 <p>RTD QUALITY SERVICES INC. 1431 – 70 AVENUE, EDMONTON, ALBERTA, CANADA T6P 1N5 TEL: (780) 440-6600 FAX: (780) 440-2538</p>	<p align="center">GENERAL NDE REPORT</p> <p>Date <u>20 June 2011</u> Page <u>1</u> of <u>2</u> RTD Job #: <u>10.110451</u> RTD Dep. #: _____</p>
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Client: <u>Canadian Natural Resources</u> Address: <u>Fort St John, BC</u> P.O.#: _____ Client Rep.: <u>Chris Jungen</u>	LSD: <u>15-20-85-17 W6M</u> Location: <u>Flatrock Battery</u> Procedure: <u>(RTD) MT.001</u> Code: <u>ASME VIII / Div 1</u>
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Description: Perform Magnetic Particle Inspection on Treater fire tubes

Surface Condition: Weldment Machined Painted
 Ground Sandblasted Other

Surface Temp (C°): < 5 > 5 • < 60 > 60

MAGNETIC PARTICLE INSPECTION

Equipment Type: Yoke Bench Asset No.: 6173 Calibration Due Date: Sep 2011
Blacklight: Intensity Check: _____ $\mu\text{W}/\text{cm}^2$ Asset No.: _____ Calibration Due 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 and 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 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: To perform wet visible magnetic particle inspection of Treater, C38596, Fire Tube welds for potential cracking.

Results:

A Black and White Magnetic Particle Inspection (MPI) method was used for all inspected areas.

- Cracks were found** on both the Mitered welds and Mounting plate weldement.
- Cracks were excavated and confirmed removed with MPI black& white method.
- Excavation areas were rewelded and a final MPI black & white method **confirmed no cracking**.

Please see pictures.

Technician: <u>Mike Dutcher</u> Signature: _____ Assistant: _____ Client Signature: _____	CGSB /ASNT/SNT Level: <u>2</u> Method: <u>PT/UT/MT</u> CGSB /ASNT/SNT Level: <u>11594</u>	Start Time: _____ Stop Time: _____ ST _____ OT _____ Unit: _____ Km: _____ Travel Time: _____ <input type="checkbox"/> Subsistence required <input type="checkbox"/> OT Meal Consumables: _____
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*Results are an interpretation of the inspection method, not a guarantee. Client signature indicates acceptance of report, results and applicable charges.

Fire Tube - 1



Overview



Cracking



Cracking



Cracking



Cracking



Cracking



Weld Repair



Weld Repair



Weld Repair



Weld Repair

Fire Tube - 2



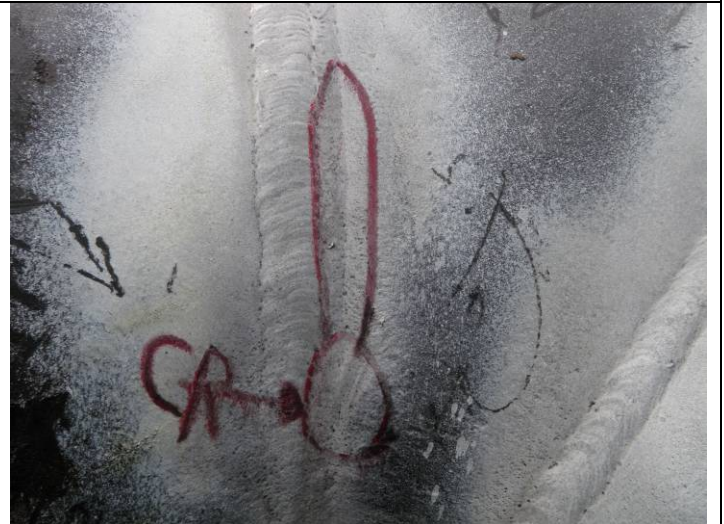
Overview



Cracking



Cracking



Cracking



Weld Repair



Weld Repair