



Donic Independent Engineering Services
Unit 3/14 Ardmillan Road
Moonee Ponds VIC 3039
(ABN 63 257 734 370)
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E: donic77@bigpond.net.au

6 June 2018

CERTIFICATE OF INSPECTION AND TESTING OF "TOWER CRANE" **MAJOR INSPECTION / ASSESSMENT**

Type of Crane:	Favelle Favco Tower Crane	Certificate No:	18 / 066 / 1
Crane Manufacturer:	Favelle Favco P/L	Crane Model:	120RX
Crane Serial No:	917	Year of manufacture:	1996
Plant Registration No:	N/A	Rebuilt:	2018
		Precision Crane Inspections NDT Report No:	5272-02

Owner's name:	Rigcon Engineering Pty Ltd		
Address:	12-16 Chester Road, Altona VIC 3013		
Final inspection date:	6 June 2018 in stripped condition (all components at facility).		
Name of competent person:	Donald Charles Nicholls		
Address of competent person:	3/14 Ardmillan Road, Moonee Ponds, Vic, 3039		
Telephone No:	03 9375 1852	Fax No:	03 9370 8934

Qualifications of Competent Person:

Professional engineering qualification, membership of professional organisation and 40 years' crane industry experience.

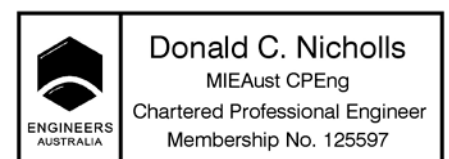
Competent Person Statement:

I hereby state that the above Crane serial number **917** as received its major structural safety inspection in accordance with the recommendation of the manufacturer and with relevant Australian Standard Standards and is safe for use provided it is operated and maintained in accordance with the manufacturer's recommendations and Australian Standards AS 2550.1 & 4, AS 1418.1 & 4.

The Tower Crane should be submitted for a further third-party pre-erection inspection in accordance with section 8 of AS2550.4 at each new job and a further major inspection / assessment after a period of five (5) years (6 / 2023).

Competent person signature

D.C. Nicholls C.P.Eng



Donic Independent Engineering Services will not accept any responsibility for the mechanical condition of the Crane beyond the date indicating the time the Crane conformed to the checklist. Maintenance records must be maintained by the client beyond this date. Please note, the level of further inspections will be dependent upon the level of maintenance records produced by the owner of the Crane. (Donic Ref D2023)



Phone : 03 5272 2866

Fax : 03 5272 2867

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Rigcon Engineering
12-16 Chester Road
Altona Vic 3018

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Rigcon Engineering
12-16 Chester Road
Altona Vic 3018

SALESPERSON		YOUR NO.		SHIP VIA	SHIP DATE	TERMS		DATE	PG.
		19232				Net 30 after EOM		23/05/2018	1
QTY.	ITEM NO.	DESCRIPTION			PRICE	UNIT	DISC %	EXTENDED	CODE
1	Lnt	Job 21531 Inspect case and boost pump on A4VG71 Serial # 3924971 off RX120 Serial 917. Clean and blast pump. Change out orings, shaft seal on boost pump. Replace controller and wear plate. Test OK			\$1,000.00			\$1,000.00	GST
1	A4VGss	A4VG Shaft seal			\$76.00	1		\$76.00	GST
4	MOR	ORing			\$2.50			\$10.00	GST
1	A4VG	A4VG71 wear plate			\$8.70			\$8.70	GST
1	A4VG	A4VG71 Controller			\$1,672.00			\$1,672.00	GST
8	M12	M12 x 40 shcs			\$2.70			\$21.60	GST
2	M7L-1409	M7L-1409 METM DKL JICM NIPPLE			\$8.10			\$16.20	GST
2	RL21	RL21-14 Bonded seal			\$5.70			\$11.40	GST
1	A4Vcg	A4V control gasket 23773			\$16.00			\$16.00	GST
1	A4Vg	A4V control gasket 23776			\$26.00			\$26.00	GST
1	Lnt	Job 21532 inspect case and boost pump on A4VG71 Serial # 3924972 off RX120 Serial 917			\$1,100.00			\$1,100.00	GST
20	Rub	TF5558 Drive Coupling Block			\$27.00	1		\$540.00	GST
1	A4VGss	A4VG Shaft seal			\$76.00	1		\$76.00	GST
4	MOR	ORing			\$2.50			\$10.00	GST
1	A4VG	A4VG71 Controller			\$1,672.00			\$1,672.00	GST
8	M12	M12 x 40			\$2.70			\$21.60	GST
2	M7L-1409	M7L-1409 METM DKL JICM NIPPLE			\$8.10			\$16.20	GST
2	RL21	RL21 -14 Bonded seal			\$5.70			\$11.40	GST
1	A4Vcg	A4V control gasket 23773			\$16.00			\$16.00	GST
COMMENT		CODE	RATE	GST	SALE AMOUNT.	SALE AMT. FREIGHT GST			
Harry Rose/ Jamie Williams						TOTAL AMT. PAID TODAY			
Bank Details BSB : 063-551 Acc No 1006 3064						BALANCE DUE			

Title of goods will not pass until payment is made in full.
Goods returned for credit will be subject to a 20% restocking fee.



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Rigcon Engineering
12-16 Chester Road
Altona Vic 3018

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Altona Vic 3018

SALESPERSON		YOUR NO.		SHIP VIA		SHIP DATE		TERMS		DATE		PG.
		19232						Net 30 after EOM		23/05/2018		2
QTY.	ITEM NO.	DESCRIPTION			PRICE	UNIT	DISC %	EXTENDED	CODE			
1	A4Vg	A4V control gasket 23776			\$26.00			\$26.00	GST			
1	Lnt	Job 21533			\$900.00			\$900.00	GST			
		Inspect case and boost pump on A10V028 Serial # 1064946 off RX120 Serial 917										
1	MOR	ORing			\$2.50			\$2.50	GST			
COMMENT		CODE	RATE	GST	SALE AMOUNT.	SALE AMT. FREIGHT		\$7,249.60	GST			
Harry Rose/ Jamie Williams		GST	10%	\$724.96	\$7,249.60	GST		\$724.96	GST			
						TOTAL AMT.		\$7,974.56				
						PAID TODAY		\$0.00				
Bank Details BSB : 063-551 Acc No 1006 3064						BALANCE DUE		\$7,974.56				

Title of goods will not pass until payment is made in full.
Goods returned for credit will be subject to a 20% restocking fee.



Precision Crane **NDT** Inspections Pty Ltd

INSPECTION REPORT

Client:	RIGCON ENGINEERING 16 Chester Rd Altona VIC 3018	Report No:	5272-01
Location of Crane:	Chester Road, Altona	Date of Inspection:	06, 30 & 31 st May 2018
Description of Crane:	9T FAVCO Tower Crane	Model Number:	120 RX
Plant Identification:	917	Serial Number:	917
Clients Order No:	917	Requested by:	Mr J. Williams
Request No:	Not Applicable	Surface Preparation:	Coated Item: <484µm Cal: 484µm
Client's Job No:	Not Applicable	Criteria Specific Clause:	Not Applicable
Acceptance Spec.:	Clients Requirements - Nil Cracking Permitted		
Material:	Carbon Steel - Not Further Specified		
Test Specification:	ISO17643, UT03.1, AS1171		
Test Procedure:	ET01.2, UT03.1, MT02.4		
Technicians:	Ken Darby - Certified ET, UT, MT, AS3998/ISO9712		

An Inspection was carried out on the *9T FAVCO Tower Crane Components* as identified, in accordance with ET01.2, UT03.1 and MT02.4. The areas of inspections were pre-selected by the client.

Results:

- **No cracking detected** in the weldment areas inspected.
- **No transverse cracking detected** in the pins inspected.
- **No cracking detected** in the Hook inner radius area.

Refer to the following pages for areas of inspection.

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Accreditation #18613



Approved Signatory:	<u>Ken Darby</u>
Signed:	
Date:	<u>4th June 2018</u>



<u>Eddy Current Inspection</u>	<u>Magnetic Particle Inspection</u>	<u>Ultrasonic Inspection</u>
Test Procedure No.: ET01.2 Test Specification: ISO17643 Acceptance Spec: Report all Findings <u>Equipment:</u> Olympus Nortec 600 Unit Olympus WLD 5-63-7/L Probe Olympus NEC-2236/7L Probe Olympus EDM Calibration Block	Test Procedure No.: MT02.4 Test Specification: AS1171 Acceptance Spec: Nil Cracking Permitted <u>Equipment:</u> Magnaflux Y1 (AC-240V) Magnet Ardrox 8901W White Contrast Paint Ardrox 800/3 Black Particle Ink <i>All areas of MT inspection were free of coatings</i>	Test Procedure No.: UT03.1 Test Specification: UT03.1 Acceptance Spec: Report all Transverse Cracking <u>Equipment:</u> Olympus EPOCH LTC P4 10L 10mmØ 4MHz 0° Probe V1 Block, 500mm Bar, Sample Bolt

Component	NDT Inspection	Area of inspection	Result
917/1 Butt Section	Eddy Current Inspection	4 off Head Connection Point Weldments (100%) 2 off Butt Connection Point Weldments (100%) 10% of Lacing Weldments (near head connection)	No cracking detected
917/2 Intermediate Section	Eddy Current Inspection	4 off Head Connection Point Weldments (100%) 4 off Butt Connection Point Weldments (100%) 10% of Lacing Weldments (near head connection)	No cracking detected
917/3 Intermediate Section	Eddy Current Inspection	4 off Head Connection Point Weldments (100%) 4 off Butt Connection Point Weldments (100%) 10% of Lacing Weldments (near head connection)	No cracking detected
917/4 Intermediate Section	Eddy Current Inspection	4 off Head Connection Point Weldments (100%) 4 off Butt Connection Point Weldments (100%) 10% of Lacing Weldments (near head connection)	No cracking detected
917/5 Intermediate Section	Eddy Current Inspection	4 off Head Connection Point Weldments (100%) 4 off Butt Connection Point Weldments (100%) 10% of Lacing Weldments (near head connection)	No cracking detected
917/6 Tip Section (Head)	Eddy Current Inspection	4 off Butt Connection Point Weldments (100%) Idler Sheave Mount Weldments Head Area Weldments – where accessible Pennant Connection Pad-eye – attachment welds	No cracking detected



Component	NDT Inspection	Area of inspection	Result
Machine Deck	Eddy Current Inspection	A-Frame Connection Points - 4 off Connection Pad-eye Weldments Slew Ring Mount Weldment - accessible weldment Operators Cap Support to Slew Mount	No cracking detected
A-Frame	Eddy Current Inspection	Connection End Point Weldments - where accessible Pennant (solid) Connection Pad-eye Weldments - where accessible Support Bracing Weldments - where accessible Main Top Head Weldment - where accessible	No cracking detected
Mounting Frame (Rigcon-01)	Eddy Current Inspection	Main Structural Weldments (100% of accessible) Pad-Eye Attachment Weldments (100% of accessible) Slew Mount Weldment (100% of accessible)	No cracking detected
Starter Tower #1	Eddy Current Inspection	Connection Point Weldments (100% of accessible) Support Lacing Weldments (100% of accessible)	No cracking detected
Connection Pins (Boom)	Ultrasonic Inspection	1-6 @ 225mm in Length 7-10 @ 250mm in Length 11-14 @ 225mm in Length 15-18 @ 225mm in Length 19 @ 250mm in Length 20 @ 225mm in Length	No transverse cracking
Boom Tip	Ultrasonic Inspection	Head Sheave Shaft @ 625mm in Length Pennant Pins (2 off) @ 130mm in Length Idler Sheave Shaft @137mm in Length (Butt Area)	No transverse cracking
Monkey	Ultrasonic Inspection	Sheave Shaft (2 off) @122mm in Length	No transverse cracking
Slew Bolts	Ultrasonic Inspection	#1 to #47 Slew Bolts @ average length 216mm #48 to #68 Slew Bolts @ average length 216mm	No transverse cracking



Component	NDT Inspection	Area of inspection	Result
Winch Pack	Ultrasonic Inspection	#1 Mounting Bolt @ 100mm in length #2 Mounting Bolt @ 100mm in length #3 Mounting Bolt @ 100mm in length #4 Mounting Bolt @ 110mm in length #5 Mounting Bolt @ 128mm in length #6 Mounting Bolt @ 105mm in length #7 Mounting Bolt @ 119mm in length #8 Mounting Bolt @ 100mm in length	No transverse cracking
Hook SWL 16t (#S57561)	Magnetic Particle Inspection	Inner radius of Hook and Saddle	No cracking detected



Figure.1 Butt Section 917/1

Figure.2 917/1 Identification Plate



Figure.3 Intermediate Section 917/2

Figure.4 917/2 Identification



Figure.5 Intermediate Section 917/3

Figure.6 917/3 Identification



Figure.7 Intermediate Section 917/4

Figure.8 917/4 Identification



Figure.9 Intermediate Section 917/5

Figure.10 917/5 Identification



Figure.11 Tip Section 917/6

Figure.12 917/6 Identification



Figure.13 Tip Section 917/6

Figure.14 Head Area



Figure.15 Machine Deck

Figure.16 Machine Deck

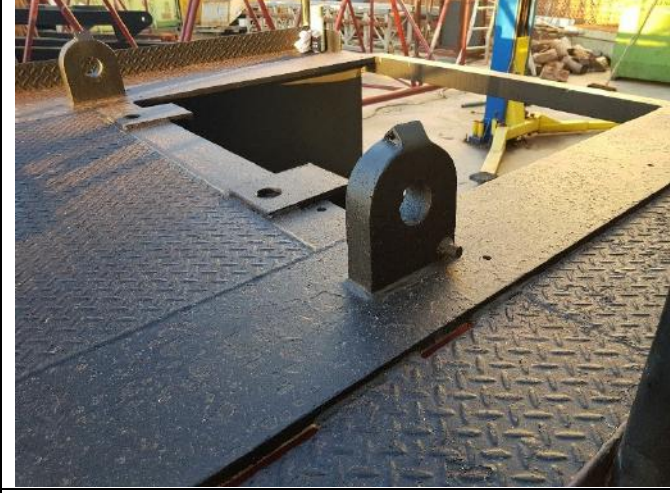


Figure.17 Machine Deck

Figure.18 A Frame



Figure.19 A- Frame



Figure.20 A-Frame Tip Area



Figure.21 A-Frame Connection Points



Figure.22 A-Frame Connection Points



Figure.23 A-Frame Support Bracing



Figure.24 Mounting Frame



Figure.25 Mounting Frame



Figure.26 Slew Mount Weld



Figure.27 Starter Tower



Figure.28 Starter Tower



Figure.29 Starter Tower



Figure.30 Connection Pins (Boom) #1 to #10

Figure.31 Connection Pins (Boom) #11 to #14



Figure.32 Connection Pin #15

Figure.33 Connection Pin #16



Figure.34 Connection Pin #17

Figure.35 Connection Pin #18



Figure.36 Connection Pin #19

Figure.37 Connection Pin #20



Figure.38 Boom Tip (Idler Sheave Shaft)

Figure.39 Pennant Pins



Figure.40 Had Sheave Shaft

Figure.41 Monkey



Figure.42 Sheave Shaft

Figure.43 Sheave Shaft



Figure.44 Slew Bolts #1 to #47

Figure.45 Slew Bolts #48 to #68



Figure.46 Winch Pack Mounting Bolts

Figure.47 Mounting Bolts #1 to #4



Figure.48 Mounting Bolts #5 to #8

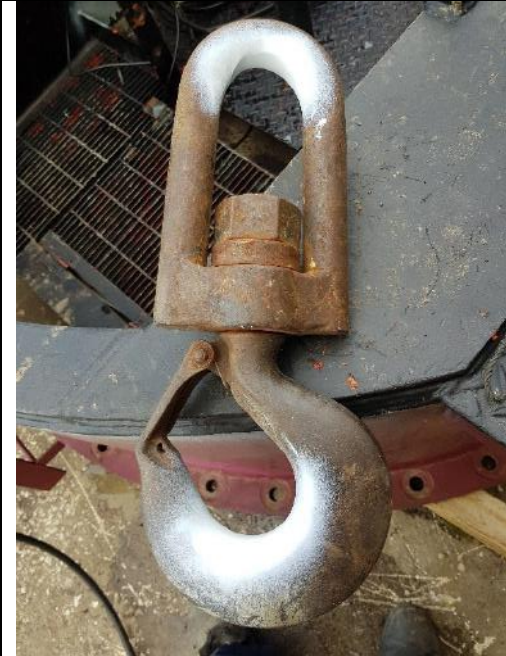


Figure.49 Hook



Figure.50 Inner radius of Hook & Saddle