

Pressure Vessel External Visual Inspection Report



Organization: Husky

Inspection Date: 07/03/2012 12:00:00AM

Plant: Heavy Oil & Gas

Equipment ID: 62068385

Asset No: 62068385

System: N/A

Operating Unit: L7-01-008-00001 Eagle Wildmere Gas Gathering

Background

Description:	DEHYDRATOR, DEHY UNIT
Asset Type:	

Inspection

Inspector:	Nick Mintoft	Company:	Husky Energy	Insulated:	N
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External Location Categories

Barrier Penetrations:	0	Damaged Insulation:	0	Vessel Supports:	0	Insulation Rings:	0
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Internal Location Categories

Erosion Zones:	0
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Inspection Comments

ID	Description	Condition	Location	NCR	Comments
V7	Heads	Fair			Acceptable
V9	Electrical Ground	Yes			Acceptable
V11	Coating/Painting	Fair			Acceptable
V13	Gauge/Site Glass	Fair			Acceptable
V14	Shell	Fair			Acceptable
V22	Foundation	Fair			Acceptable
V24	Saddle/Skirt	Fair			Acceptable
V31	Connections Other (Please explain)	Fair			Associated Piping - Acceptable

Pressure Vessel External Visual Inspection Report

Inspection Summary

Inspections performed indicate that the contactor is in fair condition and suitable for continued service. The vessel is painted and is in fair condition however there was some minor surface staining found on the contactor shell.

The nameplate, piping, bolting and external attachments are in fair condition.

The gauges are clear and in good condition.

The vessel is securely attached to the floor.

The PSV protecting the contactor must be serviced prior to recommissioning the contactor.

UT thickness tests were performed on the contactor's bottom head, shell and inlet nozzle with all areas found to meet or exceed the thickness values shown on the vessel's Manufacturer's Data Report. See attached sketch for thicknesses found and approximate locations of tests.

Recommendations:

Continue the UT thickness survey at next scheduled inspection.

The PSV protecting the contactor must be serviced prior to recommissioning the contactor.

Inspect the Contactor in five (5) years.

cc: Al Hinz, Jocelyn Munro

Pressure Vessel External Visual Inspection Report

Inspection Planning

Date of Inspection: _____ Date of last Inspection: _____ Date of Next Inspection: _____

The signature below certify that the above is a true report of the inspection / test of the equipment specified and consider fit for service until the date of next inspection.

Competent Inspector: _____ Report Generation Date: _____

Reviewed and Accepted by:

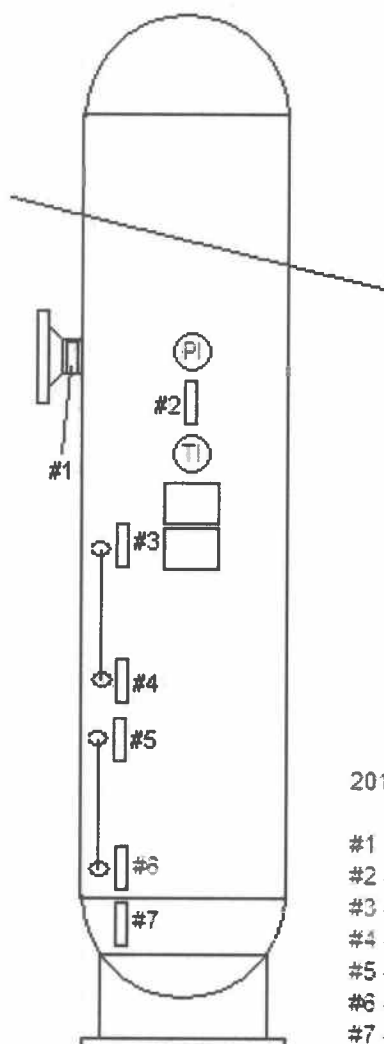
Next Inspection Date: MAR 07 2017

Approved by:

Signature:  Date: MAR 26 2012

Signature: _____ Date: _____

Date: 2012-03-07 Location: 8-2-50-7W4 Contact: Al Hinz AFE/Cost Center 25515
Equipment # 62068385 Provincial # A244337 CRN H0415.2 S/N LS-3771
Description Dehy Head Material SA 516-70 Thk. .9375" min Shell Material SA 516-70 Thk. .843"
Manufacturer CE NATCO Limited Year Built 1988 CA None Size 16" x 336"
1430 PSI @ 129 F



2012-03-07

#1 - .225"
#2 - .845"
#3 - .850"
#4 - .849"
#5 - .843"
#6 - .848"
#7 - .959"

NDE Report Pressure Vessel



Organization: Husky

Plant: Heavy Oil & Gas

EquipmentID: 62068385

System ID: N/A

Unit Name: L7-01-008-00001 Eagle Wildmere Gas Gathering

Background

Description:	DEHYDRATOR, DEHY UNIT
Asset Type:	Pressure Vessel

Summary

Component Type	Short Term Avg. Corrosion Rate	Long Term Avg. Corrosion Rate	Remaining Life

NDE

Inspection Location	Location Description	Component Type	Status	Nominal Thickness	Minimum Thickness	Initial Reading	Initial Date	Previous Rdg	Previous Date	Current Reading	Current Date	ST CR	LT CR	Remain Life
#1	Nozzle Neck	Vessel	Active	5.50	0.00	5.5	07/03/2012	5.5	07/03/2012	5.7	26/03/2012			
#2	Shell	Vessel	Active	21.40	0.00	21.4	07/03/2012	21.4	07/03/2012	21.5	26/03/2012			
#3	Shell	Vessel	Active	21.40	0.00	21.4	07/03/2012	21.4	07/03/2012	21.6	26/03/2012			
#4	Shell	Vessel	Active	21.40	0.00	21.4	07/03/2012	21.4	07/03/2012	21.6	26/03/2012			
#5	Shell	Vessel	Active	21.40	0.00	21.4	07/03/2012	21.4	07/03/2012	21.4	26/03/2012			
#6	Shell	Vessel	Active	21.40	0.00	21.4	07/03/2012	21.4	07/03/2012	21.5	26/03/2012			

***NDE Report
Pressure Vessel***

#7	Head	Vessel	Active	23.80	0.00	23.8	07/03/2012	23.8	07/03/2012	24.4	26/03/2012			
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**NDE Report
Pressure Vessel**

Inspection Planning

Date of Inspection: _____ Date of last Inspection: _____ Date of Next Inspection: _____

The signature below certify that the above is a true report of the inspection / test of the equipment specified and consider fit for service until the date of next inspection.

Competent Inspector: _____ Report Generation Date: _____

Reviewed and Accepted by:

Next Inspection Date: MAR 07 2017

Approved by:

Signature:  Date: MAR 26 2012

Signature: _____ Date: _____

ALBERTA LABOUR
General Safety Services Division
Boilers Branch
6th Floor, 10808 - 99 Avenue
Edmonton, Alberta
T5K 0G2

62068385

244337

**MANUFACTURER'S DATA REPORT
FOR PRESSURE VESSEL**

**DÉCLARATION DE CONFORMITÉ DU CONSTRUCTEUR
D'APPAREILS SOUS PRESSION**

Partial/Partiel ☐

Upon shipment of a pressure vessel, this form fully and correctly filled in must be mailed to the office of the Chief Inspector in the province of installation in accordance with the regulations under the Act, governing the construction and installation of pressure vessels.

Au moment de l'expédition d'un appareil sous pression, ce formulaire complété correctement, doit être envoyé au bureau de l'inspecteur en chef de la province d'installation tel que prévu dans les règlements de la loi sur les appareils sous pression.

Manufactured by Construit par	Name and address of Manufacturer Nom et adresse du constructeur CE NATCO LIMITED 703 - 21 Ave Nisku AB
Manufactured for Construit pour	Name and address of Purchaser or Consignee Nom et adresse du client ou de son représentant Tall Exploration Co. 1720, 840-7 Ave S.W. Calgary, Alberta
Ultimate owner Utilisateur	Name and address Nom et adresse As Above
Location of installation Lieu d'installation	Address Adresse L.S.D. - 6-12-44-4-W-11

Pressure vessel/Appareil	
Type Genre 3 Phase Vertical Contactors	Serial No. N° de série L S - 3771
Year built Année de fabrication 88-01	Overall Length/Long totale 336"/8534
Provincial Registration No. - C.R.N. N° d'enregistrement provincial - N.E.C. H-0011	National Board No. N° National Board SA-1007-00
Drawing No. N° de dessin SA-1007-00	Diameter Diamètre 16"/406

The chemical and physical properties of all parts meet the requirements of material specifications of the A.S.M.E. Code.

Les propriétés chimiques et physiques de toutes les composantes respectent les exigences des spécifications de matériaux de code ASME.

The design, construction and workmanship conform to CSA B51

La conception, la construction et la façon sont conformes à ACNOR B51

ASME
1986
VIII
Sec

Division
I

Addenda
Supplement
1986

Code case No.
N° de cas

Manufacturers' partial data reports properly identified and signed by authorized inspectors have been furnished for the following items of the report, and attached to this report:

Les rapports partiels du constructeur adéquatement identifiés et signés par les inspecteurs autorisés ont été produits pour les items suivants du rapport, et attachés à ce rapport:

Names of parts Nom de la composante	Item No. N° d'item	Manufacturer's Name Nom du constructeur	Identifying Stamp/Estampe d'identification

Shell/Viole													
Description	Material Matériau	Thickness Épaisseur	Corr Allow Surépais de corr	Diameter Diamètre	Overall Length Long totale	Number of courses Nombre de sections	Girth Joints Joints de circonférence		Longitudinal Joints Joints longitudinaux			P W H T Traitement therm	
							Type	RT Radiog	Type	RT Radiog	Efficiency Efficacité	Temp.	Time Durée
Shell	SA 106-B	0.943 21.4	Nil	-	336" 8534	-	DBL.V	UW11a	-	-	100	-	-
							BUT	5b					

Heads/Tetes											
Description	Material Matériau	Min. Thickn. Épais. min.	Corr. Allow Surépais. corr.	Crown Radius Rayon couron	Knuckle Radius Petit rayon	Ellipse Ratio Rapp. ellipse	Conical Apex Angle Angle conique	Hemisp. Radius Ray. hemisph.	Flat Diameter Diam. plat	Side to pressure Côte sous pression	
Top	SA 516-70	0.9375 23.8	Nil	-	-	2:1SE	-	-	-	concave	
Bottom	SA 516-70	0.9375 23.8	Nil	-	-	2:1SL	-	-	-	concave	
Removable bolts used (describe other fastenings) Boutons amovibles utilisés (décrire tout autre attache)							Mat'l Spec. Spec. du mat		Grade		Size/Dimension

Pressure - Temperature Pression - température			
Pressure Vessel Part Partie de l'appareil Contacteur	Constructed for max. allowable working pressure Construit pour une pression maximale de marche permise	At max. temp. A une temp. max.	Test pressure (hydro-pneumatic or combination) Pression d'épreuve (hydro-pneumatique ou combinaison)

Tube Section/Faisceau tubulaire

Tube/Tube: Plaque tubulaire	Material/Matériau	Diameter/Diamètre	Nominal Thickness/Epaisseur nominale	Corr. Allow./Surépais corrosion	Attachment/Mode d'attachement
Tube material/Matériau des tubes	Diameter/Diamètre	Nominal Thickness (gauge)/Epaisseur nominale (calibre)	Number/Nombre	Type (Straight or U)/Type (Droit ou U)	Heating Surface/Surface de chauffe

Jacket/Chemise

Type of Jacket/Genre de chemise	Jacket closure/Fermeture de chemise	Proof Test/Pression d'épreuve	Heating Surface/Surface de chauffe	Sketch/Schema
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Safety Valve Outlets/Soupapes de sûreté

Number/Nombre	Dimension	Location/Endroit
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Nozzles and Openings/Tubulures et ouvertures

Purpose/But	Number/Nombre	Dimension	Type	Material/Matériau	Nominal Thickness/Epaisseur nominale	Reinforcement/Matériau de renfort	How attached/Genre d'attaches	Location/Endroit
N1/N2	29	2"	RFWN	SA 106-B	0.218"	-	Welded	Side/Top
H1/H2	39	2"	T.O.L.	SA105	3000#	-	Welded	Side
C1/C3/C8/C9	33	1"	CPLG	SA105	6000#	-	Welded	Side
C2/C4/C12/C16/C17	35	1"	T.O.L.	SA105	3000#	-	Welded	Side

Supports/Supports

Skirt/Jupe	Lugs/Oreilles	Legs/Pieds	Other/Autres (Description)	Attached/Attachés
Yes Oui ☒ No Non ☐	No. Nbre	No. Nbre		Where and How/Méthode et endroit Welded Bottom

Remarks/Observations (Cubical capacity/Volume)40 FT³ / 1.14M³**Certificate of Compliance/Certificat de conformité**

We certify that the statements made in this data report are correct and that the said vessel has been constructed in accordance with the Provincial Registered design below and the requirements of standard CSA B51.

Nous certifions que les données de la déclaration de conformité sont correctes et que l'appareil a été construit en accord avec l'enregistrement provincial ci-dessous et les exigences de la norme ACNOR B51.

Provincial Registered Design
Enregistrement provincial H-0415.2

Manufacturer
Constructeur CE MATECO

Signature [Signature] Date JUN 23 1988

Certificate of Shop Inspection/Certificat d'inspection en usine

I, the undersigned, a duly authorized Boiler and Pressure Vessel Inspector
Je, soussigné, inspecteur autorisé de chaudières et appareil sous pression
employed by BOILERS BRANCH

of GOVERNMENT OF ALBERTA

have inspected the above vessel and state that to the best of my knowledge and belief, the manufacturer has constructed the vessel in accordance with the Provincial registration CRN H-0415.2 and the requirements of standard CSA B51.

ai inspecté l'appareil précité et autant que je sache, crois que le constructeur a construit l'appareil en accord avec l'enregistrement provincial NEC et les exigences de la norme ACNOR B51.

Inspector's Name
Nom de l'inspecteur M. BAYCHUK
Signature [Signature] Date JUN 23 1988

**Certificate of Compliance / Certificat de conformité
Field Work / Installation au chantier**

We certify that the field installation of all parts of the vessel conforms with the requirements of Provincial Regulations.

Nous certifions que l'installation au chantier de toutes les composantes de l'appareil est conforme aux règlements provinciaux.

Installer's Name
Nom de l'installateur _____

Signature _____

**Certificate of Field Inspection / Certificat d'inspection
Installation au chantier**

I, the undersigned, a duly authorized Boiler and Pressure Vessel Inspector
Je, soussigné, inspecteur autorisé de chaudières et appareil sous pression
employed by _____

have inspected the items not covered by the Shop Inspection Certificate and the installation of the items and state that to the best of my knowledge and belief the construction and assembly of the items are in accordance with the Provincial Regulations.

ai inspecté les composantes non couvertes par le certificat d'inspection en usine et l'installation de l'appareil et, autant que je sache, la construction et l'assemblage de l'appareil sont en accord avec les règlements provinciaux.

Inspector's Name
Nom de l'inspecteur _____

Signature _____ Date _____

0244337

A SUBSIDIARY OF COMBUSTION ENGINEERING INC
BOX 579 NISKU, ALBERTA T0C 2G0
TELEPHONE 463 955 2511 -- TELEX 037 1864



DATA REPORT SUPPLEMENTARY SHEET

Manufactured by C.E. Natco Limited 703 - 21 Avenue, Nisku, Alberta.

Manufactured for: Laid Exploration Company

C.R.N. H-0-15.2

Purpose:

Nozzles and Openings / tubulures et ouvertures

Purpose But	Number Nombre	Dimension	Type	Material Matériau	Nomina- Thickness Epaisseur nominale	Reinforcement Matériau de renfort	How attached Genre d'attaches	Location Endroit
C5/C11/C15	36	1/2"	T.O.L.	SA 105	3000#	-	Welded	Side
C6/C7/C13/C14	37	3/4"	T.O.L.	SA 105	3000#	-	Welded	Side
C10/C19/C20	39	1 1/2"	T.O.L.	SA 105	3000#	-	Welded	Side
C18	40	2"	T.O.L.	SA 105	3000#	-	Welded	Side

Date: JUN 23 1998

C.E. NATCO LIMITED

Signed: [Signature]

Manufacturer

Date: JUN 23 1998

Gov't of Alberta: [Signature]

Inspector's Signature (Boiler's Branch)