



RTD QUALITY SERVICES INC.
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GENERAL NDE REPORT

Date June 23, 2010 Page 1 of 2
 RTD Job #: 105.00150
 RTD Dep. #:

Client: Canadian Natural Resources Ltd.
 Address: Grande Prairie, AB
 P.O.#:
 Client Rep.: Ajmal Khan

Lot #:
 Location: LSD: 14-28-87-07 W6M
 Procedure: (RTD) MT-001
 Code: ASME VIII / Div 1

Description: To perform Magnetic Particle and Visual inspection on the fire tubes removed from Oil Treater A2518844

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

MAGNETIC PARTICLE INSPECTION

Equipment Type: Yoke Bench Asset No.: Calibration Due Date: June 2011
 Blacklight: Intensity Check: µW/cm² 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 X Fluorescent
 Product Manufacturer: Magnaflux 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; 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; RTD Asset No.; Calibration Date; June 09
 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 Magnetic Particle and Visual inspection to determine the integrity by means of identifying and quantifying pitting and/or mechanical damage.**

Background **1. The fire tubes were high pressure cleaned with water prior to inspection. The welds were wire brushed.**
2. Fire tubes measured 18 inch diameter x 12 feet, nominal wall thickness 9.6 mm.

Results: **Magnetic particle inspection performed. No cracking detected. No mechanical damage.**
Cluster pitting identified at the 10:00 to 2:00 position throughout the length of the fire tube. Maximum pit depth to 0.050 inch.

Repairs: **None at this time.**

Technician: Chris Maxsom Start Time: Stop Time: ST OT
 Signature: Method: MT Unit: Km: Travel Time:
 Assistant: CGSB /ASNT/SNT Level: II 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.

Photo Table



Overview -Treater



Treater data plate



Fire tube #1 - Serial Number IPL 3533009



Fire tube #2 - No Serial Number



Overview - Fire tubes