



Head Office: 4810 - 93 Street NW, Edmonton, Alberta, Canada T6E 5M4
Tel: 780-469-2401 Fax: 780-468-2422 www.raeengineering.ca

Report No: FO000281

Client	Petronas Energy Canada Ltd.	Inspection Date	Jan 7, 2018		
Prov. Reg. #	AB 0586440 BC BPV-048529	Inspection Type	VE / UT / PSV		
Equipment Type	Glycol Contactor	Location	Town		
Tag/Equip.		LSD	BC A-058-H/094-B-16		
Status	Not in Service	Downhole LSD			
Manufacturer	Propak Systems Ltd.	Area	Town		
Serial Number	081926-101	Year Built	2008		
CRN #	T6576.21	Service	Sour		
Comp/Unit Id	Dehy #3	Manway	None		
Nat.Board #		Coating	Unknown		
Interim Insp'n		Interim Type			
Next Thorough Insp	9999	Next Insp Type	VE / UT		
Length		Height			
Volume	Capacity	Client Reference	1005234		
Owner	Petronas Energy Canada Ltd.	RT	1	HT	YES
Foreman	SBU	RAE Job No.	6882		
ABSA	Plant: H Vessel: P Process: W Special: B		ASME	Sec. VIII div. 1	
History Log	AB-10 - internal entry - LSD changed - entered August 27, 2015. PSV Service Report - dated July 18, 2017				

Component	Shell				
MAWP	1415.0 PSI @ 150 °F		MDMT	-20 °F @ 1415.0 PSI	
Material	SA-516-70N		Material Thickness	1 in	
Diameter	24 in		Length	288 in	
Corrosion Allowance					



Valve Tag No	3235	Relief Type	Pressure Safety Valve
Manufacturer	Dresser	Set Pressure	1415 PSI
Serial Number	C0728954	Capacity	8628 SCFM
Model	981175-MA	Last Service	Jun 21, 2017
CRN	0G0703.92	Next Service	9999
Service Co.	Pimm's Production	Service Interval	60 Months
Service Co. Tag	66472	Inlet Size	1.5 in
ASME Stamp	UV	Outlet Size	2 in
NB Stamp	YES	Connection	Threaded
Relief Dest.	To Flare	Valve Loc.	On Piping
Comments	Verified 1/6/2016 Good condition, 5 yr interval (TP - 8/28/2017)	Client Reference	1011072

Component	Heads		
Material	SA-516-70N	Material Thickness	0.958 in
Corrosion Allowance			

Comments

The following RAE Procedure(s) was/were used in inspecting this vessel:

INS-624B Unfired Pressure Vessels Procedure

INS-645B PRV Inspection Procedure

NDE-701B UT-1 Ultrasonic Thickness Measurement Procedure

A visual external inspection was performed at this time.



Figure: 1



LSD

Figure: 2



Site Overview

Building Observations

The building was generally in good condition, well lit, and adequately supported. The checker plate steel floor was clean and in good condition. The doors and windows functioned well and were in good condition. The cladding was generally in good condition with a few small dents throughout. There were no combustibles in the building. There was generally good access to the equipment in the building. The building structure was level. The ground wire was securely attached to the building structure. The building was supported by pilings.

Figure: 3



Building Overview

Figure: 4



Building Overview

Piping Observations

The inlet and outlet piping was painted and generally in good serviceable condition. The piping had welded joints and flanged connections that showed no signs of leakage. The pipe flanges and bolting appeared to be in good condition. The flanged connections were fully bolted.



Figure: 5



Inlet Piping

Figure: 6



Inlet Piping

Figure: 7



Outlet Piping

PSV Observations

The PSV was located on associated piping within the building. The PSV was mounted in the vertical position, securely attached to the piping, and in good condition. The nameplate was securely attached and legible. The set pressure was acceptable for the vessel. The service tag was securely attached. The PSV seal wire was attached and intact. The vent size was adequate and vent lines were positioned safely. The outlet piping provided positive drainage for the PSV. The valve on the discharge piping was tagged do not operate and had a seal wire on it.



Figure: 8



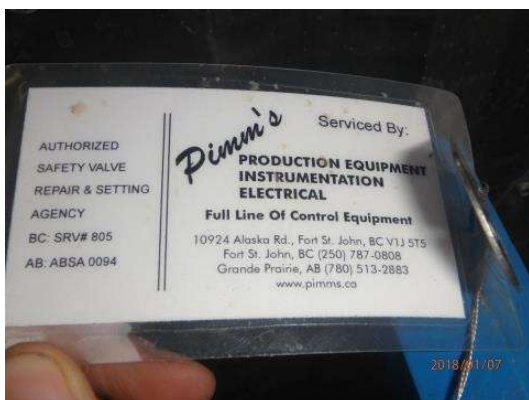
PSV Overview

Figure: 9



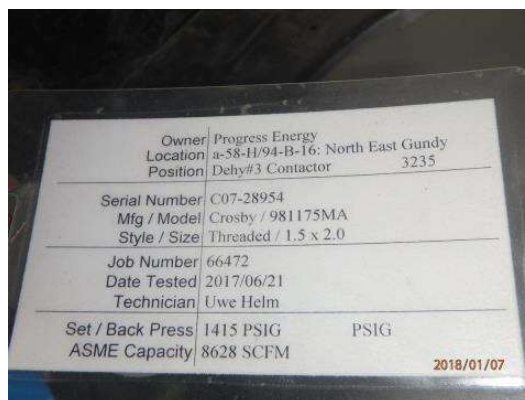
PSV Nameplate

Figure: 10



PSV service tag

Figure: 11



PSV service tag

External Observations

The bottom half of the vessel was inside the building structure and the top half was located outside the building structure. The nameplate was legible and securely mounted to the vessel. The vessel was identified per serial number stamped on the nameplate of the vessel. The heads, shell, nozzles and bolting appeared to be in good condition with no stress evident on piping or nozzle connections. There was no damage or distortion evident on the vessel surface. The vessel was not insulated it was painted and generally in good condition. The gauges were in good condition. The vessel was vertical and mounted on a skirt that was bolted to the floor. The vessel was adequately supported. The through roof seal was intact and in fair condition.



Figure: 12



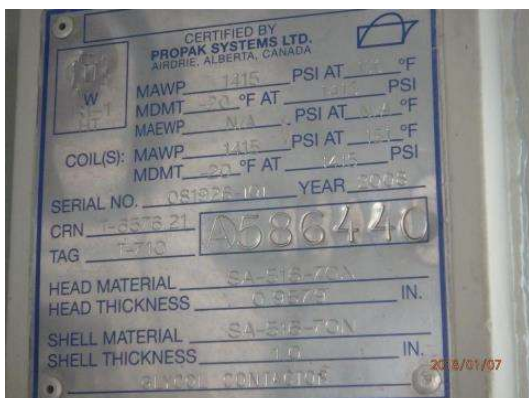
Vessel Overview (Bottom)

Figure: 13



Vessel Overview (Top)

Figure: 14



Vessel Nameplate

Internal Observations

No internal inspection was performed at this time.

UT1 Observations

Please see the attached Appendices for UT Data.

Recommendations

Based on the inspection performed at this time the vessel appears fit for service.



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Report No: FO000281

Francis Omovbude

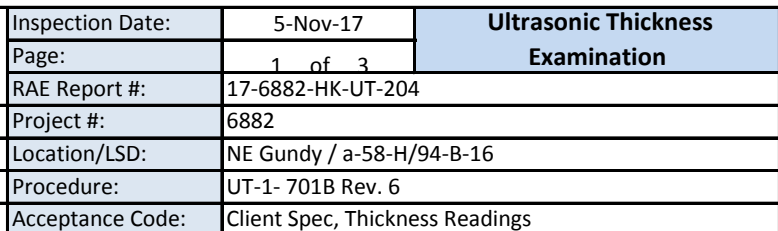
API 510 #76115, API 570 #80439
CWB Level I #18851

Trevor Paananen, P.Eng.

Alberta IBPV #A-55680
CWB Level I #4816, API 570 #76796
API 653 #22574, NACE Level I #12488

Inspector : Francis Omovbude

Reviewed By: Trevor Paananen



Item Number:	A0586440	Material:	Carbon Steel			
Item Description:	Glycol Contactor	Surface	<input checked="" type="checkbox"/> Coated	<input type="checkbox"/> Bare Steel	<input type="checkbox"/> Machined	
		Condition:	<input type="checkbox"/> As Ground	<input type="checkbox"/> Shot Blasted	<input type="checkbox"/> As Welded	
		Surface Temp:	<input type="checkbox"/> < 0 °C	<input checked="" type="checkbox"/> 0-120 °C	<input type="checkbox"/> 120-260 °C	<input type="checkbox"/> >260 °C


Instrument Mfr:	GE	Model:	DMS-Go	S/N:	USMGO14056033		Cal. Due:	10-Apr-18
Cal Block S/N:	12-2513	1 or 2 Point Cal:	<input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2	Calibrated Range:		0.100"-0.500"	Couplant:	UTX

	Probe Model	Freq MHz	Angle	Dia. (in)	Probe Type		Manufacturer	Serial #	Cable length	Delay line	Vel. (m/sec)	Transfer Value	Ref dB	Ref %FSH	Scan dB	Range (in)
					Single	Dual										
1	063-200-106	5.0	0°	0.25	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Stresstel	14E011JP	4'	<input type="checkbox"/>	5850	NA	60	80	As Needed	3
2					<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>						
3					<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>						
4					<input type="checkbox"/>	<input type="checkbox"/>				<input type="checkbox"/>						

Scope: Conduct 0° straight beam ultrasonic testing on the Glycol Contactor looking for any signs of wall thinning due to corrosion, erosion, laminations or inclusions.

Results: The measurements obtained from the inspection locations show the thickness of all of the components inspected to be at or around nominal. There were no signs of wall thinning, internal corrosion, erosion, laminations or inclusions at the time of inspection.

Please see the following pages for the isometric drawings, and the thickness measurements.

Client Representative						
	PRINT	SIGNATURE				
1 ST Technician	Hillary Kettle		CGSB#:		CGSB Level:	
	PRINT	SIGNATURE	SNT#:	710B-030	SNT Level:	1
2 ND Technician			CGSB#:		CGSB Level:	
	PRINT	SIGNATURE	SNT#:		SNT Level:	



RAE Engineering and Inspection Ltd
4810 - 93 Street Edmonton, AB, T6E 5M4
ph: 780-469-2401 fx: 780-468-2422

Date:

5-Nov-17

Ultrasonic Thickness
Examination

Page:

2 of 3

RAE Report #

17-6882-HK-UT-204

Client:

Progress

Project #:

6882

Item Number:

Location/LSD:

NE Gundy / a-58-H/94-B-16

Item Description:

Glycol Contactor

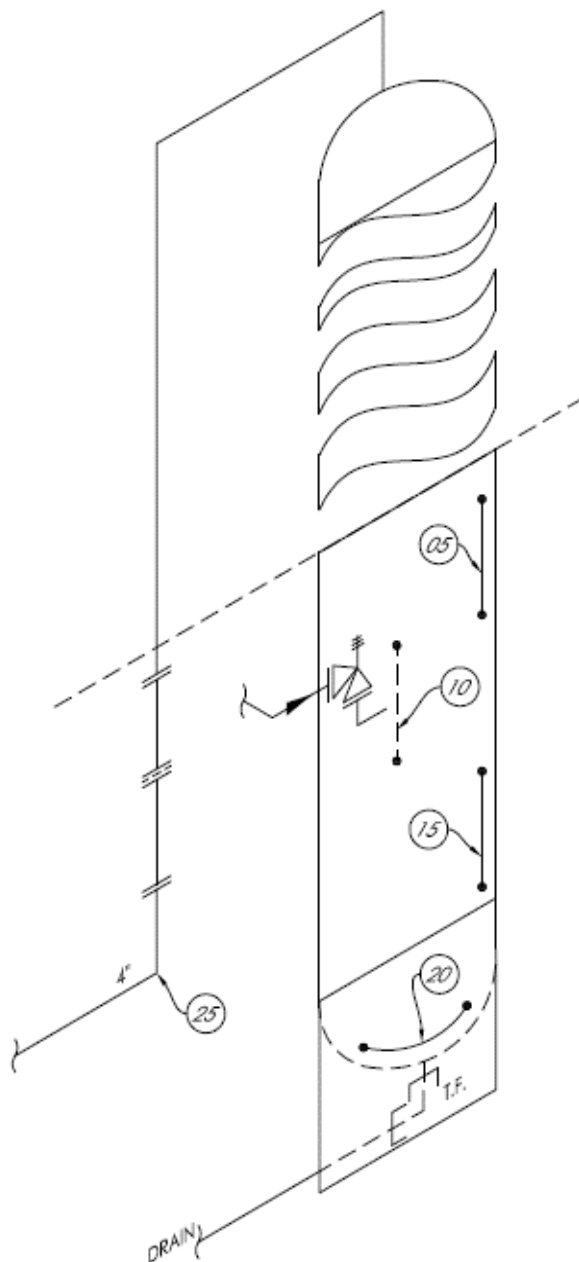
Procedure:

UT-1- 701B Rev. 6

Acceptance Code:

Client Spec, Thickness Readings

ISO Drawing of Equipment and TMLs



Client

Representative

PRINT

SIGNATURE

Hillary Kettle

1ST Technician

Hillary Kettle

PRINT

SIGNATURE

2ND Technician

PRINT

SIGNATURE

CGSB#:

710B-030

CGSB Lvl:

1

CGSB#:

CGSB Lvl:

SNT#:

SNT Lvl:



RAE Engineering and Inspection Ltd
4810 - 93 Street Edmonton, AB, T6E 5M4
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Date:	5-Nov-17	Ultrasonic Thickness Examination
Page:	3 of 3	
RAE Report #:	17-6882-HK-UT-204	
Project #:	6882	
Location/LSD:	NE Gundy / a-58-H/94-B-16	
Procedure:	UT-1- 701B Rev. 6	
Acceptance Code:	Client Spec, Thickness Readings	

Client:	Progress
Item Number:	
Item Description:	Glycol Contactor

Measurements in: inches							TML Data											
TML	Description						1	2	3	4	5	6	7	8	9	10	11	12
05	Upper Shell						1.063	1.055	1.056	1.052	1.052	1.052	1.051	1.055	1.061	1.081	1.112	1.107
	Nom.	N/S	Min.	N/S	Direc.	T-B									Min. =	1.051	Ave. =	1.066
10	Mid Shell						1.054	1.105	1.079	1.059	1.116	1.079	1.079	1.076	1.060	1.061	1.057	1.053
	Nom.	N/S	Min.	N/S	Direc.	T-B									Min. =	1.053	Ave. =	1.073
15	Lower Shell						1.075	1.064	1.054	1.053	1.072	1.050	1.050	1.047	1.048	1.046	1.045	1.046
	Nom.	N/S	Min.	N/S	Direc.	T-B									Min. =	1.045	Ave. =	1.054
20	Bottom Head						1.167	1.193	1.135	1.124	1.121	1.166	1.111	1.108	1.136	1.116	1.136	1.136
	Nom.	N/S	Min.	N/S	Direc.	T-B									Min. =	1.108	Ave. =	1.137
25	4" XH	90° Elbow					0.372	0.343	0.341	0.337	0.338	0.337						
	Nom.	0.337	Min.	0.295	Direc.	T-B									Min. =	0.337	Ave. =	0.345



PRODUCTION EQUIPMENT
INSTRUMENTATION
ELECTRICAL

787-0808

10824 ALASKA ROAD
FORT ST. JOHN, B.C.
V1J 5T5

Relief Device Single Data Sheet

Owner Progress Energy
Plant a-58-H/94-B-16: North East Gundy
Date Tuesday, July 18, 2017

Tag Number	3235	Serial Number	C07-28954	Unit / Vessel	
Most Recent	Yes (Relief Valve)	Name		Status	Active
Equipment Link		Equipment Location	Dchy#3 Contactor	Job Number	66472
Universal 1		Universal 2		Risk / Criticality	
Registration #	OG0703.92	NB Registration #		Sizing Basis	
Style	Threaded	Manufacturer	Crosby	Model Number	981175MA
Traveller	Threaded	Bonnet	Closed	Cap Type	Screwed
Valve Size	1.5 x 2.0	Inlet	MNPT	Outlet	FNPT
Inlet Rupture Disk	No	Inlet Other		Outlet Other	
Body Material	Carbon Steel	Bonnet Material	Carbon Steel	Soft Seat Mat'l	Metal
Trim Material	316 SS	Bellows Material			
Spring Number		Spring Material		From / To	to
Class		Config Universal		Config Univ 2	
Discharges To		Alternate Relief		Product	
Service	Compressible	Nameplate / App Code	Sec VIII Sec VIII	App. Capacity	8628 SCFM
Set Pressure	1415 PSIG	Back Pressure	PSIG	BP Is / Constant	
MAWP	PSIG	Cold Diff Test Press	1415 PSIG	Operating Temp	70 F
ASME Capacity	8628 SCFM	Operating Press	PSIG	Req'd Blow Down %	=
Restricted Lift	IN	Mfg Lift	IN	Orifice	= IN^2
Date Received	2017/06/21	Received By	Braden Pimm	Rec Universal	unknown 4/2/2014
Scheduled - For	Yes - Pretest and repair	Special Cleaning	No	Dismb / Insp By	Uwe Helm
Pretest	Yes	Pretest Notes	Requested by client Passed	Popped @	1393 PSIG
Leaked / @	8 BPM @ 90	Comp Screw Recd	6.5 MM	Prev Repair Company	Dalco
Nameplate	Original	Seal	Intact	Seal ID	Dalco
Valve Converted	No	Valve Replaced	No	Set Press Changed	No
Date Tested	2017/06/21	Repair Company	Pimms' Production	Test Univ1	Pop
Assembled By	Uwe Helm	Tested By	Uwe Helm	Witnessed By	
Test Media	Air	Test Method	Bench	Next Maint For	
Gauge 1 S/N		Gauge 2 S/N		Comp Screw Set	IN
Final Test Press	1415 PSIG	Reseat Press	PSIG	Blow Down	PSIG
Measured Lift	IN	Leakage Rate / @	0 BPM @ 90	BP Test / @	Yes @ 35
BD Ring - Up	Notches	BD Ring - Lower	Notches	Overlap Collar	IN
Next Maint Date	2018/06/21 (12)	Next Test Date	2018/06/21 (12)	Due Date	(12)

Comment

Pretest and repair. Valve was received oily inside. Leaked slightly on pretest. Disc and nozzle were measured and lapped by C. Pierce. Gasket set was worn and replaced.

Check List / Quality Control

Oxygen Cleaned	No
Visual Inspection	Yes
PSV Painted	Yes
PSV Taped	Yes
PSV Sealed	Yes
PSV Complete	Yes
Paper Work Done	Yes
Coordinator Notified	Yes
Stamp Repair VR	No
Main Valve Test	Yes
Pilot Valve Test	No
Integral Test	No

QC Inspector

Part Name	Condition Received	Work Performed
Number		Recommendation
Nozzle	Pitted	Lapped
Gasket Set	Worn	Replaced
Disc	Req's Replacing	Lapped

Good Condition

Last - 2014

Next - 2022

Aug 28/17

Act/Rem Univ 1 Act/Rem Univ 2 Who

Date

Action Remark Action / Remarks

Boiler and Pressure Vessel Status

Note: This form may be used to provide notification of changes in ownership, location, operating status, or scrapped boilers and pressure vessels

Please review the responsibilities of the vendor and the new owner under Section 36 of the Pressure Equipment Safety Regulation. (regulation can be found on our website www.absa.ca)

Re: Vessel (A) 0586440

Serial No: 081926-101

CRN T6576.21

☐ **Vessel Sold or Purchased. Please transfer registration of the vessel to:**

Name of New Owner:

Mailing Address:

New Location of Vessel:

Contact Person:

Tel.:

E-Mail:

Date of Sale:

P.O.

☐ **Vessel Removed from Service on:**

(The owner is responsible for ensuring the vessel is inspected by ABSA prior to it being returned to service in the Province of Alberta)

☐ **Vessel Returned to service**

Inspected on:

Inspection Report Attached: ☐

☒ **Vessel Relocated to:** LSD a-058-H/94-B-16 (FORT ST JOHN)

☐ **We own but do not know the location of this vessel**

(ABSA records will record the location as unknown, and applicable annual fees will remain in force to your account. Responsibility for safe operation on Alberta continues to reside with your company. When the location becomes known, you are required to notify ABSA)

☐ **We sold this vessel but we do not know to whom:**

(ABSA records will retain your company name as owner. Responsibility for safe operation in Alberta also remains with your company until new ownership details are received by ABSA)

☒ **Vessel operating outside the Province of Alberta since:** 2014-04-11

Please remove from annual registration. You are required to notify ABSA if the vessel return to service in Alberta.

Vessel Scrapped - All three conditions must be satisfied

☐ Vessel has been removed from service and there is no intention to return it to pressure service.

☐ The nameplate has been removed and all other identification has been removed

☐ The vessel is in a condition that it cannot be pressureized. i.e. a hole has been cut in the vessel, a nozzle has been removed or a head has been cut off.

Company Name: RAE Engineering & Inspection Ltd. on behalf of Progress Energy Canada Ltd.

Position Title: Chief Inspector

Telephone:

Name: Trevor Paananen

E-Mail:

Signature: _____



Date: August 27 2015