

INSPECTION SERVICES AND ENGINEERING CERTIFICATION

PHONE: 780.870.1547 EMAIL: operations@indexndt.ca Head Office Mail: P.O. Box 10524, Lloydminster, AB T9V 3A6

INSPECTION REPORT


EQUIPMENT LOCATION:	Lloydminster, Alberta			NDT PROCEDURE#:			INSP-001		
EXAMINATION COVERAGE:	<i>RANDOM:</i>	5%	10%	25%	50%	75%	100%	X	
ACCEPTANCE CRITERIA:	CSA W59	ISO 9927-1		CAOEC RP			OTHER:	X	
INSPECTION METHOD:	VT	X	UT	X	MT WET FLOURESCENT	X	MT WET BLACK	MT DRY RED	
EQUIPMENT INFO:	BLACK LIGHT MAKE - INOVA			LIGHT METER # 1822158			MAG COIL # RC1-30120121		

CLIENT:	K&S Power Tongs	UNIT/RIG:	KSV011
EQUIPMENT:	Volant Tool	MAKE/MODEL:	Volant CRTi3-7.0
REPORT#:	IDX-5130	SERIAL NUMBER:	KSV011

EQUIPMENT PHOTOS



INSPECTION RESULTS

ACCEPTABLE: X	REJECTED:	DATE OF INSPECTION: March 21, 2024																								
<p>TECHNICIAN:</p> 	<p>COMMENTS:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">Part:</td> <td style="width: 50%;">Serial#:</td> </tr> <tr> <td>Mandrel-</td> <td>82306-03-3J4540-03</td> </tr> <tr> <td>Cage-</td> <td>82856-3J4463</td> </tr> <tr> <td>Upper Cam -</td> <td>102348-3J3560-20</td> </tr> <tr> <td>Lower Cam -</td> <td>104338-3J3652-18</td> </tr> <tr> <td>Cam Latch -</td> <td>102351-3J3558-19</td> </tr> <tr> <td>Cam Int -</td> <td>102349-3J4474-08</td> </tr> <tr> <td>Die -</td> <td>80928-01-3J5854-36</td> </tr> <tr> <td>Die -</td> <td>80928-01-3J5854-33</td> </tr> <tr> <td>Die -</td> <td>80928-01-3J1145-03</td> </tr> <tr> <td>Die -</td> <td>80928-01-4411A15-29</td> </tr> <tr> <td>Die -</td> <td>80928-01-3J5854-35</td> </tr> </table> <p>Material Thickness: 1.274", 1.307", 1.268", 1.279", 1.300"</p> <p>REPAIRS: NA</p>		Part:	Serial#:	Mandrel-	82306-03-3J4540-03	Cage-	82856-3J4463	Upper Cam -	102348-3J3560-20	Lower Cam -	104338-3J3652-18	Cam Latch -	102351-3J3558-19	Cam Int -	102349-3J4474-08	Die -	80928-01-3J5854-36	Die -	80928-01-3J5854-33	Die -	80928-01-3J1145-03	Die -	80928-01-4411A15-29	Die -	80928-01-3J5854-35
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QUALITY ASSURED INSPECTIONS FOR QUALITY ASSURED BUSINESSES

"Except as provided herein, Index NDT Inspections Ltd. makes no warranty, express or implied with respect to the mechanical or other conditions of the equipment inspected by us. Index NDT Inspections Ltd. shall only be responsible in the event of damage resulting directly from their inspection, and in no event, shall the liability of Index NDT Inspections Ltd. exceed the cost of inspection." Our organization assumes only the responsibility of locating defects in the inspected components and welds made accessible at the time of inspection. All equipment should be cleaned to allow access to all welds and critical components. It is of the utmost importance that the unit's owner be aware that excessive coating over 10 mils can severely mask the detection of discontinuities while utilizing standard inspection techniques. We are not responsible for the mechanical or other conditions assembled condition except at customer's request.

INCLUSION P-POROSITY IU-INTERNAL UNDERCUT EU-EXTERNAL UNDERCUT S-SLAG C-CRACK IP-INCOMPLETE PENETRATION NF-NON-FUSION CR-CRACK PH-PIN HOLE D-DISCONTINUITY



REES N.D.T. INSPECTION SERVICES 2008 LTD.



15612-89 Street
Grande Prairie, AB T8V 2N8

Grande Prairie
(780) 539-3594
(780) 532-8047 (Fax)

Dispatch
1-888-540-3594
www.reesndt.com

Vegreville
(780) 603-4887
Email: gcoers@reesndt.com

INSPECTION DATE: 27-Mar-24

CLIENT: K & S Power Tongs
ADDRESS: 3614 63 Avenue Close
Lloydminster AB T9V 2W1

REES NDT PO NUMBER: R78795
CLIENT PO NUMBER:
REES NDT WO NUMBER: 211339

INSPECTION CERTIFICATE

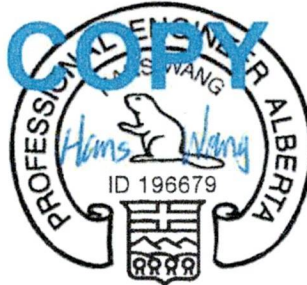
CERTIFICATION OF: CRT Mandrel
MAKE: Volant
MODEL: CRTi3-7.0
SERIAL NUMBER: 82306-03-3J4540-03
UNIT NUMBER: NA
CAPACITY: 320 ton
OWNER: K & S Power Tongs

Rees NDT Inspection Services 2008 Ltd. performed a VISUAL AND NON-DESTRUCTIVE TESTING inspection on the above mentioned CRT MANDREL. All observations have been recorded and are disclosed in the complete documentation for Rees NDT Work Order #211339. The scope of this certificate is limited to the inspection of the item's structural condition at the time of inspection and does not imply a review of the equipment's design or its associated capacity rating. The capacity noted above reflects the original equipment manufacturer's maximum capacity rating and may be reduced by operating conditions, regulatory requirements and the use of auxillary equipment that has a lower capacity rating.

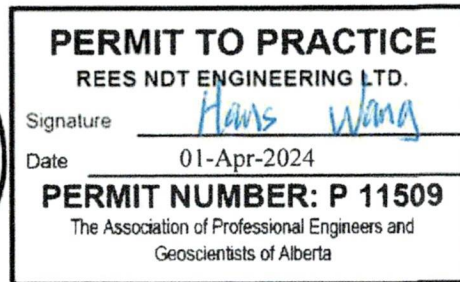
The undersigned Engineer reviewed all the inspection reports and has issued this certificate after all required repairs (if any) were completed. In the undersigned Engineer's opinion, the CRT MANDREL may be returned to service and is safe to use within the original manufacturer's specifications. The equipment owner is obliged to supply the OEM's operating instructions with the equipment and maintain the OEM's identification and capacity markings. If OEM information cannot be obtained, certified replacements must be obtained from a Professional Engineer.

This certification covers the above mentioned unit for a period of 5 YEARS AS PER API-8B from the date of inspection, or until the unit is damaged by handling, transportation or operation.

Reviewed
By:



01-Apr-2024





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LOAD TEST CERTIFICATE

Owner K & S Power Tongs
Address 3614 63 Avenue Close
Lloydminster AB T9V 2W1

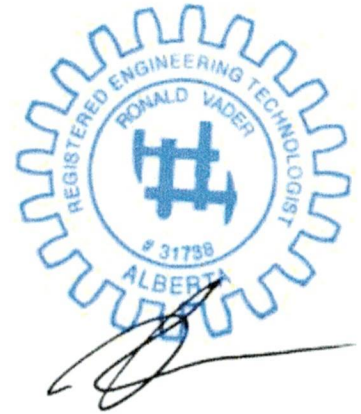
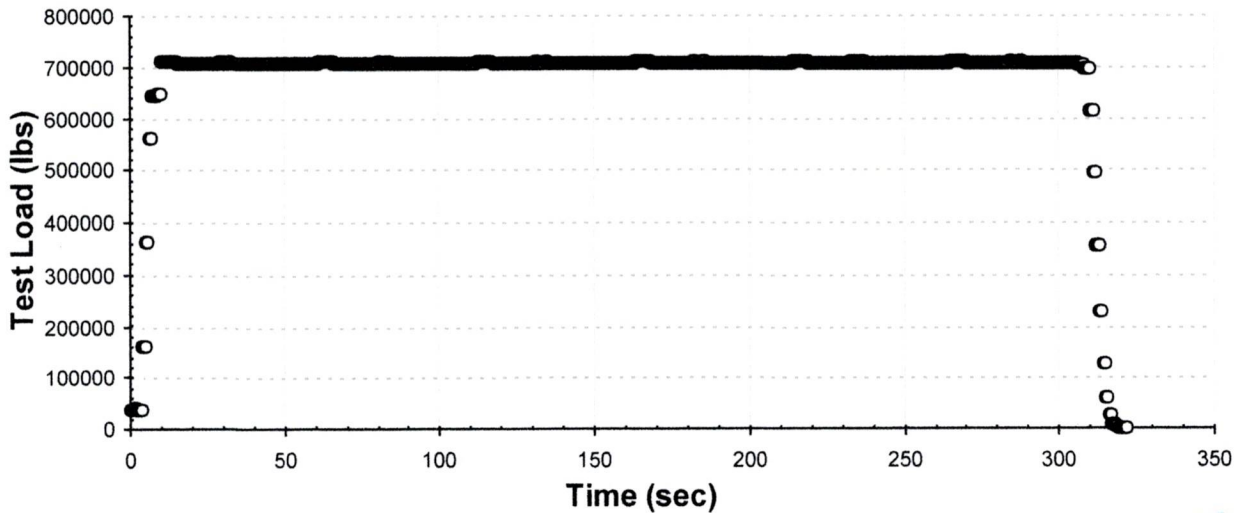
Date 27-Mar-24
Workorder # 211339
Purchase Order# KSV011

Contact Name:	Chris	Phone #:	(780) 872-8240
Item:	CRT Mandrel	Location:	Rees NDT Shop, Grande Prairie
Make:	Volant	Model:	CRTi3-7.0
Serial Number:	82306-03-3J4540-03	Unit:	NA
Capacity:		320 ton	

Proof Load Test 704000 lbs
Test Method: Proof 1.10

Test Date 28-Mar-24
Peak Load 711029 lbs

Required Duration (sec) 300
Passed





REES N.D.T. INSPECTION SERVICES 2008 LTD.



- Non-Destructive Testing • UT MPI LPI
- Wall Thickness Testing • Hardness test
- Crane and Picker Certification
- Drilling Rig Certification
- Materials Consulting
- Failure Analysis
- Corrosion Monitoring
- Weld Procedures (WPS, PQR)
- Quality Control
- Predictive Maintenance
- Computer Generated Drawings (CAD)

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GRANDE PRAIRIE: (780) 539-3594 G.P. FAX: (780) 532-8047 DISPATCH: 1-888-540-3594

15612-89 Street Grande Prairie AB T8V 2N8

email: ronvader@reesndt.com

Consigned to K & S Power Tongs

Date 27-Mar-24

Address 3614 63 Avenue Close
Lloydminster AB
T9V 2W1

Workorder 211339

Purchase Order# KSV011

Location Rees NDT Shop, Grande Prairie

Customer K & S Power Tongs

Eng Certification - Visual - Fluorescent Magnetic Particle - Ultrasonic - Load Test

Contact Name:	Chris	Phone #:	(780) 872-8240
Item:	CRT Mandrel	Location:	Rees NDT Shop, Grande Prairie
		Model:	CRTi3-7.0
Make:	Volant	Unit:	NA
Serial Number:	82306-03-3J4540-03	Capacity:	320 ton

Field Report

RESULTS OF INSPECTION IN ALL ACCESSIBLE AREAS:

Rees NDT Inspection Services 2008 Ltd. performed a Visual, Wet Fluorescent Magnetic Particle Inspection, Wall Thickness Test and Load Test on the above mentioned CRT Mandrel. Mandrel was cleaned of paint, oil and grease prior to inspection. Mandrel was demagnetized at the time of inspection. See attached pictures.

MPI Inspection:

 Procedure: MPI-ASTM E709 Rev 0, Jan 22, 2019
 Technique: MT-3 Wet Fluorescent Magnetic Particle
 Acceptance Standard: API-8C
 Surface Prep: Bare Metal / Machined
 Material: Carbon Steel

NDT Inspection Results:

 Pre Load Test - CRT Mandrel: No relevant indications or damage was noted at the time of inspection. 4 1/2" IF Box Plug Gauge Passed.

Post Load Test - CRT Mandrel: No relevant indications or damage was noted at the time of inspection.

5-Wall Thickness Readings Taken: 1.282", 1.247", 1.254", 1.215", 1.216" Average Thickness: 1.242"

Areas scanned around and lowest readings recorded.

O.D. was measured at the same spot as wall thickness readings: O.D. 3.978"

Calibrated Equipment Used Blacklights: BL-32-00 Coils: C-24-00 Digital Calipers & Micrometers: DVC-24-00 UT Machines: USU-23-00 Cal Blocks: 01-7186 Cal Blocks: UT-CB-75-00

Inspected By: J. Ibarbia W. Werner HD Equip Tech (K-06-101358) J. House CGSB #20221 (MPI II) SNT #028 (MPI II) R. Estano SNT #064 (MPI II)

Rees NDT Records

Received by: _____

AR = 0.69%= Passed,
calculated with CRT maintenance procedure Appendix B mandrel neck area calculation.

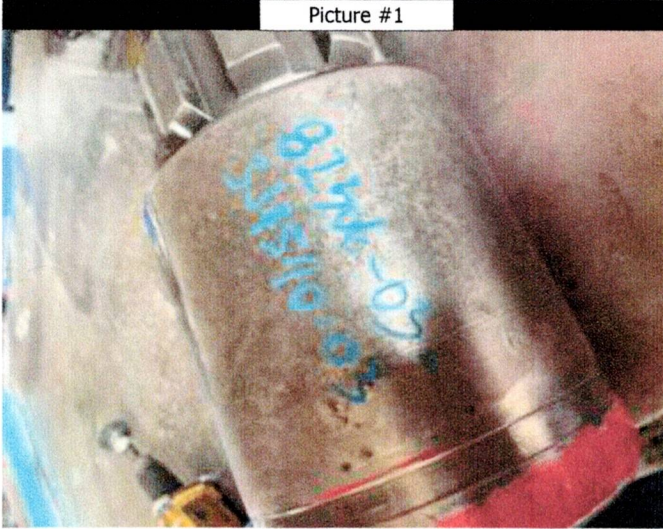
This inspection and compliance certification covers items supplied for inspection.
Customer is responsible for PLC / mechanical components, and proper function of tool.

Equipment Used:

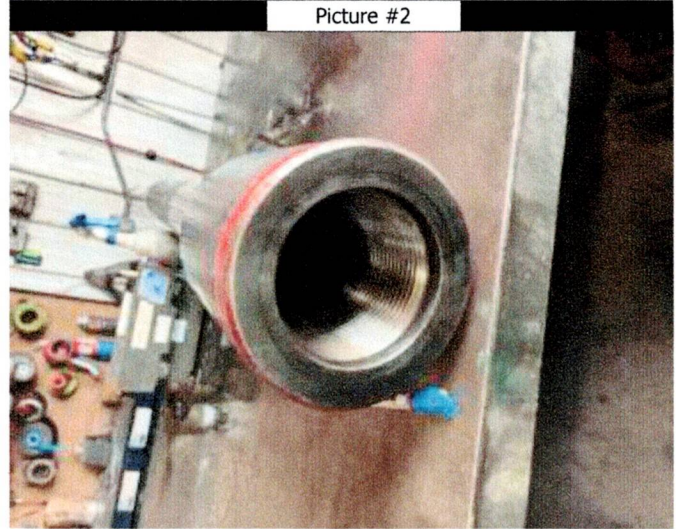
Equipment Used:

- Spectroline B100 Blacklight (BL-32-00 - -) Calibration Due: 29-Jun-2024
- 10.5" DC Smith Drilco (C-24-00 - 0655) Calibration Due: 31-Jul-2024
- Digital Vernier Caliper (DVC-24-00 - 7007630) Calibration Due: 15-May-2024
- Krautkramer USN-58L SW (USU-23-00 - 023K45) Calibration Due: 06-Jun-2024
- DS Block with Case (01-7186 - 01-7186) Calibration Due: 31-Dec-2099
- 0.250" - 1.000" 4 Step Curve (UT-CB-75-00 - UT-CB-75-00) Calibration Due: 31-Dec-2099
- Magnaglo 14A Fluorescent Magnetic Particles Batch #23A005

Picture #1



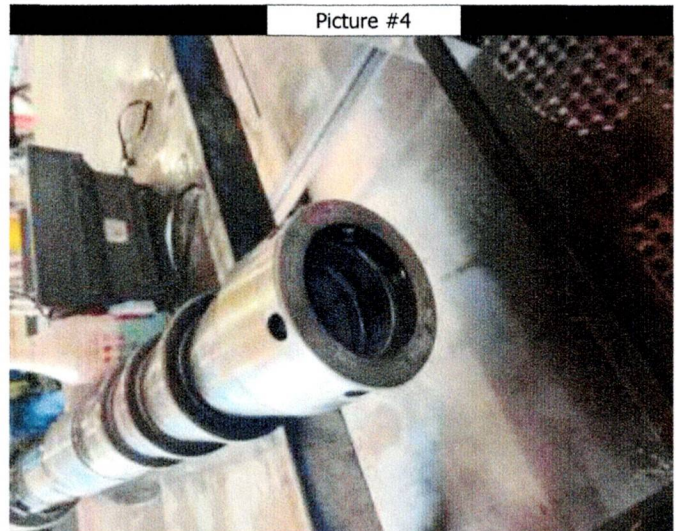
Picture #2



Picture #3



Picture #4



Calibrated Equipment Used Blacklights: BL-32-00 Coils: C-24-00 Digital Calipers & Micrometers: DVC-24-00 UT Machines: USU-23-00 Cal
Blocks: 01-7186 Cal Blocks: UT-CB-75-00

Inspected By: J. Ibarbia W. Werner HD Equip Tech (K-06-101358) J. House CGSB #20221 (MPI II) SNT #028 (MPI II) R. Estano SNT #064 (MPI II)

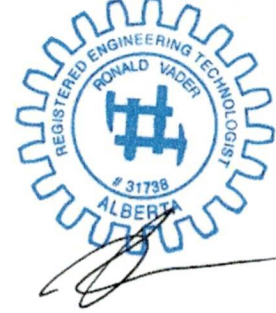
Rees NDT Records

Received by: _____

Picture #5



Picture #6



Calibrated Equipment Used Blacklights: BL-32-00 Coils: C-24-00 Digital Calipers & Micrometers: DVC-24-00 UT Machines: USU-23-00 Cal
Blocks: 01-7186 Cal Blocks: UT-CB-75-00

Inspected By: J. Ibarbia W. Werner HD Equip Tech (K-06-101358) J. House CGSB #20221 (MPI II) SNT #028 (MPI II) R. Estano SNT #064 (MPI II)

Rees NDT Records

Received by: _____