

APPLUS-RTD  
 EDMONTON, ALBERTA,  
 CANADA T6P 1N5  
 TEL: (780) 440-6600 FAX: (780) 440-2538

GENERAL NDE REPORT

A-3141304\_06\_21  
 2013\_MT-Report-b

Date June 20, 2013 Page 1 of 4  
 RTD Job #: 10-113249  
 RTD Dep. #: G/P

Client: C.N.R.L  
 Address: ClearHills Gas Plant (AB)  
 W.O.#: \_\_\_\_\_  
 Client Rep.: Craig Liba

LSD: L.S.D. 16-11-88-13 W6M  
 Location: ClearHills Gas Plant  
 Procedure: RTD-MT- 003  
 Code: Asme VIII Div 1

Description: MPI Inspection on all internal tee intersections, nozzles, Inlet diffuser, demister support cage to shell and manway weld to shell in the (High Pressure Inlet Separator) (A-3141304).

Surface Condition:  Weldment  Machined  Painted  
 Ground  Sandblasted  Other Surface Temp (C°):  < 5  > 5 x < 60  > 60

**MAGNETIC PARTICLE INSPECTION**

Equipment Type:  Yoke  Bench Asset No.: 2227 Calibration Due Date: 07-21-13  
 Blacklight: Intensity Check: 2080  $\mu\text{W}/\text{cm}^2$  Asset No.: 12754 Calibration Due Date: 08-21-13  
 Method:  A/C  D/C Type:  Continuous  Residual Power Supply:  120 V  Battery  Natural  
 Type:  Dry Powder: Colour; \_\_\_\_\_ Wet:  Black and White  Fluorescent  
 Product Manufacturer: Magna Flux Product Identification Code: 14 AM

**LIQUID PENETRANT INSPECTION**

Type:  I-Fluorescent  II-Visible Dye Method:  A (Water Wash)  B (P.E. Lipophilic)  C (Solvent Removable)  D (P.E. Hydrophilic)  
 Blacklight: Asset No.; \_\_\_\_\_ Calibration Due Date; \_\_\_\_\_ Blacklight Intensity; \_\_\_\_\_  $\mu\text{W}/\text{cm}^2$   
 Dwell Times: Penetrant; \_\_\_\_\_ Minutes Developer; \_\_\_\_\_ Minutes Product Manufacturer: \_\_\_\_\_

**ULTRASONIC THICKNESS MEASUREMENT**

Method:  P/E  Dual  T/T  Other Type:  Longitudinal  Shear Wave  
 Instrumentation: Manufacturer; \_\_\_\_\_ RTD Asset No.; \_\_\_\_\_ Calibration Date; \_\_\_\_\_  
 Cal. Block(s): Type; \_\_\_\_\_ RTD Asset No.; \_\_\_\_\_ Serial No.; \_\_\_\_\_  
 Couplant: Manufacturer; \_\_\_\_\_ Type; \_\_\_\_\_

Probe Type	Angle	Frequency	Size	Reference Level (dB)	Scanning Level (dB)	Range	Skip Value	Beam Travel	Transfer Value (dB)

INSPECTION DETAILS

Scope: **Carry out Magnetic Particle Inspection on all internal tee intersections, nozzles, Inlet diffuser welds to shell, demister support cage to shell and manway weld to shell in the (High Pressure Inlet Separator- A-3141304).**

- Results:
- (1) At East shell tee intersection the circumferential weld had (9) cracks ¼” to ½” in length running circumferentially.
  - (2) All (8) lower Cracks were removed with light remedial grinding with 80Grit flapper, with substantial weld cap remaining.
  - (3) The top crack at ½” length above tee intersection was removed with light remedial grinding with 80grit flapper flush with shell.
  - (4) All were re-inspected and found acceptable.

Technician: Jerry Hrynkiw CGSB /ASNT/SNT Level: II Start Time: \_\_\_\_\_ Stop Time: \_\_\_\_\_ ST \_\_\_\_\_ OT \_\_\_\_\_  
 Signature: \_\_\_\_\_ Method: MT #5709 Unit: \_\_\_\_\_ Km: \_\_\_\_\_ Travel Time: \_\_\_\_\_  
 Assistant: \_\_\_\_\_ CGSB /ASNT/SNT Level: \_\_\_\_\_  Subsistence required  OT Meal  
 Client Signature: \_\_\_\_\_ Consumables: \_\_\_\_\_

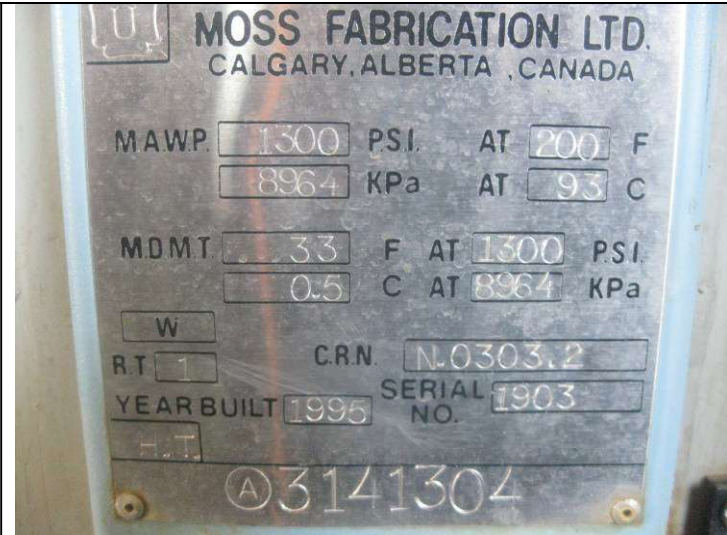
\*Results are an interpretation of the inspection method, not a guarantee. Client signature indicates acceptance of report, results and applicable charges.

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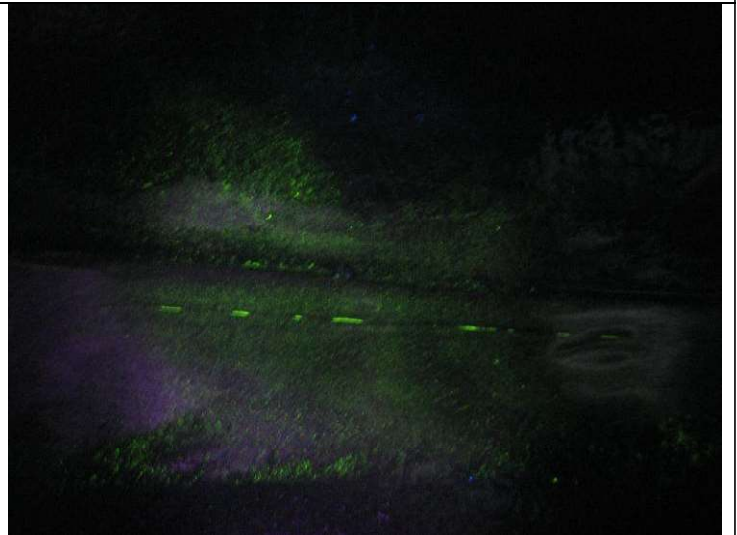
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**Vessel Data Plate (A#3141304)**

**Tee Intersection**



**Crack found on circumferential weld**

**Crack found on circumferential weld 2<sup>nd</sup> View**

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**View of crack above tee intersection**



**Over all view of location and area of cracks found**



**Bottom nozzles**



**Demister pad weld to shell**

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**Nozzle by Demister pad support weld to Shell**



**Inlet Diffuser Box**



**Final view of circ weld after cracks removed with  
weld cap intact.**



**Final view above tee intersection after crack  
removed flush with shell**