



RTD QUALITY SERVICES
GRANDE PRAIRIE OPERATIONS
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GENERAL NDE REPORT Chinchaga 2011-30

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RTD Job #: 10.110763

RTD Dep. #:

Client: Canadian Natural Resources Ltd.
 Address: Grande Prairie, AB
 P.O.#:
 Client Rep.: Craig Liba / Deston Reber

Lot #: Chinchaga Gas Plant
 Location: LSD 01-24-96-05 W6M
 Procedure: (RTD) MT-001
 Code: ASME VIII Div 1

Description: Brascan Line Heater - Inlet and Outlet piping – external surface corrosion

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

MAGNETIC PARTICLE INSPECTION

Equipment Type: Yoke Bench Asset No.: Calibration Due Date:
 Blacklight: Intensity Check: µW/cm² Asset No.: Calibration Date:
 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: Product Identification Code:

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 Date; Blacklight Intensity; µW/cm²
 Dwell Times: Penetrant; Minutes Developer; Minutes Product Manufacturer:

ULTRASONIC THICKNESS MEASUREMENT

Method: P/E Dual T/T Other Type: Longitudinal Shear Wave
 Instrumentation: Manufacturer; Panametrics RTD Asset No.; 12369 Calibration Due Date; Dec 2011
 Cal. Block(s): Type; 5 Step Wedge RTD Asset No.; Serial No:
 Couplant: Manufacturer; UTX Type: Water Mix

Probe Type	Angle	Frequency	Size	Reference Level (dB)	Scanning Level (dB)	Range	Skip Value	Beam Travel	Transfer Value (dB)
Dual	0	5Mhz	.500"	58	58	20mm	N/A	N/A	N/A

INSPECTION DETAILS

Scope: To do a Ultra sonic thickness/corrosion survey on the Inlet and Outlet piping of the Brascan Line Heater

Ref: Brascan Line Heater Piping
A0170474

Results: Ultrasonic thickness survey was performed on the Inlet and Outlet Piping – See photos attached.

The piping was showing some corrosion on the outside diameter this corrosion was wire brushed – general corrosion detected with wall loss – 6 inch nominal thickness 11.0 mm / min thickness to 8.7 mm remaining wall – 2.3 mm wall loss. Calculations carried out – T min thickness is based on MAWP of inlet separator 1150 PSI = 5.1 mm required thickness.

Recommendations: Clean up, paint piping and re insulate.

Technician: Dwight Carson
 Signature: _____ Method: MT
 Assistant: Chris Bethel CGSB /ASNT/SNT Level: 2
 Client Signature: _____

Start Time: Stop Time: _____ ST _____ OT _____
 Unit: Km: Travel Time:
 Subsistence required OT Meal
 Consumables:



Inlet and Outlet Piping

Data Plate for Shell



Piping showing light corrosion

Piping showing light corrosion – pitted surface



Lowest reading 8.7 mm on Elbow.

Over view