

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#:				T	INSP-001			
EXAMINATION COVERAGE:	RANDOM:		5%	10	7%		25%		50%		75%		100%	Х
ACCEPTANCE CRITERIA:	CSA W59	ISO 9927-1		1		CAODC RP					C	OTHER:	Х	
INSPECTION METHOD:	VT X L	П	X MT WET FL			RES	RESCENT X MT WET E			ET B	LACK	ACK MT DRY RED		
EQUIPMENT INFO:	BLACK LIGHT MAKE - INOVA			LIG	LIGHT METER # 1822158 N				MAG	1AG COIL # RC1-30120121				

CLIENT:	K&S Power Tongs	UNIT/REPORT#:	KSV008/IDX-3105
EQUIPMENT:	Volant Tool	MAKE/MODEL:	Volant CRTi2-4.5
RATING:	N/A	SERIAL NUMBER:	KSV008

EQUIPMENT PHOTOS



INSPECTION RESULTS

ACCEPTABLE:	X	REJECTED:		DATE OF INSPECTION	N:	March 23, 2023
¥20	GS/S el III P. 398	18 94	Pai Ma Cag Upp Low Car Car Die Die Die	ndrel 8 je 8 jer 6 jer Cam 6 jer Cam 8 jer Cam 8 jer Latch 8 jer L	31325- 31208 31221- 31212- 30942- 30980- 30980- 30980- 30980-	-03-4437A01-04 -4435A17-10 -3J9258-01 -4437A05-11 -4437A06-08 -4437A03-11 -01-4400A02-61 -01-4488A01-31 -01-4448A01-29 -01-4488A01-33

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 demage resulting directly from their inspection, and in no event, shall the liability of Index NDT inspections Ltd. exceed the cost of inspection. "Dur organization assumes only the responsibility of locating defects in the inspected components and welds and critical components in the control of the





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: geoers @reesndt.com

INSPECTION DATE: 30-Mar-22

CLIENT: K & S Power Tongs

ADDRESS: 3614 63 Avenue Close

Lloydminster AB T9V 2W1

REES NDT PO NUMBER: R68180 CLIENT PO NUMBER: KSUOO & REES NDT WO NUMBER: 197569

INSPECTION CERTIFICATE

CERTIFICATION OF: CRT Mandrel

MAKE: Volant

MODEL: CRTi2-4.5

SERIAL NUMBER: 82304-03-4437A01-04

UNIT NUMBER: NA
CAPACITY: 120 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 #197569. 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:



12-Apr-2022

PERMIT TO PRACTICE
REES NDT ENGINEERING LTD

Signature
Date 12-Apr-2022

PERMIT NUMBER: P 11509
The Association of Professional Engineers and
Geoscientists of Alberta





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Owner K & S Power Tongs

Address 3614 63 Avenue Close

Lloydminster AB T9V 2W1

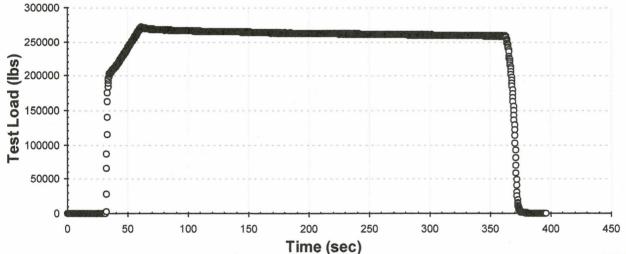
Date 30-Mar-22

Workorder# 197569

Purchase Order# Wowas

		K3V830					
Contact Name:	Chris	Phone #:	(780) 872-8240				
Item:	CRT Mandrel	Location:	Rees NDT Shop, Grande Prairie				
Make:	Volant	Model:	CRTi2-4.5				
Serial Number:	82304-03-4437A01-04	Unit:	NA				
	Capacity:	120 ton					

Proof Load Test 132000 lbs Test Date 30-Mar-22 Required Duration (sec) 300 Test Method: Proof 1.10 Peak Load 272200 lbs Passed 🗸 **Test Equipment:** Make: Model: Serial Number: Capacity: **Testing Frame** 525 ton **VR-01** 525 ton Volker Ries Pressure Gauge Rosemount 3501 (0-5000) psi Data Logger **ACR Systems** SRP-7-32K 0-25MA 96674 (0-25 mA) 300000 250000



DELAYED USE

Date of 1st Use: Job #:

Signed By:





15612-89 Street

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



• Non-Destructive Testing • UT MPI LPI

•Wall Thickness Testing • Hardness test

Crane and Picker Cerification

Drilling Rig Certification

· Materials Consulting

• Failure Analysis

•Weld Procedures (WPS,PQR)

Corrosion Monitoring

Quality Control

• Predictive Maintenance Computer Generated Drawings(CAD)

www.reesndt.com

GRANDE PRAIRIE: (780) 539-3594 G.P. FAX: (780) 532-8047

Grande Prairie AB T8V 2N8

email: ronvader@reesndt.com

DISPATCH: 1-888-540-3594

Consigned to K & S Power Tongs

Address 3614 63 Avenue Close

Lloydminster AB T9V 2W1

Location Rees NDT Shop, Grande Prairie

Date 30-Mar-22

Workorder 197569

Purchase Order#

KSVOUS

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:	CRTi2-4.5
Make:	Volant	Unit:	NA
Serial Number:	82304-03-4437A01-04	Capacity:	120 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: 0.835", 0.837", 0.836", 0.833", 0.833" Average Reading: 0.835" Areas scanned around and lowest readings recorded.

O.D. was measured at the same spot as wall thickness readings: O.D. 2.672"

Calibrated Equipment Used Blacklights: BL-30-00 Wet Benches: WB-02-00 UT Machines: USU-23-00 Cal Blocks: UT-CB-74-00 Digital Calipers & Micrometers: DVC-34-00

Inspected By: J. House CGSB # Machinist (J-11-16754) J. Ibarbia J. House CGSB #20221 (MPI II) SNT #028 (MPI II) B. Kempert SNT #044 (MPI II LPI II) CGSB #24150 (MPI II) K. Gejdos Millwright (J-09-31585)

Rees NDT Records

Received by:

AR = 0% = 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:

-Spectroline BIB-150P (BL-30-00 - 1910553) Calibration Due: 30-Jul-2022

-DCM Wet Bench (WB-02-00 - 37941) Calibration Due: 05-Apr-2022

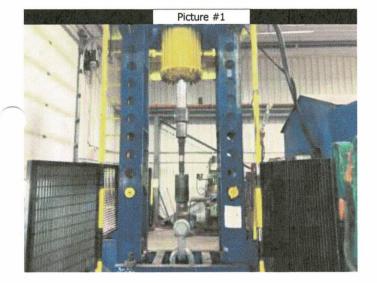
-Krautkramer USN-58L SW (USU-23-00 - 023K45) Calibration Due: 03-Jun-2022

-0.250" - 1.000" 4 Step Curve (UT-CB-74-00 - UT-CB-74-00) Calibration Due: 31-Dec-2099

-Digital Vernier Caliper (DVC-34-00 - 0012982) Calibration Due: 07-Jun-2022

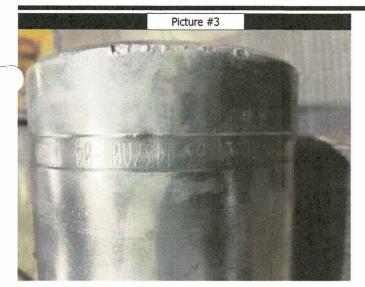
-Magnaglo 14A Fluorescent Magnetic Particles Batch #21E020



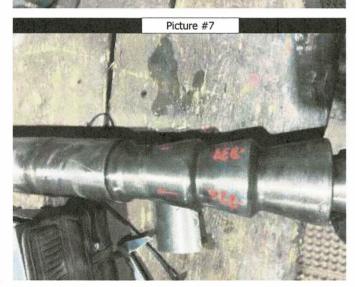


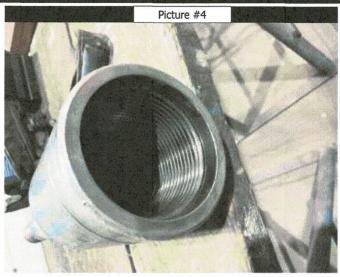


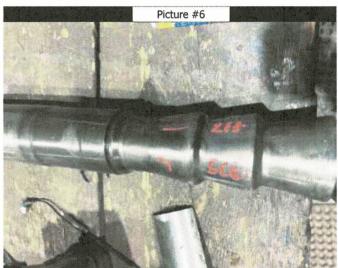
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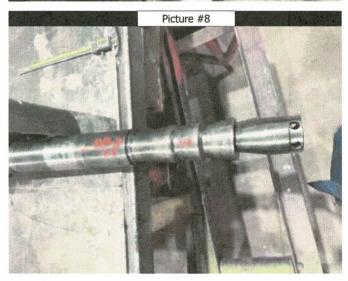












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