW CHEMICAL TEST RESULTS												

PHYSICAL TEST RESULTS

TENSILE (PSI)	88079
YIELD (PSI)	48008
% ELONGATION	51.56
% REDUCTION OF AREA	

HARDNESS

(BHN) BRINNELL	163 TO	167	
(RB) ROCKWELL B SCALE			
(RC) ROCKWELL C SCALE			

CHARPY IMPACT TEST RESULTS (FT-LBS),(IF APPLICABLE)

TEST TEMP.	1	2	3

HEAT TREATMENT OR HEAT TREAT CONDITION (IF APPLICABLE)

Solution Annealing: Heated to 1100°C, FOUR hours Water Quenched.

Reviewed
CIRCOR
Inspector Quality
Name: Sathish Kumar P
Date: P. C. H.

Prepared by CIRCOR VALVE CO.

Sathish kumar.P
Review & Approved by:

Prakash Selvaraj
AUTHORIZED SIGNATURE



CIRCOR MEXICO S.A.DE C.V.
AVENIDA AVANTE MONTERREY 401
PARQUE INDUSTRIAL AVANTE MON
GARCIA NIEVO LEON
MEXICO

MATERIAL TEST REPORT

SECTION 3 OF 3

PART NO.	05081-239
P.O. NO.	P35678-9-1
QUANTITY	1
HEAT CODE/NO.	P0141-1
VENDOR NO.	V11067

DATE	2019.05.29
INDUSTRY SPEC.	ASTM A351,2016 CF8M
MATERIAL TYPE	CF8M
CERTIFICATE NO	CM/P0141C/19

CHEMICAL TEST RESULTS

C	MN	SI	P	S	CR	NI	MO	V	CU	W		CE
0.051	1.020	1.150	0.018	0.009	18.340	9.540	2.140					
NEW CHEMICAL TEST RESULTS												

PHYSICAL TEST RESULTS

TENSILE (PSI)	81981
YIELD (PSI)	43656
% ELONGATION	59.4
% REDUCTION OF AREA	

HARDNESS

(BHN) BRINELL	174 TO	179	
(RB) ROCKWELL B SCALE			
(RC) ROCKWELL C SCALE			

CHARPY IMPACT TEST RESULTS (FT-LBS),(IF APPLICABLE)

TEST TEMP.	1	2	3

HEAT TREATMENT OR HEAT TREAT CONDITION (IF APPLICABLE)

Solution Annealing: Heated to 1100°C, FOUR hours Water Quenched.

Reviewed
CIRCOR
Inspector Quality
Name: Sathish Kumar P
Date: P. S. H.

Prepared by CIRCOR VALVE CO.

Sathish kumar.P
Review & Approved by:

Prakash Selvaraj
AUTHORIZED SIGNATURE



CIRCOR ENERGY PRODUCTS
1500 S.E. 89TH STREET
OKLAHOMA CITY, OK 73149
405-631-1533

MATERIAL TEST REPORT

Circor Quality Inspected

SECTION 3 OF 3

PART NO.	05039-002
P.O. NO.	D68440
QUANTITY	234
HEAT CODE/NO.	SZ13460
VENDOR NO.	V4239

DATE	04-02-2018
INDUSTRY SPEC.	ASTM A182 F316/F316L API 6D & 6A/ 3160001
MATERIAL TYPE	Stainless Steel
CERTIFICATE NO.	
RAW MATERIAL	

CHEMICAL TEST RESULTS

C	MN	SI	P	S	CR	NI	MO	V	CU	W		CE
0.017	0.87	0.542	0.036	0.002	16.58	10.08	2.065					

NEW CHEMICAL TEST RESULTS

PHYSICAL TEST RESULTS

TENSILE (PSI)	83375
YIELD (PSI)	48285
% ELONGATION	44
% REDUCTION OF AREA	64

HARDNESS

(BHN) BRINNELL			
(RB) ROCKWELL B SCALE			
(RC) ROCKWELL C SCALE	5.1	6.8	

CHARPY IMPACT TEST RESULTS (FT-LBS)(IF APPLICABLE)

TEST TEMP.	1	2	3	Average

HEAT TREATMENT OR HEAT TREAT CONDITION (IF APPLICABLE)

Austenitizing: Temp. up to 1050?(Min), retaining 4Hours and water cooling

CHECKED
04/02/2018



Prepared By

Timothy H. Heston

Approval Signature

Prepared By Circor Energy Products



PC: 771 Whse: 771

Requires By: 02/21/20
Contact Name: AMANDA CLIFT
Contact#:

GST/HST: R101626026

A Division of EMCO Corporation

2165 - 70th AVENUE
EDMONTON, AB T6P 0B4
Ph: (780)463-7473
Fax: (780)462-0392

Invoice Number
77110116-00

Customer P.O. Number
8401437215

Date/Time Printed
02/18/20 14:57 MST

Date/Time Ordered
02/13/20 15:16

Bill To: Cust.No. 613978
Phone No. (403) -

Ship To:

A HUSKY OIL OPERATIONS LIMITED
D AGREEMENT# M036692018
D 707-8TH AVE SW
R BOX 6525, POSTAL STATION D
E CALGARY, AB T2P 3G7
S

HUSKY OIL OPERATIONS LIMITED
SUNRISE
CANTERRA ROAD
FT MCMURRAY, AB T2P 3G7

PICKER # 1

Shipped

Special Instructions:

Reference:

PPD COL PPD/ADD

	X	
--	----------	--

Line	SKU	Bin Loc	Description	UOM	Ordered	Shipped	B/O	List	%	Net
1	YJ771297	Non Stock	3 300 GATE VLV RF TRIM 12 BB NACE API 600 WCB NEWAY #3G3RA12-NC TAG REQUESTED CAT C TESTING INCL. **IF VALVE FAILS CAT C TESTING, ADDITIONAL COSTS MAY APPLY FOR REPAIR, RETEST OR REPLACEMENT AT CUSTOMER'S EXPENSE**	EA	1	0	1			
2	YJ771372	Non Stock	4 150 BALL VLV RF FP 316 SS TRIM TM DBB LO CF8M KF #E3762-E294614A1 NO TAG REQUESTED NO TESTING INCL. 316SS BALL AND STEM DEVIATIONS: FULL PORT, SIDE ENTRY, DEVLON SEATS WITH ELAST-O-LION P85 HNBR O-RING, TEMP RATING -50F, -46C	EA	6	6				

Staging Area _____ Pipe _____ Bags _____

Boxes _____ Skids 1 Crates _____ Other _____

Taken By
jmd - Jillian MacDonald

Sales Rep. _____ Freight _____ Placed By
AMANDA C.

Bill of Lading # #W219907 Date Picked 2/18/20 Picked By VB Weight 0.0 Via Velocity Exp Date Shipped 2/18/20 Page
1 Last Page

NO RETURNS ALLOWED ON SPECIAL ORDERS WITHOUT PERMISSION

2% PER MONTH (24% PER ANNUM) SERVICE CHARGE ON ALL OVERDUE ACCOUNTS.

Customer's
Signature

Customer's
Name(Printed)

Customer
Copy

G.S.T. REGISTRATION NO.
#R123456789



CERTIFIED MATERIAL TEST REPORT

ITEM NO. 69

ADDITIONAL DETAIL 8:

DATE _____

(a)(iv)

100

RESULT

DESIGN CO

A71600

100

EL (%)	R.A. (%)
100	100
90	90
80	80
70	70
60	60
50	50
40	40
30	30
20	20
10	10
0	0

28 50

25 46

24	46
----	----

07	08
----	----

[illegible][illegible]

1