



RTD QUALITY SERVICES
GRANDE PRAIRIE OPERATIONS
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GENERAL NDE REPORT Chinchaga 2011-29

Date Sept 30-2011 Page 1 of 3
 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: The Heater coil was removed and several areas were found in need of repair.
 Surface Condition: Weldment Machined Painted
 Ground PowerBrushed Other Surface Temp (C°): < 5 > 5 < 60 X > 60

MAGNETIC PARTICLE INSPECTION

Equipment Type: Yoke Bench Asset No.: 11823 Calibration Due Date: Dec 2011
 Blacklight: Intensity Check: _____ $\mu\text{W}/\text{cm}^2$ 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: Magnaflux Product Identification Code: WCP-2/ 7-HF

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: _____ $\mu\text{W}/\text{cm}^2$
 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 Due 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: To do a Magnetic Particle Inspection on 21 weld prep. areas before tacking the coil to the baffles , following the outlined repair procedure

Ref: Heater Coil
A170474

Results: Magnetic Particle inspection was performed on 21 tack weld locations before welding and on the same weld locations 12 hours after the welds were completed, no cracking was found at the time of the inspection.

Technician: Dwight Carson
 Signature: _____ Method: CGSB MT 2
 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: _____

Photo Table



Overview of Brascan Heater Coil



Data Plate



7 Tack Weld Locations on each Divider



21 Total Tack Weld Locations



Preheat and MPI on locations before welding



New unopened rods



21 Locations were inspected with MPI 12 hours after welding