

RH170 STICK FINAL MDR



Independent Mining Services

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Tel: 07 49523310

33 Diesel Dr, Paget QLD 4740

30 Len Shield St, Paaet QLD 4740



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PROJECT DETAILS

Scope

Purchase Order

Delivery Docket

Repair RH170 Excavator Stick

Vendor: Minespec Parts		MINE SITE: TBA		Type: RH170		QUOTE DATE: 22-Jun-22		
IMS Job #: J5443		OEM: CAT		Serial No: 61.30.20.32.41.35.25.10		REV DATE:		
				Weight: 14T		Dimensions: 4920L x 1626H x 890W		
		HOURLY RATE		90		Expected Project Lead Time 4 Weeks		
		TOTAL MAN HOURS		297				
		TOTAL MAN HOUR COST		\$ 26,730.00				
		PARTS, MATERIAL & SERVICES COST		\$ 77,940.00				
		TOTAL COST OF REPAIR		\$ 104,670.00				
Item #	Section	Comments	Parts & Materials Requirements/ Notes	Supplier	Estimated Hours	Labour	Mat & Sub Contractors	Total
1.0	STICK ON ARRIVAL (Strip & Access)							
1.1	Craneage - Unload & set up of Stick in Workshop			Repairer	5	\$ 450.00	\$ -	\$ 450.00
1.2	Clean Grease from bores and internal grease	Confined space observer required		Repairer	26	\$ 2,340.00	\$ -	\$ 2,340.00
1.3	Fit bush cover plates Blast and Paint white background & remove grease from bores	Plug all threaded holes and fit bush protect plates prior to blasting		Repairer	1	\$ 90.00	\$ 7,425.00	\$ 7,515.00
1.4	Cut access into side wall and clean edges			Repairer	4	\$ 360.00		\$ 360.00
1.5	Check Bush alignment & measure up faces	Minespec to confirm bush removal after receiving the report		Repairer	0	\$ -	\$ 220.00	\$ 220.00
1.6	Initial NDT on Stick External / Internal	3rd Party NATA approved c/w Detailed Report		Repairer	0	\$ -	\$ 1,780.00	\$ 1,780.00
	TOTAL - STICK ON ARRIVAL				36	\$ 3,240.00	\$ 9,425.00	\$ 12,665.00
2.0	STICK REPAIRS EXTERNAL / INTERNAL							
2.1	Repair Cracks as per Initial NDT inspection Report (Internal Cast Cracking)	Allowance Only		Repairer	40	\$ 3,600.00	\$ -	\$ 3,600.00
2.2	Supply, fit and weld bottom chord plate and x6 support bars	Refer Drawing & PHOTO 9 Full Penetration weld for both chord and support bars	1 off 25mm gr350 x 4250mm x 1450mm 1 off 6mm gr250 x 50mm x 1450mm Backing bar 6 off Support bars gr350 1450mm long x 80mm x 25mm (x2 25mm slotted brace for welding rails)	Repairer	182	\$ 16,380.00	\$ 8,977.00	\$ 25,357.00
2.3	Repair and blend all bruising and minor plate damage and dress lifting lugs including x2 top support bars	REFER PHOTO 10		Repairer	11	\$ 990.00	\$ -	\$ 990.00
2.4	Remove Bracket on underside of chord	REFER PHOTO 3			2	\$ 180.00	\$ -	\$ 180.00
2.5	Remove x1 grease line plate on top chord and chain linkClean and tap all threads and replace damaged bosses as required	REFER PHOTO 7 & 9		Repairer	2	\$ 180.00		\$ 180.00
2.6	Supply, bevel and fit access cover in side wall c/w backing bar	REFER PHOTO 2	1 off 725 x 475 x 20mm gr350 (beveled weld prep) 1 off 50 x 6mm backing bar to suit	Repairer	14	\$ 1,260.00	\$ 688.00	\$ 1,948.00
	TOTAL - STICK REPAIRS EXTERNAL / INTERNAL				251	\$ 22,590.00	\$ 9,665.00	\$ 32,255.00
3.0	HITCHES / PIVOTS							
3.1	Supply Bushes	Allowance Only	API Bushes	Repairer	0	\$ -	\$ 34,000.00	\$ 34,000.00
3.2	Reclaim Bores / Line bore / Fit Bushes	Allowance Only		Repairer	0	\$ -	\$ 19,250.00	\$ 19,250.00
	TOTAL - HITCHES / PIVOTS				0	\$ -	\$ 53,250.00	\$ 53,250.00
4.0	GENERAL							
4.1	IMS Craneage - Roll and loading of Stick at Workshop			Repairer	6	\$ 540.00	\$ -	\$ 540.00
4.2	FINAL 3RD Party NDT of Stick external only	Includes MPI & U/T Test & detailed report		Repairer	0	\$ -	\$ 1,220.00	\$ 1,220.00
4.3	Stress Releive	Harmonic method		Repairer	0	\$ -	\$ 600.00	\$ 600.00
4.4	Paint Oyster White c/w red Lifting lugs Fit OEM CAT Decals as per Minespec requirements			Repairer	0	\$ -	\$ 3,780.00	\$ 3,780.00
4.5	Compile Repairer's QA Report	Required 2 weeks after delivery to site		Repairer	4	\$ 360.00	\$ -	\$ 360.00
4.6	Comnsumables			Repairer		\$ -	\$ -	\$ -
	TOTAL - GENERAL				10	\$ 900.00	\$ 5,600.00	\$ 6,500.00
				TOTAL	297	\$ 26,730.00	\$ 77,940.00	\$ 104,670.00



ABN: 89 164 890 251

Friday, 24 Jun 2022

Purchase Order No P01724

Purchase From:

Independent Mining Services (QLD) Pty Ltd
PO BOX 5281
Mackay QLD 4740

Contact: Jon Readdy

Phone: 0749523310

Fax:

Deliver To:

Minespec Parts
Braeside Road
NEBO QLD 4742

Contact: Christine Rovelli

Phone: 0459 671 394

Email: admin@minespecparts.com.au

LineNo	Description	Qty	Unit Cost	Tax \$	Total Cost
10	CAT RH170/6040 Stick Rebuild	1	\$104670.00	\$10467.00	\$115137.00

Line Notes: As per Work Instruction Dated 22/06/2022 - Job Number: J5443

Delivery Instructions

Please deliver as specified on Purchase Order

Special Instructions

This PO is issued per the Minespec Parts Terms of Trade available at www.minespecparts.com.au.

Date Due 24/06/2022

Date Raised 24/06/2022

Freight Method

Freight

Subtotal \$104,670.00

Tax \$10,467.00

Total \$115,137.00



Independent Mining Services (QLD) Pty Ltd
33 Diesel Drive
Paget
QLD 4740
Ph:07 4952 3310
Fx:07 49 52 3189
ABN:27 130 130 782
Email:admin@imsqld.com.au



Delivery Docket Number: D4810

Our Job No:	J5443	Deliver To:	Simon Ross
Customer Order No:	PO1724		Minespec Parts Pty Ltd
Customer Contact:	Simon Ross		1 Braeside Road
Con Note:			Nebo
Delivery Date:	21/09/2022		4742 Qld

Notes

Refurbish RH170 Stick Attachment as per SOW

Item Details	Qty Ordered	Qty Pending	Qty in this delivery	Unit
Material & Contracting services to Refurbish RH170 Stick Attachment as per SOW	1	0	1	Each
Labor to Refurbish RH170 Stick Attachment as per SOW	1	0	1	Each

OPERATIONAL RECORDS

Inspection Test Plan

Welder Qualifications

Operator QA/Weld Map



Inspection and Test Plan Structural

Minespec
RH170 Stick Rebuild
IMS Job Number: J5443

Approval and Change History					
Issue	Description	Approval			
		Date	Prepared	IMS	Client
A	Issued for internal approval	22-6-2022	Andrew Hodge	Andrew Hodge	Simon Ross
B	Final approval		Andrew Hodge	Andrew Hodge	Simon Ross
C					

**Inspection & Test Plan**

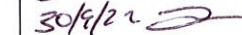
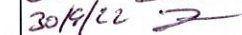
Scope item: RH170 Stick Rebuild

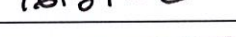
Authorised: Andrew Hodge

Date: 22-6-2022

Client Name: Minespec		Description of Job: RH170 Stick Rebuild			Client PO#: PO1724			IMS Job Number: J5443			
No.	Operation/Activity	Inspection or Test Action	Standard, Spec or Drawing	Verifying Document/ Report/ Record Form	Action Status						Remarks
					IMS			Client			
					Monitor	Witness	Hold	Sign & Date	Witness	Hold	

1.0 Approvals												
1.1	Qualify welding procedures	Review Welding procedures	AS 1554.1	Procedures register, WPS & WPQR			QC	Andrew Hodge				
1.2	Qualify welding operators	Review welding operator Quals	AS 2980 ISO9606	Welder qualification records			QC	Andrew Hodge				

2.0 Inspections and Testing												
2.1	Inspection of materials and consumables prior to works.	Inspection of material for compliance	Material Certs & Batch Numbers	This ITP. AS/NZS 2717.1	WS			 8/6/22				Ongoing throughout entire job.
2.2	Storage of consumables.	Inspection of consumable for compliance	AS 1554.1	WTIA Technical Note# 3.	WS			 8/6/22				Ongoing throughout entire job.
2.3	Visual Inspection of Welding	Inspection of welds and material for compliance	AS 1554.1 & relevant NDT standards	AS 1554.1		QC		Kahlani.M 16.8.22				Ongoing throughout entire job.
2.4	Identify Items/Plates for possible stored energy.	Inspection of welds and material for compliance	IMSQ-WI-006	This ITP			WS	 8/6/22				Reference IMSQ-WI-006 and Relevant JSA prior to commencement of task
2.5	Initial Non-destructive examination	Inspection of welds and material for compliance	AS 1554.1 & relevant NDT standards	NATA approved NDT reports		WS			NDE		L.Hill EWD 30/6/22 	NDT contractor to complete initial report.
2.6	Final Non-destructive examination	Inspection of welds and material for compliance	AS 1554.1 & relevant NDT standards	NATA approved NDT reports		WS			NDE		L.Hill EWD 30/6/22  As per report M22-2596	NDT contractor to complete final report.
2.7	Final inspection & document check	Review for all documents complete	IMS Structural QA system	This ITP. ISO 3834.			QC	Kahlani.M		CL		Client to nominate representative at this stage.

3.0 Dimensional Control												
3.1	Dimensional inspection of Chord Plate prior to welding.	Record critical dimensions.	IMS internal structural QA. OEM specifications	This ITP. Third party report		WS		 16/8/22				
3.2	Dimensional inspection of Access Cover in Side Wall prior to welding.	Record critical dimensions.	IMS internal structural QA. OEM specifications	This ITP. Third party report		WS		 28/8/22				

Responsibility Codes

Key:	WM	Workshop Manager	WS	Workshop Supervisor	CL	Client
	LH	Leading Hand	OP	Operator	NDT	Non Destructive Testing
	WI	Welding Inspector	OEM	Original Equipment Manufacturer		
	SUPT	Superintendent	SC	Sub-Contractor		
	QC	QC Inspector	NDE	Non Destructive Examination (Provider)		



Inspection & Test Plan

Scope item: RH170 Stick Rebuild

Authorised: Andrew Hodgson

Date: 22-6-2022

Client Name: Minespec

Description of Job: RH170 Stick Rebuild

Client PO#: PO1724

IMS Job Number: J5443

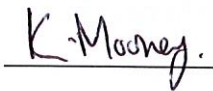
No.	Operation/Activity	Inspection or Test Action	Standard, Spec or Drawing	Verifying Document/ Report/ Record Form	Action Status							Remarks
					IMS				Client			
					Monitor	Witness	Hold	Sign & Date	Witness	Hold	Sign & Date	
3.3	Inspection of all blended radial transitions on corners/chord plates and bearing plates internal and external.	Record critical dimensions.	Third Party Initial NDT Report.	This ITP. Material dimension check sheet.		WS		 22/8/22				
3.4	Complete alignment check and check Bores against OEM specification.	Record critical dimensions.	IMS internal structural QA. OEM specifications	This ITP. Third party report		WS				SC	A. Clark	Third party to supply report at this stage
3.5	Dimensional verification of reclaimed Bores and final machining.	Record critical dimensions.	IMS internal structural QA. OEM specifications	This ITP. Third party report		WS				SC	A. Clark	Third party to supply report upon completion
3.6	Dimensional verification of installed bushes to OEM specification.	Record critical dimensions.	IMS internal structural QA. OEM specifications	This ITP. OEM Procedures.		WS				SC	A. Clark	Third party to supply report upon completion
4.0	Welding											
4.1	Identify/confirm crack locations.	Review weld maps, & NDT reports	IMS internal structural QA	NDT Report		WS						
4.2	Post excavated crack locations	Verify defect removal after gouging	IMS Welding standards	NDT provider report or verbal		WS						
4.3	Weld crack locations, Bushes, Build up work,	In process monitoring of WPS application. Preheat & operator check sheets	IMS internal structural QA standard. Australian Standards.	WPS, preheat check sheets & operator check sheets	WS							
4.4	Final visual inspection to be carried out prior to loading onto transport and delivery to site.	Review and inspect final product to ensure workmanship quality.	IMS internal structural QA standard. Australian Standards.	ITP document			QC	K. Mooney		CL		

Project Completion Acceptance

Accepted: IMS

Accepted: Minespec

Signed:



Dated:

Signed:

Dated

Responsibility Codes

Key:

WM	Workshop Manager	WS	Workshop Supervisor
LH	Leading Hand	OP	Operator
WI	Welding Inspector	OEM	Original Equipment Manufacturer
SUPT	Superintendent	SC	Sub-Contractor
QC	QC Inspector	NDE	Non Destructive Examination (Provider)

CL	Client
NDT	Non Destructive Testing

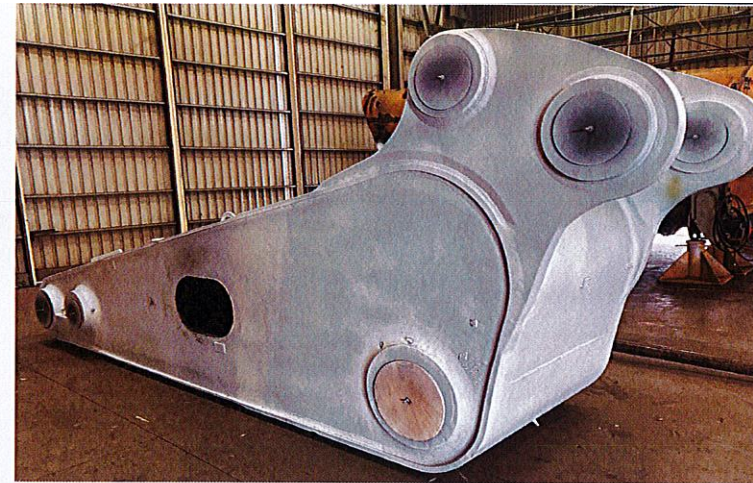
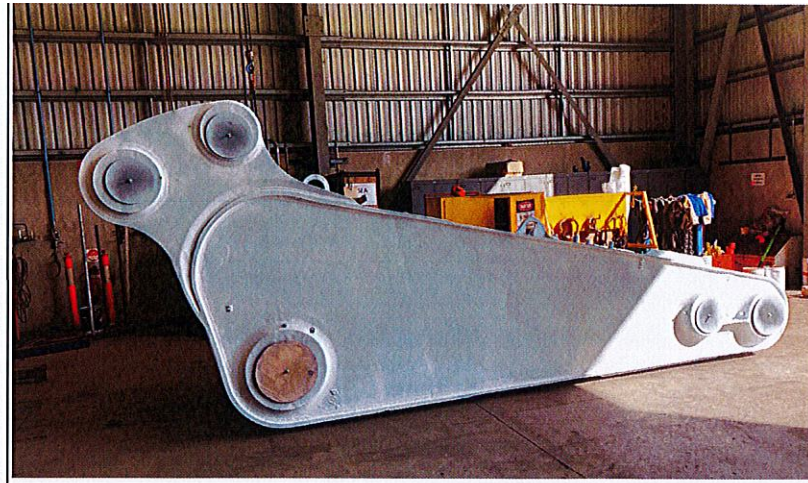
Welder Qualification Register



NAME	QUALIFICATION	NDT REPORT	PASS/FAIL
Abad, Gerardo	1st Year Apprentice	M17-624	Pass
Agsangre, Crispin	2nd Year Apprentice	M17-625	Pass
Alamodin, Roel	3rd Year Apprentice	M18-1455	(blank)
Alamodin, Roel	AS/NZS2980	M18-1501	
Ali, Faruk	AS2980	M18-240	

ID	NAME	QUALIFICATION	NDT REPORT	TAKEN	PASS/FAIL	6 MONTH	12 MONTH	18 MONTH	24 MONTH	30 MONTH	36 MONTH	42 MONTH
286	Abad, Gerardo	AS2980/ISO9606	M18-1455	Yes	Pass	20/05/2019	20/11/2019	20/05/2020	20/11/2020	20/05/2021	20/11/2021	20/05/2022
338	Agsangre, Crispin	AS2980/ISO9606	M19-1093	Yes	Pass	08/02/2020	08/08/2020	08/02/2021	08/08/2021	08/02/2022	08/08/2022	08/02/2023
106	Alamodin, Roel	AS2980/ISO9606	M18-1501	Yes	Pass	20/05/2019	20/11/2019	20/05/2020	20/11/2020	20/05/2021	20/11/2021	20/05/2022
305	Alamodin, Rommoel	AS2980/ISO9606	M19-933	Yes	Pass	12/01/2020	12/07/2020	12/01/2022	12/07/2022	12/01/2023	12/07/2023	12/01/2024
138	Ali, Faruk	AS2980/ISO9606	M20-447	Yes	Pass	9/04/2020	9/10/2020	9/04/2021	9/10/2021	9/04/2022	9/10/2022	9/04/2023
164	Alimo-ot, Edwin	AS2980/ISO9606	M20-281	Yes	Pass	29/02/2020	29/08/2020	28/02/2021	29/08/2021	28/02/2022	29/08/2022	28/02/2023
192	Anastasi, Dave	AS2980/ISO9606	M18-878	Yes	Pass	26/12/2018	26/06/2019	26/12/2019	26/06/2020	26/12/2020	26/06/2021	26/12/2021
268	Antonio, Larry	AS/NZS2980	M18-252	Yes	Pass	12/12/2018	12/06/2019	12/12/2019	12/06/2020	12/12/2020	12/06/2021	12/12/2021
378	Baclay, Angelo	AS2980/ISO9606	M20-281	Yes	Pass	29/02/2020	29/08/2020	28/02/2021	29/08/2021	28/02/2022	29/08/2022	28/02/2023
311	Balanga, Reynaldo	AS2980/ISO9606	M20-447	Yes	Pass	9/04/2020	9/10/2020	9/04/2021	9/10/2021	9/04/2022	9/10/2022	9/04/2023
122	Barba, Michael	AS2980/ISO9606	M18-878	Yes	Pass	26/12/2018	26/06/2019	26/12/2019	26/06/2020	26/12/2020	26/06/2021	26/12/2021
341	Basilio, Emmuel	AS2980/ISO9606	M19-1093	Yes	Pass	08/02/2020	08/08/2020	08/02/2021	08/08/2021	08/02/2022	08/08/2022	08/02/2023
258	Birch, Paul Andrew	AS/NZS2980	M18-240	Yes	Pass	21/09/2018	21/03/2019	21/09/2019	21/03/2020	21/09/2020	21/03/2021	21/09/2021
363	Bongco, Epifanio	AS2980/ISO9606	M20-259	Yes	Pass	25/08/2020	25/02/2021	25/08/2021	25/02/2022	25/08/2022	25/02/2023	25/08/2023
240	Borg, Zayne	3rd Year Apprentice		No								
331	Caballa, Edwin	AS2980/ISO9606	M19-696	Yes	Pass	21/11/2019	21/05/2020	21/11/2020	21/05/2021	21/11/2021	21/05/2022	21/11/2022
204	Caldo, Johnel	AS2980/ISO9606	M20-447	Yes	Pass	9/04/2020	9/10/2020	9/04/2021	9/10/2021	9/04/2022	9/10/2022	9/04/2023
333	Callueng, Marlon	AS2980/ISO9606	M19-517	Yes	Pass	13/11/2019	13/05/2020	13/11/2020	13/05/2021	13/11/2021	13/05/2022	13/11/2022
201	Canete, Abel	AS2980/ISO9606	M19-933	Yes	Pass	12/01/2020	12/07/2020	12/01/2022	12/07/2022	12/01/2023	12/07/2023	12/01/2024
356	Castillo, Romnick	AS2980/ISO9606	M20-447	Yes	Pass	9/04/2020	9/10/2020	9/04/2021	9/10/2021	9/04/2022	9/10/2022	9/04/2023
359	Choruma, Munashe	1st Year Apprentice		No								
207	Connor, Mitchell	AS2980/ISO9606	M20-372	Yes	Pass	9/04/2020	9/10/2020	9/04/2021	9/10/2021	9/04/2022	9/10/2022	9/04/2023
214	Copo, Garlan	AS2980	M17-625	Yes	Pass	29/12/2017	29/06/2018	29/12/2018	29/06/2019	29/12/2019	29/06/2020	29/12/2020
377	Cortez, Dennis	AS2980/ISO9606	M20-372	Yes	Pass	9/04/2020	9/10/2020	9/04/2021	9/10/2021	9/04/2022	9/10/2022	9/04/2023
328	Cruz, Erwin	AS2980/ISO9606	M20-447	Yes	Pass	9/04/2020	9/10/2020	9/04/2021	9/10/2021	9/04/2022	9/10/2022	9/04/2023
362	Daguinotas, Peter	AS2980/ISO9606	M20-259	Yes	Pass	25/08/2020	25/02/2021	25/08/2021	25/02/2022	25/08/2022	25/02/2023	25/08/2023
368	De Vera, Ariel	AS2980/ISO9606	M20-281	Yes	Pass	29/02/2020	29/08/2020	28/02/2021	29/08/2021	28/02/2022	29/08/2022	28/02/2023
321	Dobie, Cameron	2nd Year Apprentice		No								
371	Eroles, Romel	AS2980/ISO9606	M20-447	Yes	Pass	9/04/2020	9/10/2020	9/04/2021	9/10/2021	9/04/2022	9/10/2022	9/04/2023
312	Faram, Earle	1st Year Apprentice		No								
301	Fernando, Jeffrey	AS2980/ISO9606	M19-696	Yes	Pass	21/11/2019	21/05/2020	21/11/2020	21/05/2021	21/11/2021	21/05/2022	21/11/2022
336	Ferrer, Noel Bonilla	AS2980/ISO9606	M19-696	Yes	Pass	21/11/2019	21/05/2020	21/11/2020	21/05/2021	21/11/2021	21/05/2022	21/11/2022
367	Ferry, Nelson	AS2980/ISO9606	M20-372	Yes	Pass	9/04/2020	9/10/2020	9/04/2021	9/10/2021	9/04/2022	9/10/2022	9/04/2023
351	Gamiten, Cezar	AS2980/ISO9606	M20-372	Yes	Pass	9/04/2020	9/10/2020	9/04/2021	9/10/2021	9/04/2022	9/10/2022	9/04/2023
263	Gamuza, Abraham Joseph	AS2980/ISO9606	M18-878	Yes	Pass	26/12/2018	26/06/2019	26/12/2019	26/06/2020	26/12/2020	26/06/2021	26/12/2021
266	Garcia, Justino	AS/NZS2980	M18-240	Yes	Pass	21/09/2018	21/03/2019	21/09/2019	21/03/2020	21/09/2020	21/03/2021	21/09/2021
171	Gavarra, Angelo	AS2980/ISO9606	M19-933	Yes	Pass	12/01/2020	12/07/2020	12/01/2022	12/07/2022	12/01/2023	12/07/2023	12/01/2024
352	Grafil, Arvin	AS2980/ISO9606	M20-259	Yes	Pass	25/08/2020	25/02/2021	25/08/2021	25/02/2022	25/08/2022	25/02/2023	25/08/2023
120	Irang, William	AS2980/ISO9606	M19-723	Yes	Pass	29/11/2019	29/05/2020	29/11/2020	29/05/2021	29/11/2021	29/05/2022	29/11/2022
267	Kim, Chris Cheolyoung	AS/NZS2980	M18-240	Yes	Pass	21/09/2018	21/03/2019	21/09/2019	21/03/2020	21/09/2020	21/03/2021	21/09/2021
361	Lim, Leuvenh	AS2980/ISO9606	M20-447	Yes	Pass	9/04/2020	9/10/2020	9/04/2021	9/10/2021	9/04/2022	9/10/2022	9/04/2023
315	Lorete, Archie	AS2980/ISO9606	M19-933	Yes	Pass	12/01/2020	12/07/2020	12/01/2022	12/07/2022	12/01/2023	12/07/2023	12/01/2024
166	Macatangay, Bernie	AS2980/ISO9606	M19-933	Yes	Pass	12/01/2020	12/07/2020	12/01/2022	12/07/2022	12/01/2023	12/07/2023	12/01/2024
358	Manila, Melchor	AS2980/ISO9606	M20-281	Yes	Pass	29/02/2020	29/08/2020	28/02/2021	29/08/2021	28/02/2022	29/08/2022	28/02/2023
353	Maranan, Aries	AS2980/ISO9606	M20-259	Yes	Pass	25/08/2020	25/02/2021	25/08/2021	25/02/2022	25/08/2022	25/02/2023	25/08/2023
344	Marasigan, Mark	AS2980/ISO9606	M19-1048	Yes	Pass	29/01/2020	29/07/2020	29/01/2021	29/07/2021	29/01/2022	29/07/2022	29/01/2023

ID	NAME	QUALIFICATION	NDT REPORT	TAKEN	PASS/FAIL	6 MONTH	12 MONTH	18 MONTH	24 MONTH	30 MONTH	36 MONTH	42 MONTH
260	Mooney, Kahlani Founa	3rd Year Apprentice		No								
269	Nierva, Joselito	AS/NZS2980	M18-252	Yes	Pass	12/12/2018	12/06/2019	12/12/2019	12/06/2020	12/12/2020	12/06/2021	12/12/2021
237	Olaes, Ramiro	AS/NZS2980	M17-624	Yes	Pass	16/01/2018	16/07/2018	16/01/2019	16/07/2019	16/01/2020	16/07/2020	16/01/2021
345	Oliver, Camara	AS2980/ISO9606	M19-1093	Yes	Pass	08/02/2020	08/08/2020	08/02/2021	08/08/2021	08/02/2022	08/08/2022	08/02/2023
343	Pacturan, Bernice	AS2980/ISO9606	M19-1093	Yes	Pass	08/02/2020	08/08/2020	08/02/2021	08/08/2021	08/02/2022	08/08/2022	08/02/2023
265	Pan, John Andrew	AS2980/ISO9606	M18-1501	Yes	Pass	20/05/2019	20/11/2019	20/05/2020	20/11/2020	20/05/2021	20/11/2021	20/05/2022
241	Peterson, Connor	3rd Year Apprentice		No								
357	Pruel, Antonette	AS2980/ISO9606	M20-372	Yes	Pass	9/04/2020	9/10/2020	9/04/2021	9/10/2021	9/04/2022	9/10/2022	9/04/2023
176	Quimosquimos, Ricky	AS2980/ISO9606	M19-723	Yes	Pass	29/11/2019	29/05/2020	29/11/2020	29/05/2021	29/11/2021	29/05/2022	29/11/2022
346	Quirit, Kaniswar	AS2980/ISO9606	M19-1093	Yes	Pass	08/02/2020	08/08/2020	08/02/2021	08/08/2021	08/02/2022	08/08/2022	08/02/2023
83	Randall, Tony	AS2980/ISO9606	M20-372	Yes	Pass	9/04/2020	9/10/2020	9/04/2021	9/10/2021	9/04/2022	9/10/2022	9/04/2023
302	Ranola, Adrian	AS2980/ISO9606	M18-1501	Yes	Pass	20/05/2019	20/11/2019	20/05/2020	20/11/2020	20/05/2021	20/11/2021	20/05/2022
160	Real, Alexander	AS2980/ISO9606	M18-878	Yes	Pass	26/12/2018	26/06/2019	26/12/2019	26/06/2020	26/12/2020	26/06/2021	26/12/2021
340	Rueda, Manny	AS2980/ISO9606	M19-1048	Yes	Pass	29/01/2020	29/07/2020	29/01/2021	29/07/2021	29/01/2022	29/07/2022	29/01/2023
342	Sajul, Richard	AS2980/ISO9606	M19-1093	Yes	Pass	08/02/2020	08/08/2020	08/02/2021	08/08/2021	08/02/2022	08/08/2022	08/02/2023
332	Samar, Hazer	AS2980/ISO9606	M19-517	Yes	Pass	13/11/2019	13/05/2020	13/11/2020	13/05/2021	13/11/2021	13/05/2022	13/11/2022
320	Sharif, Shariful Islam	AS2980/ISO9606	M19-723	Yes	Pass	29/11/2019	29/05/2020	29/11/2020	29/05/2021	29/11/2021	29/05/2022	29/11/2022
140	Simmonds, Greg	AS2980/ISO9606	M20-372	Yes	Pass	9/04/2020	9/10/2020	9/04/2021	9/10/2021	9/04/2022	9/10/2022	9/04/2023
297	Sunner, Cody	2nd Year Apprentice		No								
300	Tapayan, Felipe	AS2980/ISO9606	M19-696	Yes	Pass	21/11/2019	21/05/2020	21/11/2020	21/05/2021	21/11/2021	21/05/2022	21/11/2022
337	Trimor, Edmundo Gaylan	AS2980/ISO9606	M19-696	Yes	Pass	21/11/2019	21/05/2020	21/11/2020	21/05/2021	21/11/2021	21/05/2022	21/11/2022
119	Tumale, Jorge	AS2980/ISO9606	M20-281	Yes	Pass	29/02/2020	29/08/2020	28/02/2021	29/08/2021	28/02/2022	29/08/2022	28/02/2023
354	Valerio, Garry	AS2980/ISO9606	M20-259	Yes	Pass	25/08/2020	25/02/2021	25/08/2021	25/02/2022	25/08/2022	25/02/2023	25/08/2023
187	Velasco, Allen	AS2980/ISO9606	M20-281	Yes	Pass	29/02/2020	29/08/2020	28/02/2021	29/08/2021	28/02/2022	29/08/2022	28/02/2023
339	Venida, Edson	AS2980/ISO9606	M19-1048	Yes	Pass	29/01/2020	29/07/2020	29/01/2021	29/07/2021	29/01/2022	29/07/2022	29/01/2023
360	Walton, Riley	1st Year Apprentice		No								
281	Zhang, Tony Guoqing	AS2980/ISO9606	M19-723	Yes	Pass	29/11/2019	29/05/2020	29/11/2020	29/05/2021	29/11/2021	29/05/2022	29/11/2022



Note* All Cast to be preheated to 150°C

Inspected By: Andrew Hodge

Department: Quality

Location: IMS Workshop

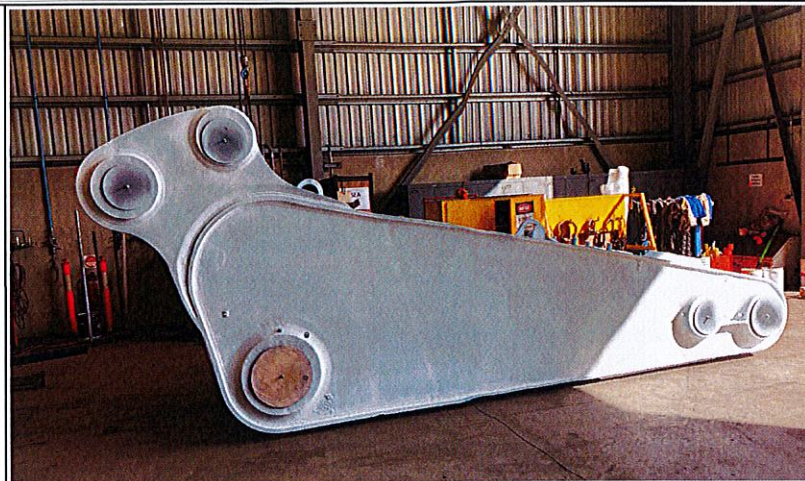
Client: Minespec

Description: RH170 Stick

Scope Item: Crack Repairs - 3.01. Internal

Reference Material: Refer to NDT Initial Report

Welder ID	Welder Name	Section/Location	Joint Type/ ID	WPS	Recommended Preheat Temp °C	Actual Preheat Temp °C	Date Taken	Consumable Used	Consumable Batch No:	Inspected By Supervisor:
	Emmanuel	CR01	Fillet Weld	IMSQ-OP-312	150°C	155	25-8-22	E71T-12M H4	AE71CM16	Supervisor
	Emmanuel	CR02	Fillet Weld	IMSQ-OP-312	150°C	159	25-8-22	E71T-12M H4	AE71CM16	
	Emmanuel	CR03	Fillet Weld	IMSQ-OP-312	150°C	162	25-8-22	E71T-12M H4	AE71CM16	
	Emmanuel	CR04	Fillet Weld	IMSQ-OP-312	150°C	158	25-8-22	E71T-12M H4	AE71CM16	
	Emmanuel	CR05	Fillet Weld	IMSQ-OP-312	150°C	153	25-8-22	E71T-12M H4	AE71CM16	
	Emmanuel	CR06	Fillet Weld	IMSQ-OP-312	150°C	156	25-8-22	E71T-12M H4	AE71CM16	
	Emmanuel	CR07	Fillet Weld	IMSQ-OP-312	150°C	154	25-8-22	E71T-12M H4	AE71CM16	
	Emmanuel	CR08	Fillet Weld	IMSQ-OP-312	150°C	157	25-8-22	E71T-12M H4	AE71CM16	
	Emmanuel	CR09	Crack Repair	IMSQ-OP-320	80°C	152	25-8-22	E71T-12M H4	AE71CM16	
	Emmanuel	CR10	Crack Repair	IMSQ-OP-320	80°C	159	25-8-22	E71T-12M H4	AE71CM16	
	Emmanuel	CR11	Crack Repair	IMSQ-OP-320	80°C	161	25-8-22	E71T-12M H4	AE71CM16	
	Emmanuel	CR12	Crack Repair	IMSQ-OP-320	80°C	158	25-8-22	E71T-12M H4	AE71CM16	
	Emmanuel	CR13	Crack Repair	IMSQ-OP-320	80°C	157	25-8-22	E71T-12M H4	AE71CM16	
	Emmanuel	CR14	Crack Repair	IMSQ-OP-320	80°C	155	25-8-22	E71T-12M H4	AE71CM16	
	Emmanuel	CR15	Crack Repair	IMSQ-OP-320	80°C	158	25-8-22	E71T-12M H4	AE71CM16	
	Emmanuel	CR16	Crack Repair	IMSQ-OP-320	80°C	153	25-8-22	E71T-12M H4	AE71CM16	
	Emmanuel	CR17	Crack Repair	IMSQ-OP-320	80°C	151	25-8-22	E71T-12M H4	AE71CM16	
	Emmanuel	CR18	Crack Repair	IMSQ-OP-320	80°C	152	25-8-22	E71T-12M H4	AE71CM16	
	Emmanuel	CR19	Crack Repair	IMSQ-OP-320	80°C	158	25-8-22	E71T-12M H4	AE71CM16	
	Emmanuel	CR20	Crack Repair	IMSQ-OP-320	80°C	159	26-8-22	E71T-12M H4	AE71CM16	
	Emmanuel	CR21	Crack Repair	IMSQ-OP-320	80°C	154	26-8-22	E71T-12M H4	AE71CM16	
	Emmanuel	CR22	Crack Repair	IMSQ-OP-320	80°C	153	26-8-22	E71T-12M H4	AE71CM16	
	Emmanuel	CR23	Crack Repair	IMSQ-OP-320	80°C	158	26-8-22	E71T-12M H4	AE71CM16	
	Emmanuel	CR24	Crack Repair	IMSQ-OP-320	80°C	156	26-8-22	E71T-12M H4	AE71CM16	



Note* All Cast to be preheated to 150°C

Inspected By: Andrew Hodge

Department: Quality

Location: IMS Workshop

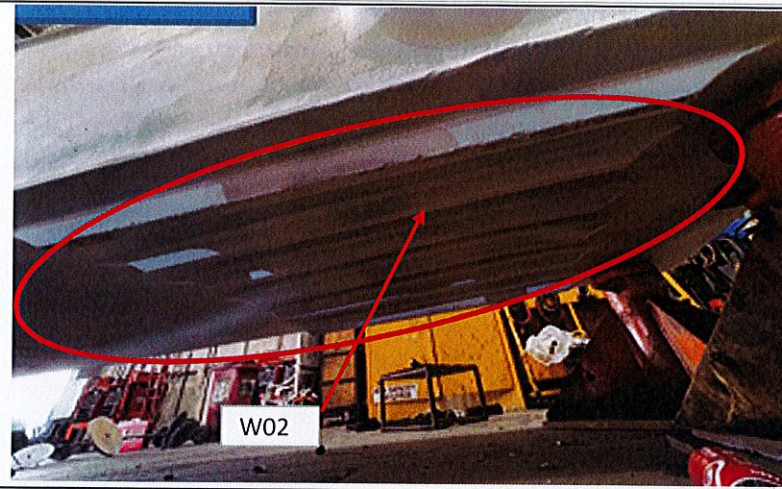
Client: Minespec

Description: RH170 Stick

Scope Item: Crack Repairs - 3.02. External

Reference Material: Refer to NDT Initial Report

Welder ID	Welder Name	Section/Location	Joint Type/ ID	WPS	Recommended Preheat Temp °C	Actual Preheat Temp °C	Date Taken	Consumable Used	Consumable Batch No:	Inspected By Supervisor:
	GERALD	CR01	Crack Repair	IMSQ-OP-320	150°C	155°C	26-8-22	E71T-12M H4	AE71CM16	Supervisor
	GERALD	CR02	Crack Repair	IMSQ-OP-320	150°C	156°C	26-8-22	E71T-12M H4	AE71CM16	
	GERALD	CR03	Crack Repair	IMSQ-OP-320	150°C	158°C	26-8-22	E71T-12M H4	AE71CM16	
	GERALD	CR04	Crack Repair	IMSQ-OP-320	150°C	159°C	26-8-22	E71T-12M H4	AE71CM16	
	GERALD	CR05	Crack Repair	IMSQ-OP-320	150°C	157°C	26-8-22	E71T-12M H4	AE71CM16	
	GERALD	CR06	Crack Repair	IMSQ-OP-320	150°C	158°C	26-8-22	E71T-12M H4	AE71CM16	
	GERALD	CR07	Crack Repair	IMSQ-OP-320	150°C	159°C	26-8-22	E71T-12M H4	AE71CM16	
	GERALD	CR08	Crack Repair	IMSQ-OP-320	150°C	157°C	26-8-22	E71T-12M H4	AE71CM16	
	GERALD	CR09	Crack Repair	IMSQ-OP-320	80°C	85°C	27-8-22	E71T-12M H4	AE71CM16	
	GERALD	CR10	Crack Repair	IMSQ-OP-320	80°C	87°C	27-8-22	E71T-12M H4	AE71CM16	
	GERALD	CR11	Crack Repair	IMSQ-OP-320	80°C	88°C	27-8-22	E71T-12M H4	AE71CM16	
	GERALD	CR12	Crack Repair	IMSQ-OP-320	80°C	87°C	27-8-22	E71T-12M H4	AE71CM16	
	GERALD	CR13	Crack Repair	IMSQ-OP-320	80°C	88°C	27-8-22	E71T-12M H4	AE71CM16	
	GERALD	CR14	Crack Repair	IMSQ-OP-320	80°C	85°C	27-8-22	E71T-12M H4	AE71CM16	
	GERALD	CR15	Crack Repair	IMSQ-OP-320	80°C	87°C	27-8-22	E71T-12M H4	AE71CM16	
	GERALD	CR16	Crack Repair	IMSQ-OP-320	80°C	85°C	27-8-22	E71T-12M H4	AE71CM16	
	GERALD	CR17	Crack Repair	IMSQ-OP-320	80°C	87°C	27-8-22	E71T-12M H4	AE71CM16	
	GERALD	CR18	Crack Repair	IMSQ-OP-320	80°C	89°C	27-8-22	E71T-12M H4	AE71CM16	
	GERALD	CR19	Crack Repair	IMSQ-OP-320	80°C	88°C	27-8-22	E71T-12M H4	AE71CM16	
	GERALD	CR20	Crack Repair	IMSQ-OP-320	80°C	84°C	27-8-22	E71T-12M H4	AE71CM16	
	GERALD	CR21	Crack Repair	IMSQ-OP-320	80°C	85°C	27-8-22	E71T-12M H4	AE71CM16	
	GERALD	CR22	Crack Repair	IMSQ-OP-320	80°C	87°C	27-8-22	E71T-12M H4	AE71CM16	
	GERALD	CR23	Crack Repair	IMSQ-OP-320	80°C	88°C	27-8-22	E71T-12M H4	AE71CM16	
	GERALD	CR24	Crack Repair	IMSQ-OP-320	80°C	89°C	27-8-22	E71T-12M H4	AE71CM16	



Inspected By: Andrew Hodge

Department: Quality

Location: IMS Workshop

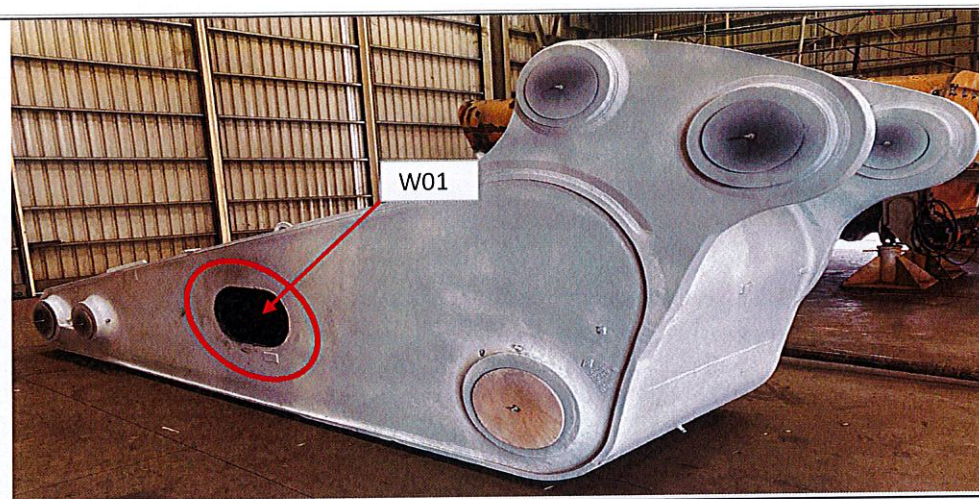
Client: Minespec

Description: RH170 Stick

Scope Item: External Structure - 2.02. Install Chord Plate Stiffeners

Reference Material: Refer to IMS Procedure

Welder ID	Welder Name	Section/Location	Joint Type/ ID	WPS	Recommended Preheat Temp °C	Actual Preheat Temp °C	Date Taken	Consumable Classification	Consumable Batch No:	Inspected By Supervisor:
201	ABEL	W02	Fillet Weld	IMSQ-OP-300	80°C	84°C	18-08-22	E71T-12M H4	AE 71 CM16	Supervisor: _____
201	ABEL	W02	Fillet Weld	IMSQ-OP-300	80°C	85°C	18-08-22	E71T-12M H4	AE 71 CM16	
201	ABEX	W02	Fillet Weld	IMSQ-OP-300	80°C	89°C	18-08-22	E71T-12M H4	AE 71 CM16	
	ALEX	W02	Fillet Weld	IMSQ-OP-300	80°C	88°C	18-08-22	E71T-12M H4	AE 71 CM16	
	ALEX	W02	Fillet Weld	IMSQ-OP-300	80°C	91°C	18-08-22	E71T-12M H4	AE 71 CM16	
	ALEX	W02	Fillet Weld	IMSQ-OP-300	80°C	90°C	18-08-22	E71T-12M H4	AE 71 CM16	
	EMMUEL	W02	Fillet Weld	IMSQ-OP-300	80°C	89°C	18-08-22	E71T-12M H4	AE 71 CM16	
	EMMUEL	W02	Fillet Weld	IMSQ-OP-300	80°C	91°C	18-08-22	E71T-12M H4	AE 71 CM16	
	EMMUEL	W02	Fillet Weld	IMSQ-OP-300	80°C	87°C	18-08-22	E71T-12M H4	AE 71 CM16	
	EMMUEL	W02	Fillet Weld	IMSQ-OP-300	80°C	86°C	18-08-22	E71T-12M H4	AE 71 CM16	
	EMMUEL	W02	Fillet Weld	IMSQ-OP-300	80°C	93°C	18-08-22	E71T-12M H4	AE 71 CM16	
	ANTONETTE	W02	Fillet Weld	IMSQ-OP-300	80°C	88°C	18-08-22	E71T-12M H4	AE 71 CM16	
	ANTONETTE	W02	Fillet Weld	IMSQ-OP-300	80°C	86°C	18-08-22	E71T-12M H4	AE 71 CM16	
	ANTONETTE	W02	Fillet Weld	IMSQ-OP-300	80°C	84°C	18-08-22	E71T-12M H4	AE 71 CM16	
341	EMMUEL	W02	Fillet Weld	IMSQ-OP-300	80°C	91	18-8-22	E71T-12M H4	AE 71 CM16	
341	EMMUEL	W02	Fillet Weld	IMSQ-OP-300	80°C	88	18-8-22	E71T-12M H4	AE 71 CM16	
341	EMMUEL	W02	Fillet Weld	IMSQ-OP-300	80°C	85	18-8-22	E71T-12M H4	AE 71 CM16	
341	EMMUEL	W02	Fillet Weld	IMSQ-OP-300	80°C	87	21-8-22	E71T-12M H4	AE 71 CM16	
341	EMMUEL	W02	Fillet Weld	IMSQ-OP-300	80°C	89	21-8-22	E71T-12M H4	AE 71 CM16	
341	EMMUEL	W02	Fillet Weld	IMSQ-OP-300	80°C	86	21-8-22	E71T-12M H4	AE 71 CM16	
341	EMMUEL	W02	Fillet Weld	IMSQ-OP-300	80°C	90	21-8-22	E71T-12M H4	AE 71 CM16	
341	EMMUEL	W02	Fillet Weld	IMSQ-OP-300	80°C	84	21-8-22	E71T-12M H4	AE 71 CM16	
341	EMMUEL	W02	Fillet Weld	IMSQ-OP-300	80°C	88	21-8-22	E71T-12M H4	AE 71 CM16	
341	EMMUEL	W02	Fillet Weld	IMSQ-OP-300	80°C	86	21-8-22	E71T-12M H4	AE 71 CM16	



Inspected By: Andrew Hodge

Department: Quality

Location: IMS Workshop

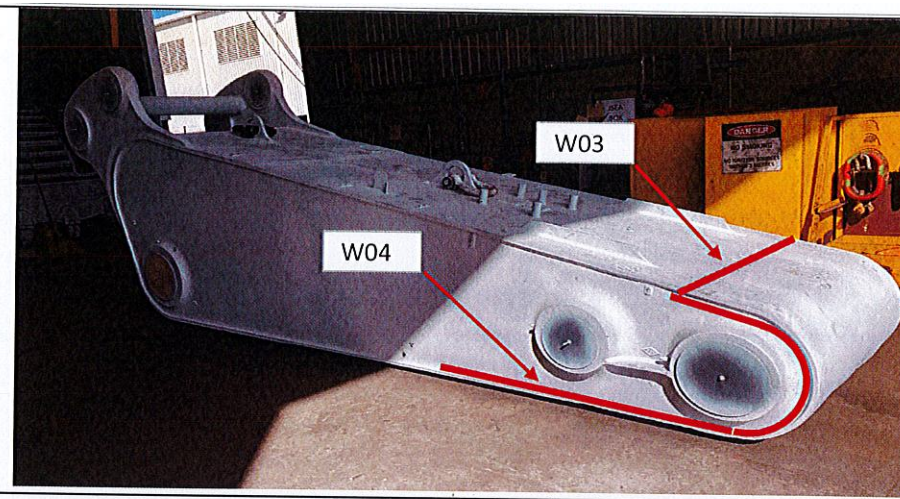
Client: Minespec

Description: RH170 Stick

Scope Item: External Structure - 2.06. Install Access Cover in Side Wall

Reference Material: Refer to IMS Procedure

Welder ID	Welder Name	Section/Location	Joint Type/ ID	WPS	Recommended Preheat Temp °C	Actual Preheat Temp °C	Date Taken	Consumable Classification	Consumable Batch No:	Inspected By Supervisor:
	EMMERZ	W01	Butt Weld	IMS-WPS-1778	80°C	85	28-8-22	E71T-12M H4	AE71CM16	Supervisor: _____
	EMMERZ	W01	Butt Weld	IMS-WPS-1778	80°C	88	28-8-22	E71T-12M H4	AE71CM16	
	EMMERZ	W01	Butt Weld	IMS-WPS-1778	80°C	89	28-8-22	E71T-12M H4	AE71CM16	
	EMMERZ	W01	Butt Weld	IMS-WPS-1778	80°C	84	28-8-22	E71T-12M H4	AE71CM16	
	EMMERZ	W01	Butt Weld	IMS-WPS-1778	80°C	87	28-8-22	E71T-12M H4	AE71CM16	
	EMMERZ	W01	Butt Weld	IMS-WPS-1778	80°C	88	28-8-22	E71T-12M H4	AE71CM16	
	EMMERZ	W01	Butt Weld	IMS-WPS-1778	80°C	90	28-8-22	E71T-12M H4	AE71CM16	
	EMMERZ	W01	Butt Weld	IMS-WPS-1778	80°C	86	28-8-22	E71T-12M H4	AE71CM16	
	EMMERZ	W01	Butt Weld	IMS-WPS-1778	80°C	83	28-8-22	E71T-12M H4	AE71CM16	
	EMMERZ	W01	Butt Weld	IMS-WPS-1778	80°C	91	28-8-22	E71T-12M H4	AE71CM16	
	EMMERZ	W01	Butt Weld	IMS-WPS-1778	80°C	82	28-8-22	E71T-12M H4	AE71CM16	
	EMMERZ	W01	Butt Weld	IMS-WPS-1778	80°C	85	28-8-22	E71T-12M H4	AE71CM16	
	EMMERZ	W01	Butt Weld	IMS-WPS-1778	80°C	86	28-8-22	E71T-12M H4	AE71CM16	
	EMMERZ	W01	Butt Weld	IMS-WPS-1778	80°C	84	28-8-22	E71T-12M H4	AE71CM16	
	EMMERZ	W01	Butt Weld	IMS-WPS-1778	80°C	82	28-8-22	E71T-12M H4	AE71CM16	
	EMMERZ	W01	Butt Weld	IMS-WPS-1778	80°C	88	29-8-22	E71T-12M H4	AE71CM16	
	EMMERZ	W01	Butt Weld	IMS-WPS-1778	80°C	83	29-8-22	E71T-12M H4	AE71CM16	
	EMMERZ	W01	Butt Weld	IMS-WPS-1778	80°C	90	29-8-22	E71T-12M H4	AE71CM16	
	EMMERZ	W01	Butt Weld	IMS-WPS-1778	80°C	84	29-8-22	E71T-12M H4	AE71CM16	
	EMMERZ	W01	Butt Weld	IMS-WPS-1778	80°C	87	29-8-22	E71T-12M H4	AE71CM16	
	EMMERZ	W01	Butt Weld	IMS-WPS-1778	80°C	89	29-8-22	E71T-12M H4	AE71CM16	
	EMMERZ	W01	Butt Weld	IMS-WPS-1778	80°C	83	29-8-22	E71T-12M H4	AE71CM16	
	EMMERZ	W01	Butt Weld	IMS-WPS-1778	80°C	81	29-8-22	E71T-12M H4	AE71CM16	
	EMMERZ	W01	Butt Weld	IMS-WPS-1778	80°C	80	29-8-22	E71T-12M H4	AE71CM16	



Inspected By: Andrew Hodge

Department: Quality

Location: IMS Workshop

Client: Minespec

Description: RH170 Stick

Scope Item: Internal Structure - 2.02. Install Bottom Chord Plate

Reference Material: Refer to IMS Procedure

Welder ID	Welder Name	Section/Location	Joint Type/ ID	WPS	Recommended Preheat Temp °C	Actual Preheat Temp °C	Date Taken	Consumable Classification	Consumable Batch No:	Inspected By Supervisor:
176	RICKY	W03	Butt Weld	IMS-WPS-1778	80°C	85°C	24-8-22	E71T-12M H4	AE71CM16	
176	RICKY	W03	Butt Weld	IMS-WPS-1778	80°C	88°C	24-8-22	E71T-12M H4	AE71CM16	
176	RICKY	W03	Butt Weld	IMS-WPS-1778	80°C	86°C	24-8-22	E71T-12M H4	AE71CM16	
176	RICKY	W03	Butt Weld	IMS-WPS-1778	80°C	89°C	24-8-22	E71T-12M H4	AE71CM16	
176	RICKY	W03	Butt Weld	IMS-WPS-1778	80°C	91°C	24-8-22	E71T-12M H4	AE71CM16	
	ALEX REAL	W03	Butt Weld	IMS-WPS-1778	80°C	86°C	16-8-22	E71T-12M H4	AE71CM16	
	ALEX REAL	W04	Fillet Weld	IMSQ-OP-300	80°C	89°C	16-8-22	E71T-12M H4	AE71CM16	
	ALEX REAL	W04	Fillet Weld	IMSQ-OP-300	80°C	88°C	16-8-22	E71T-12M H4	AE71CM16	
	ALEX REAL	W04	Fillet Weld	IMSQ-OP-300	80°C	92°C	16-8-22	E71T-12M H4	AE71CM16	
	ALEX REAL	W04	Fillet Weld	IMSQ-OP-300	80°C	95°C	16-8-22	E71T-12M H4	AE71CM16	
	ALEX REAL	W04	Fillet Weld	IMSQ-OP-300	80°C	96°C	16-8-22	E71T-12M H4	AE71CM16	
341	EMMER	W04	Fillet Weld	IMSQ-OP-300	80°C	85°C	16-8-22	E71T-12M H4	AE71CM16	
341	EMMER	W04	Fillet Weld	IMSQ-OP-300	80°C	89°C	16-8-22	E71T-12M H4	AE71CM16	
341	EMMER	W04	Fillet Weld	IMSQ-OP-300	80°C	87°C	16-8-22	E71T-12M H4	AE71CM16	
341	EMMER	W04	Fillet Weld	IMSQ-OP-300	80°C	89°C	16-8-22	E71T-12M H4	AE71CM16	
341	EMMER	W04	Fillet Weld	IMSQ-OP-300	80°C	88°C	16-8-22	E71T-12M H4	AE71CM16	
341	EMMER	W04	Fillet Weld	IMSQ-OP-300	80°C	90°C	16-8-22	E71T-12M H4	AE71CM16	
301	Jeffrey	W04	Fillet Weld	IMSQ-OP-300	80°C	85	24-8-22	E71T-12M H4	AE71CM16	
301	Jeffrey	W04	Fillet Weld	IMSQ-OP-300	80°C	89	24-8-22	E71T-12M H4	AE71CM16	
301	Jeffrey	W04	Fillet Weld	IMSQ-OP-300	80°C	88	24-8-22	E71T-12M H4	AE71CM16	
301	Jeffrey	W04	Fillet Weld	IMSQ-OP-300	80°C	85	24-8-22	E71T-12M H4	AE71CM16	
301	Jeffrey	W04	Fillet Weld	IMSQ-OP-300	80°C	71	24-8-22	E71T-12M H4	AE71CM16	
301	Jeffrey	W04	Fillet Weld	IMSQ-OP-300	80°C	89	24-8-22	E71T-12M H4	AE71CM16	

Supervisor:

SUBCONTRACTOR REPORTS

Non-Destructive Testing

Machining Records

Report No: M22-2596

Date: 18th July 2022

Client: Independent Mining Services [Qld] Pty Ltd

Contact: Reddan O’Heaney

Subject: The Magnetic Particle examination of welds, bolt holes and transitions about one [1] RH170 Stick.

Test Location: 33 Diesel Drive, Paget QLD 4740.

Order No: P30484

Client Job No: J5443

Technician: Tyran Martin and James Tebble

Results of Examination:

Results of examination are detailed in Table 1 of this report.
All measurements provided in millimetres unless stated otherwise.

Reported By:



Craig Birkett
ISO 9712 Level 3
Technician

Report Issue Date: 1st August 2022

TECHNICAL DATA

MAGNETIC PARTICLE EXAMINATION

Test Standard:	AS 1171-1998
Test Procedure:	MT01
Product Criteria:	To detect cracking
Technique:	Magnetic Flow
Current Type:	Sustained
Magnet:	AC yoke MT60 and MT70
Media:	Smartcheck MPIBA / Smartcheck MPIWA
Material:	Carbon Steel NFS
Surface Condition:	Ground / Painted
Demagnetized:	No
Test Restrictions:	Paint may reduce test sensitivity. Paint areas are not covered under the NATA endorsement. Dirt and grease may hide/mask cracking indications lowering test sensitivity. Access restrictions to Stick Internal areas.

RESULTS OF EXAMINATION

The Magnetic Particle
examination of welds, bolt holes
and transitions about one [1]
RH170 Stick.
Job Number: J5443

TABLE 1
Magnetic Particle Examination

<u>Examined</u>	<u>Interpretation</u>
1.1 Stick External Welds, Bolt Holes and Transitions MPI 100%	Cracking detected – <i>refer to Photographs 1.1 to 1.3.</i> <i>Note: internal tubes not tested. Grind mark and over grind detected.</i>
1.2 Stick Internal Nominated Areas MPI	Cracking detected – <i>refer to Photographs 1.4 and 1.5.</i>



Photograph 1.1.

General view of areas examined and cracking detected about RH170 Stick, External JNJ5443



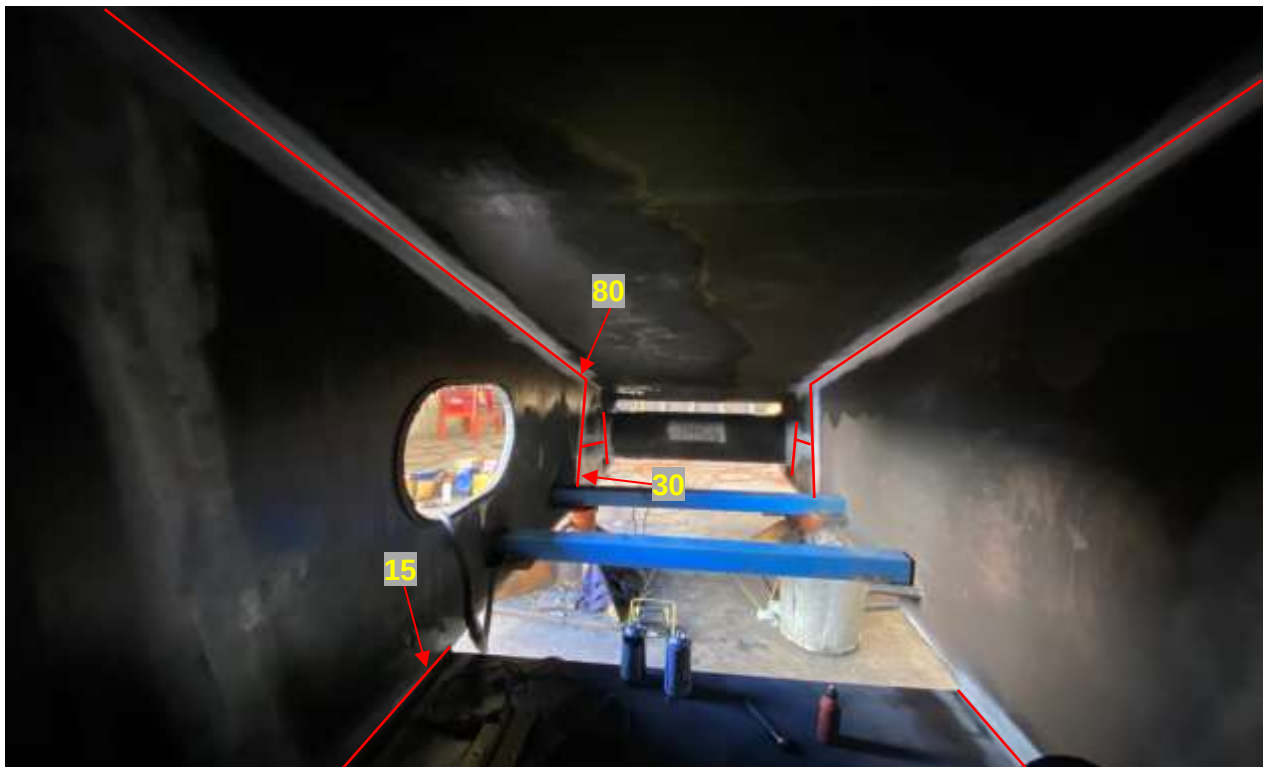
Photograph 1.2.

General view of areas examined and cracking detected about RH170 Stick, External JNJ5443



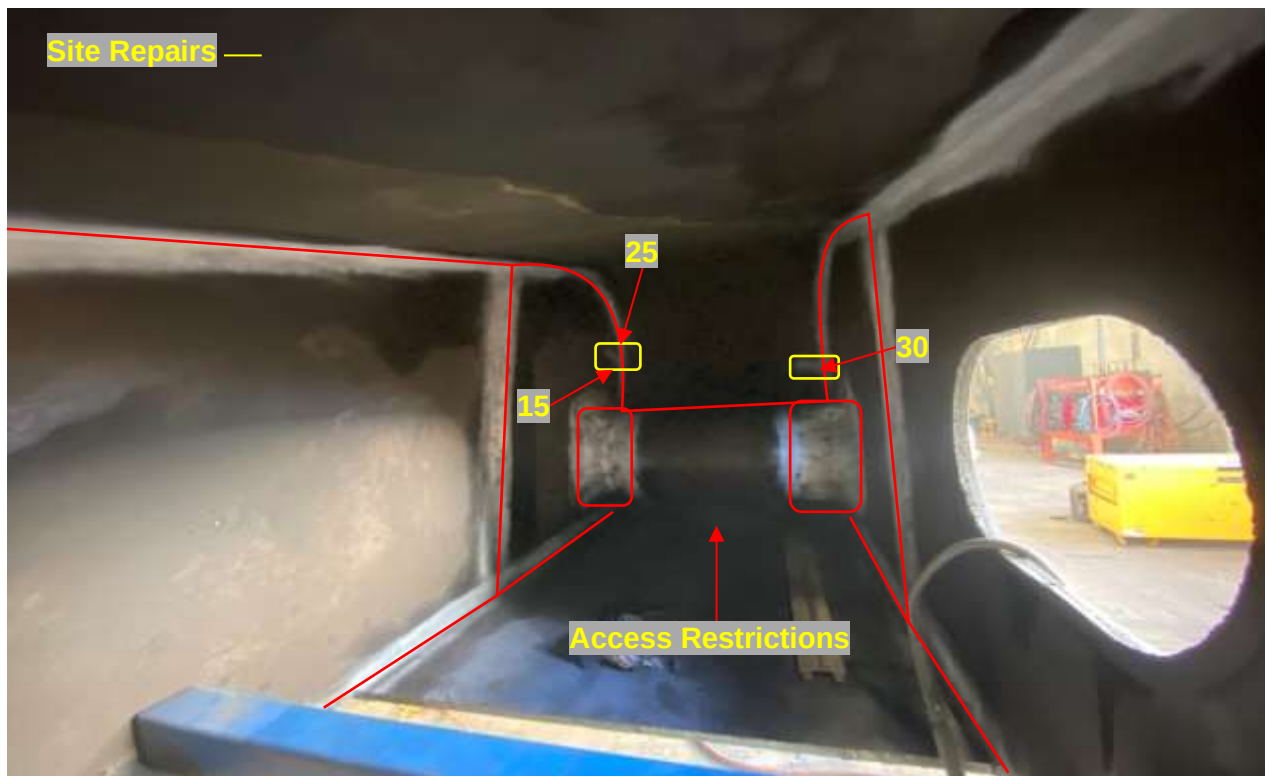
Photograph 1.3.

General view of areas examined and cracking detected about RH170 Stick, External JNJ5443



Photograph 1.4.

General view of areas examined and cracking detected about RH170 Stick, External JNJ5443



Photograph 1.5.

General view of areas examined and cracking detected about RH170 Stick, External JNJ5443

Report No: M22-2596-02
Date: 26th and 29th August 2022
Client: Independent Mining Services Pty Ltd
Contact: Reddan O’Heaney
Subject: The Magnetic Particle examination of repairs about one [1] RH170 Stick.
Test Location: 33 Diesel Drive, Paget QLD 4740.
Order No: P31294
Client Job No: J5443
Technician: James Tebble and Connor Wheeler

Results of Examination:

Results of examination are detailed in Table 1 of this report.
All measurements provided in millimetres unless stated otherwise.



Accredited for compliance
with ISO/IEC 17025 - Testing
Accreditation no. 15420

Reported By:

Craig Birkett
ISO 9712 Level 3
Technician

Report Issue Date:

7th October 2022

TECHNICAL DATA

MAGNETIC PARTICLE EXAMINATION

Test Standard:	AS 1171-1998
Test Procedure:	MT01
Product Criteria:	AS/NZS 1554.1:2014 SP Table 6.2.2
Technique:	Magnetic Flow
Current Type:	Sustained
Magnet:	AC yoke MT34 and MT60
Media:	Smartcheck MPIBA / Smartcheck MPIWA
Material:	Carbon Steel NFS
Surface Condition:	As welded / Ground
Demagnetized:	No
Test Restrictions:	Nil

Note:

Where statements of conformity are made in this report, the following decision rules are applied:-

Complies (C) – Results $\pm$ expanded uncertainty within limits/specifications

Does Not Comply (DNC) – Results $\pm$ expanded uncertainty exceeds limits/specifications

Indeterminate (IR) – Results $\pm$ expanded uncertainty overlaps limits/specifications

RESULTS OF EXAMINATION

The Magnetic Particle
examination of repairs about one
[1] RH170 Stick.
Job Number: J5443

TABLE 1
Magnetic Particle Examination

<u>Examined</u>	<u>Interpretation</u>	<u>Quality</u>
<i>Repairs as per INDT Report No. M22-2596</i>		
1.1 Stick External		
MPI Repair 1	Defect detected: - Crack 10mm x 1	Does not comply
MPI Repair 2	No discontinuities detected exceeding acceptance criteria <i>Refer to Photograph 1.1.</i>	Complies
1.2 Stick Internal		
MPI Repair	No discontinuities detected exceeding acceptance criteria	Complies



Photograph 1.1.

General view of areas examined and defect detected prior to Repair 2 about RH170 Stick, External JNJ5443

Report No: M22-2596-03

Date: 24th August to 1st September 2022

Client: Independent Mining Services [Qld] Pty Ltd

Contact: Reddan O’Heaney

Subject: The Magnetic Particle and Ultrasonic examination of new welds about one [1] RH170 Stick.

Test Location: 33 Diesel Drive, Paget QLD 4740.

Order No: P31294

Client Job No: J5443

Technician: Izriel Daly, Ryan Daniello and Gervasio Fajardo

Results of Examination:

Results of examination are detailed in Table 1 of this report.
All measurements provided in millimetres unless stated otherwise.



Accredited for compliance
with ISO/IEC 17025 - Testing
Accreditation no. 15420

Reported By:

Craig Birkett
ISO 9712 Level 3
Technician

Report Issue Date:

7th October 2022

TECHNICAL DATA

MAGNETIC PARTICLE EXAMINATION

Test Standard:	AS 1171-1998
Test Procedure:	MT01
Product Criteria:	AS/NZS 1554.1:2014 SP Table 6.2.2
Technique:	Magnetic Flow
Current Type:	Sustained
Magnet:	AC yoke MT34, MT56, MT60, MT70 and MT76
Media:	Smartcheck MPIBA / Smartcheck MPIWA
Material:	Carbon Steel NFS
Surface Condition:	As welded / Ground
Demagnetized:	No
Test Restrictions:	Nil

ULTRASONIC EXAMINATION

Test Standard:	AS 2207-2007
Test Method:	UMA-2 / UMB-2 / UMC-2
Product Criteria:	AS/NZS 1554.1:2014 SP Table 6.2.1
Technique:	Contact Scanning
Sizing Method:	Last Significant Echo
Flaw Detector:	Epoch 600 and Epoch 650
Couplant:	UCA-7
Material:	Carbon Steel NFS
Surface Condition:	Complies
Transducers:	A1095 0° 5MHz P108, A1095 0° 5MHz P198, AWS 45° 2MHz P107, AWS 45° 2MHz P165, AWS 70° 2MHz P107, AWS 70° 2MHz P161 and WB-70° P05
Test Restrictions:	Limited scanning due to geometry.

Note:

Where statements of conformity are made in this report, the following decision rules are applied:-

Complies (C) – Results $\pm$ expanded uncertainty within limits/specifications

Does Not Comply (DNC) – Results $\pm$ expanded uncertainty exceeds limits/specifications

Indeterminate (IR) – Results $\pm$ expanded uncertainty overlaps limits/specifications

RESULTS OF EXAMINATION

The Magnetic Particle and Ultrasonic examination of new welds about one [1] RH170 Stick.

Job number: J5443

TABLE 1
Magnetic Particle and Ultrasonic Examination

<u>Examined</u>	<u>Interpretation</u>	<u>Quality</u>
1.1 Side Plate LHS Internal New Welds MPI 100%	No discontinuities detected exceeding acceptance criteria	Complies
1.2 Side Plate LHS External New Welds MPI 100%	No discontinuities detected exceeding acceptance criteria	Complies
1.3 Side Plate LHS New Welds UT 50%	- Lack of fusion 14mm deep, 10mm long - Lack of fusion 15mm deep, 10mm long	Complies Complies
1.4 Side Plate RHS Internal New Welds MPI 100%	No discontinuities detected exceeding acceptance criteria	Complies
1.5 Side Plate RHS External New Welds MPI 100%	No discontinuities detected exceeding acceptance criteria	Complies

TABLE 1 – CONTINUED
Magnetic Particle and Ultrasonic Examination

<u>Examined</u>	<u>Interpretation</u>	<u>Quality</u>
1.6 Side Plate RHS New Welds UT 50%	No recordable discontinuities detected	Complies
1.7 Top Plate External New Welds MPI 100%	No discontinuities detected exceeding acceptance criteria	Complies
UT 50%	No recordable discontinuities detected	Complies
1.8 Plate Underside Internal Joining Welds MPI 100%	No discontinuities detected exceeding acceptance criteria	Complies
1.9 Plate Underside External Joining Welds MPI 100%	No discontinuities detected exceeding acceptance criteria	Complies
1.10 Plate Underside Joining Welds UT 50%	No recordable discontinuities detected	Complies
1.11 Plate Underside Welds MPI 100%	No recordable discontinuities detected	Complies

TABLE 1 – CONTINUED
Magnetic Particle and Ultrasonic Examination

<u>Examined</u>	<u>Interpretation</u>	<u>Quality</u>
1.12 Window Plate		
New Welds		
MPI 100%	No discontinuities detected exceeding acceptance criteria	Complies
UT 100%	No recordable discontinuities detected	Complies



Photograph 1.1.
General view of areas examined about Stick, Internal New Welds JNJ5443



Photograph 1.2.
General view of areas examined about Stick, LHS External New Welds JNJ5443



Photograph 1.3.

General view of areas examined about Stick, RHS External New Welds JNJ5443



Photograph 1.4.

General view of areas examined about Stick, Top Plate New Welds JNJ5443



Photograph 1.5.

General view of areas examined about Stick, Underside New Welds and Joining Welds JNJ5443



Photograph 1.6.

General view of areas examined about Stick, Window New Welds JNJ5443



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Quality Assurance Form

Customer/Location: Independent Mining Services Mackay

Job Number: J5443 Date: 22/06/2022

Plant No: CAT RH170 Stick

Job Description: Measure/Inspect all Bushes on RH170 Stick

Bore	Specified Size	Bore Position	Actual Size
1.	260.10+0.10/-0.00	Stick to Bucket LH	260.50 (0.30mm Oversize)
2.	260.10+0.10/-0.00	Stick to Bucket RH	260.45 (0.25mm Oversize) Bush Walked
3.	200.10+0.10/-0.00	Stick to Tipping Link LH	200.60 (0.40mm Oversize)
4.	200.10+0.10/-0.00	Stick to Tipping Link RH	200.50 (0.30mm Oversize)
5.	BORE 380.00+0.05/-0.00	Stick to Boom Pivot LH	380.25 (0.20mm Oversize)
6.	BORE 380.00+0.05/-0.00	Stick to Boom Pivot RH	380.15 (0.10mm Oversize)
7.	200.10+0.10/-0.00	Stick to Tipping Link Cyl Mount Bore LH Outer Bush	200.45 (0.25mm Oversize)
8.	200.10+0.10/-0.00	Stick to Tipping Link Cyl Mount Bore LH Inner Bush	200.45 (0.25mm Oversize)
9.	200.10+0.10/-0.00	Stick to Tipping Link Cyl Mount Bore LH Outer Bush	200.29 (0.09mm Oversize)
10.	200.10+0.10/-0.00	Stick to Tipping Link Cyl Mount Bore RH Inner Bush	200.29 (0.09mm Oversize)
12.	220.10+0.10/-0.00	Stick to Boom Cyl Mount Bush LH Inner	220.45 (0.25mm Oversize)
13.	220.10+0.10/-0.00	Stick to Boom Cyl Mount Bush LH Outer	220.45 (0.25mm Oversize)
14.	220.10+0.10/-0.00	Stick to Boom Cyl Mount Bush RH Inner	220.30 (0.10mm Oversize)
15.	220.10+0.10/-0.00	Stick to Boom Cyl Mount Bush RH Outer	220.30 (0.10mm Oversize)



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Notes: All X8 Cylinder Mount Bushes are up to 0.25mm oversize and damage to the faces of the bush.

X2 Stick to Bucket Bushes Are Oversize/Bush faces are Worn, RHS Bush has walked out which will be from misalignment or the bore being oversize.

X2 Tipping Link Mount Bushes are up to 0.40mm oversize

X2 Stick To Boom Pivot Bushes have been removed, Bores are up to 0.20mm oversize.

Photos Attached.



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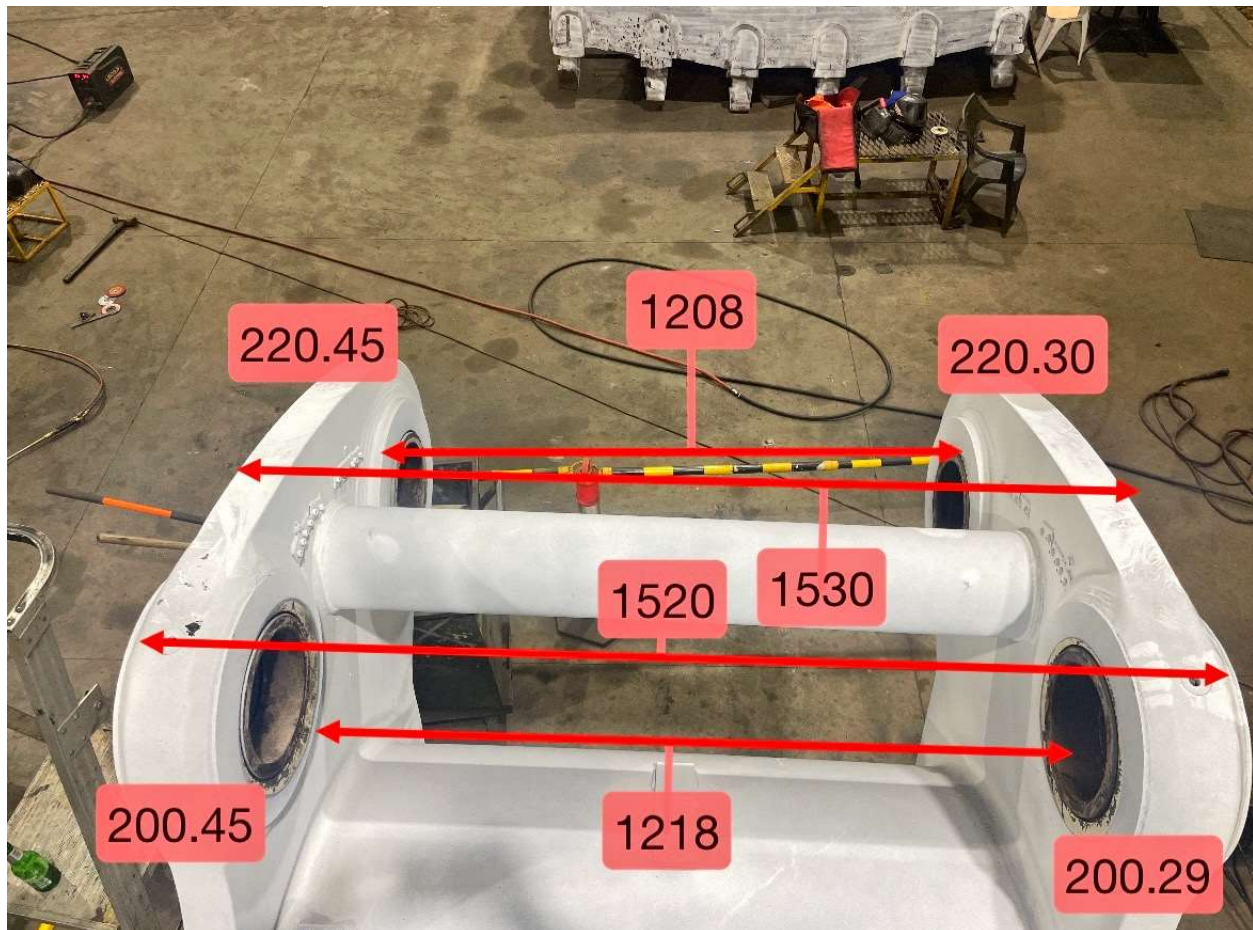
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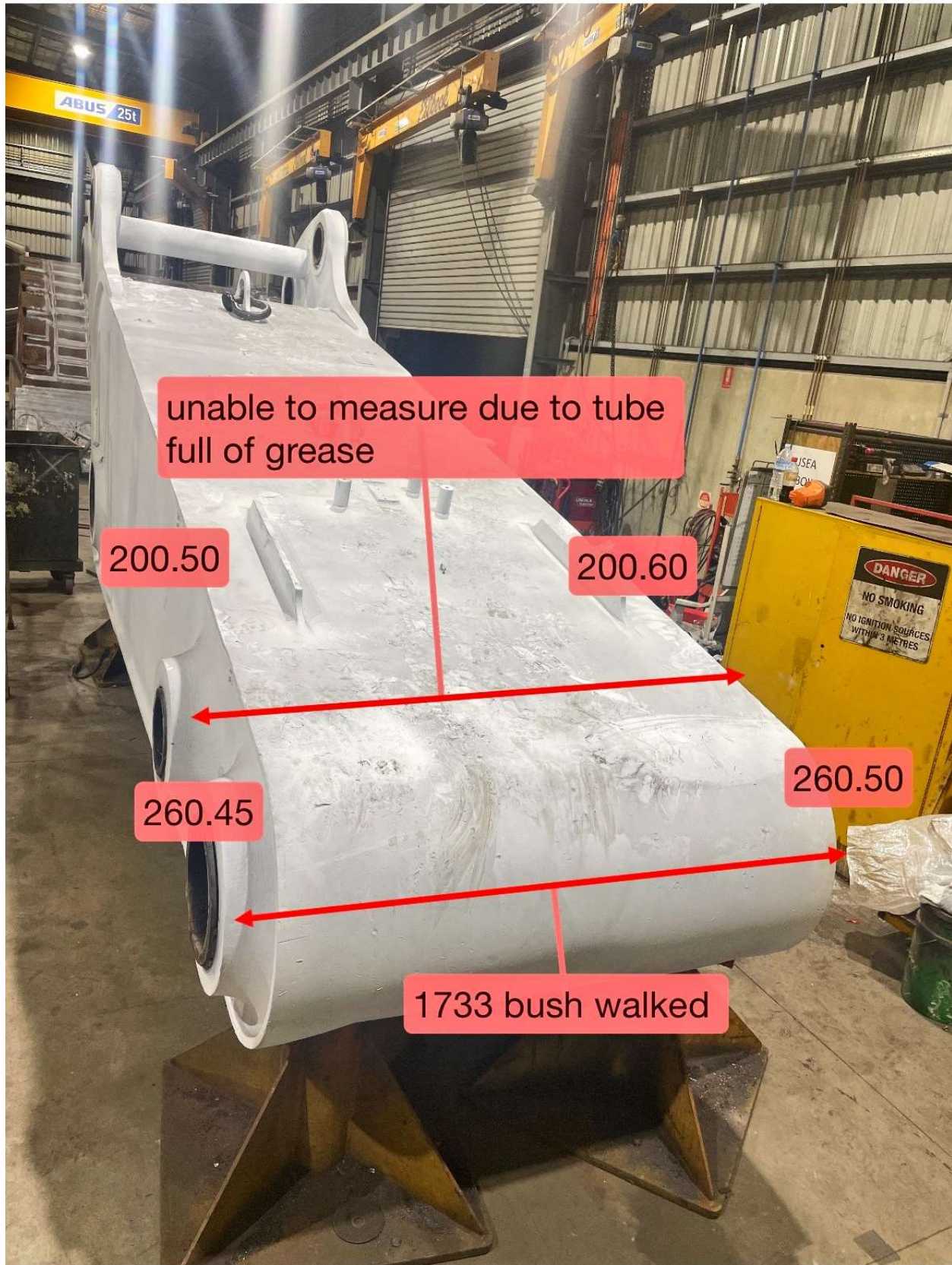
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Quality Assurance Form

Customer/Location: Independent Mining Services Mackay

Job Number: J5443 Date: 31/08/22

Plant No: CAT 6040/RH170 Stick

Job Description: Linebore All Bores and Fit Bushes Supplied.

Bore	Specified Size	Bore Position	Actual Size
1.	300.00+0.05/-0.00	LH	300.00
2.	300.00+0.05/-0.00	RH	300.03
3.	225.00+0.05/-0.00	LH	225.03
4.	225.00+0.05/-0.00	RH	225.02
5.	380.00+0.05/-0.00	LH	380.01
6.	380.00+0.05/-0.00	RH	380.00
7.	FACES:		
8.	1610.00+0.00/-0.50	Tipping Link	1609.80
9.	1590.00+0.00/-0.50	Stick to Bucket	1589.80
10.	1460.00+0.00/-0.50	Stick to Boom	1460.00

Notes: All Bores Welded and Machined, Cylinder Mount Bores Machined, All Lube Holes are Clear. Bushes Fitted. QA Photos Attached.



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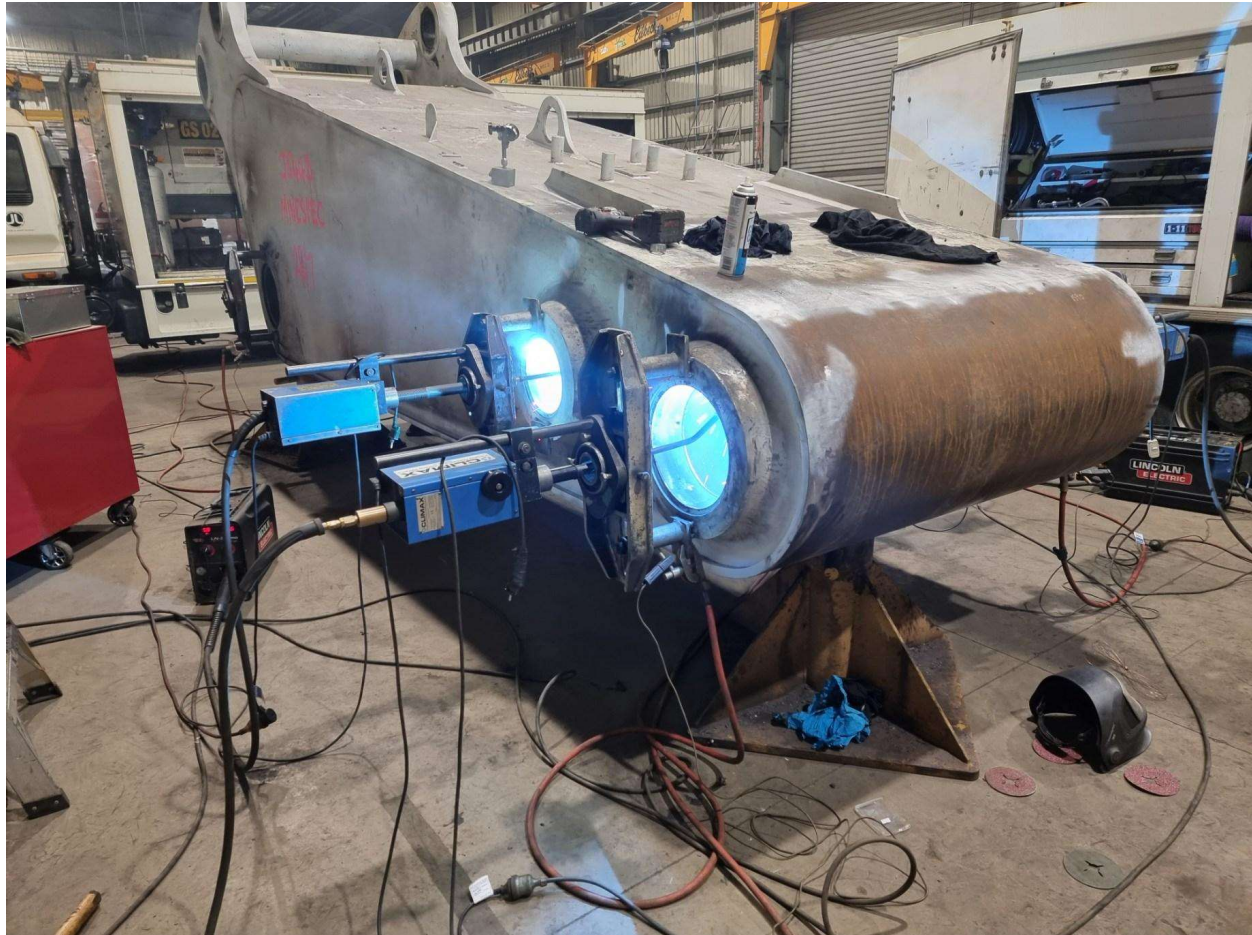
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SUPPORTING DOCUMENTATION

Material Certificates

Photos

TEST CERTIFICATE



Customer: COIL STEELS PTY LTD PO BOX 1594 BROWNS PLAINS BC Q L D 4118	Supplier: BLUESCOPE STEEL (AIS) PTY LTD PORT KEMBLA, N.S.W., AUSTRALIA. A.B.N. 19 000 019 625
Cust Order No: 26544	Sales Order No: B1146 Printed At: Supplier MWS on: 18/05/2022

 Accredited for compliance with ISO/IEC 17025 - Testing.	I certify that the original records of the company show that the item(s) referred to on this certificate conform to the specification as stated. R.MATHIESSEN - BLUESCOPE STEEL APPROVED SIGNATORY Mechanical LAB 0631 M.GATRICK - BLUESCOPE STEEL APPROVED SIGNATORY Chemical LAB 0632
---	---

STEELMAKING: Basic Oxygen - Slab Cast
 SPECIFICATION: **AS/NZS 3678-250**
 PRODUCT: **XLERPLATE**

INSPECTION: Supplier
 CERTIFICATION: EN10204 3.1

CHEMICAL ANALYSIS

Percentage of element by mass (L=Cast, P=Product, -S=Soluble, -T=Total, CF=Chemical Formula, n=Min, x=Max)

Item No	Heat / Unit No	NATA Lab	L/P	C	P	Mn	Si	S	Ni	Cr	Mo	Cu	Al-T
0797	7821229	0632	L	.143	.015	.65	.14	.010	.024	.045	.005	.048	.035
0797	7821239	0632	L	.147	.014	.66	.14	.010	.017	.037	.003	.048	.032
0799	7819498	0632	L	.153	.021	.65	.15	.012	.017	.045	.004	.046	.029
0801	7822139	0632	L	.149	.012	.62	.14	.009	.018	.039	.005	.041	.030

Item No	Heat / Unit No	NATA Lab	L/P	Ti	B-T	Nb	V	CF1	CF2	CF3
0797	7821229	0632	L	<.002	<.0003	.001	<.003	.27	.12	.00
0797	7821239	0632	L	<.002	<.0003	.001	<.003	.27	.10	.00
0799	7819498	0632	L	<.002	<.0003	.001	<.003	.28	.11	.00
0801	7822139	0632	L	<.002	<.0003	.001	<.003	.26	.10	.00

CF1=C+ (MN/6) + ((CR+MO+V)/5) + ((CU+NI)/15) CF2=NI + CR + CU + MO CF3=NB + V

MECHANICAL TESTING

Tensile AS 1391 :2020 B

Item No	Heat No	Tested Unit	NATA Lab	Cat	Loc	THICK mm	ReH MPa	Rm MPa	Lo	ELONGN %
0799	7819498	XX211	0631	B	TQF	16.00	330	440	A	39
0799	7819498	XX219	0631	B	TQF	16.00	330	440	A	40
0797	7821229	XX320	0631	P	TQF	6.00	480	510	A	24
0797	7821239	XW630	0631	B	TQF	6.00	450	490	A	26
0801	7822139	XX967	0631	B	TQF	8.00	380	490	A	27
0801	7822139	YA246	0631	B	TQF	8.00	385	470	A	32

ITEMS COVERED BY THIS CERTIFICATE

Item No	Heat No	Ordered Dimensions (mm)	No of Units	Mass (Tonnes)	Unit Identities
0797	7821229	2400.0X6.00X6000	1	0.678	XX320B2
0797	7821239	2400.0X6.00X6000	8	5.424	XW640B1 XW640B2 XW640B3 XW641A1 XW641A2 XW641B1 XW641B2 XW641B3
0799	7819498	3000.0X16.00X9000	2	6.782	XZ369A2 XZ370A1
0801	7822139	3000.0X8.00X9000	2	3.392	YA740A2 YA741A1

COMMENTS

This test certificate is issued subject to the Uncertainty of Results statement set out on BlueScope Steel's Website

www.bluescopesteelconnect.com. In order to rely upon this certificate, you must read the Uncertainty of Results statement.

THIS PRODUCT IS SUPPLIED IN ACCORDANCE WITH THE REQUIREMENTS OF AS/NZS 3678:2016. SAMPLING AND CHEMICAL ANALYSIS ARE PERFORMED IN ACCORDANCE WITH BLUESCOPE STEEL PROCEDURE DH-LABS-QS-00 S05.07C. MECHANICAL TESTING HAS BEEN PERFORMED ON SAMPLES SUPPLIED BY THE RELEVANT PRODUCTION DEPARTMENTS. HEAT TREATMENT - PRODUCT AS ROLLED. Quality management system conforms to AS/NZS ISO 9001 as assessed by BSI (Certificate Number FS 594448).

MECHANICAL COMMENTS

TEST PIECE LOCATION (LOC) TQF=Transverse Quarter Front End

TEST CATEGORY (CAT) P=Pattern B=Batch

GAUGE LENGTH (Lo) A=5.65 * square root of the original cross-sectional area of the test piece.





Customer: COIL STEELS PTY LTD PO BOX 1594 BROWNS PLAINS BC Q L D 4118	Supplier: BLUESCOPE STEEL (AIS) PTY LTD PORT KEMBLA, N.S.W., AUSTRALIA. A.B.N. 19 000 019 625
Cust Order No: 25565	Sales Order No: B0146 Printed At: Supplier MWS on: 11/03/2021



Accredited for compliance with ISO/IEC 17025 - Testing.

I certify that the original records of the company show that the item(s) referred to on this certificate conform to the specification as stated.

R.MATHIESSEN - BLUESCOPE STEEL APPROVED SIGNATORY
Mechanical LAB 0631M.GATRICK - BLUESCOPE STEEL APPROVED SIGNATORY
Chemical LAB 0632STEELMAKING: Basic Oxygen - Slab Cast
SPECIFICATION: **AS/NZS 3678-250**
PRODUCT: **XLERPLATE**INSPECTION: Supplier
CERTIFICATION: EN10204 3.1**CHEMICAL ANALYSIS**

Percentage of element by mass (L=Cast, P=Product, -S=Soluble, -T=Total, CF=Chemical Formula, n=Min, x=Max)

Item No	Heat / Unit No	NATA Lab	L/P	C	P	Mn	Si	S	Ni	Cr	Mo	Cu	Al-T
0351	6725399	0632	L	.150	.015	.64	.14	.012	.014	.023	.003	.041	.032
0354	6732339	0632	L	.141	.013	.65	.13	.011	.015	.038	.004	.054	.030
0354	6734758	0632	L	.151	.023	.64	.13	.015	.016	.043	.004	.053	.036
0357	6733229	0632	L	.150	.016	.66	.15	.013	.014	.034	.003	.052	.024

Item No	Heat / Unit No	NATA Lab	L/P	Ti	B-T	Nb	V	CF1	CF2	CF3
0351	6725399	0632	L	<.002	<.0003	.001	<.003	.27	.08	.00
0354	6732339	0632	L	<.002	<.0003	.001	<.003	.26	.11	.00
0354	6734758	0632	L	<.002	.0003	.001	<.003	.27	.12	.00
0357	6733229	0632	L	<.002	<.0003	.001	<.003	.27	.10	.00

CF1=C+ (MN/6) + ((CR+MO+V)/5) + ((CU+NI)/15) CF2=NI + CR + CU + MO CF3=NB + V

MECHANICAL TESTING**Tensile AS 1391**

Item No	Heat No	Tested Unit	NATA Lab	Cat	Loc	THICK mm	ReH MPa	Rm MPa	Lo	ELONGN %
0351	6725399	PY774	0631	B	TQF	6.00	460	500	A	30
0351	6725399	PZ429	0631	B	TQF	6.00	445	490	A	28
0354	6732339	RH239	0631	P	TQF	10.00	310	430	A	39
0354	6734758	RF117	0631	B	TQF	10.00	325	440	A	41
0357	6733229	RC261	0631	B	TQF	10.00	345	460	A	41
0357	6733229	RC950	0631	B	TQF	10.00	335	460	A	42

ITEMS COVERED BY THIS CERTIFICATE

Item No	Heat No	Ordered Dimensions (mm)	No of Units	Mass (Tonnes)	Unit Identities
0351	6725399	3000.0X6.00X9000	5	6.360	RH417A1 RH417A2 RH418A1 RH420A1 RH420A2
0354	6732339	2400.0X10.00X6000	5	5.650	RH239A1 RH239A2 RH239A3 RH239B2 RH239B3
0354	6734758	2400.0X10.00X6000	4	4.520	RH237A1 RH237A2 RH238B1 RH238B2
0357	6733229	3000.0X10.00X9000	6	12.714	RH132A1 RH132A2 RH132B1 RH132B2 RH133A1 RH133A2



COMMENTS

This test certificate is issued subject to the Uncertainty of Results statement set out on BlueScope Steel's Website

www.bluescopesteelconnect.com. In order to rely upon this certificate, you must read the Uncertainty of Results statement.

THIS PRODUCT IS SUPPLIED IN ACCORDANCE WITH THE REQUIREMENTS OF AS/NZS 3678:2016. SAMPLING AND CHEMICAL ANALYSIS ARE PERFORMED IN ACCORDANCE WITH BLUESCOPE STEEL PROCEDURE DH-LABS-QS-00 S05.07C. MECHANICAL TESTING HAS BEEN PERFORMED ON SAMPLES SUPPLIED BY THE RELEVANT PRODUCTION DEPARTMENTS. HEAT TREATMENT - PRODUCT AS ROLLED.

Quality management system conforms to AS/NZS ISO 9001 as assessed by BSI (Certificate Number FS 594448).

MECHANICAL COMMENTS

TEST PIECE LOCATION (LOC) TQF=Transverse Quarter Front End

TEST CATEGORY (CAT) P=Pattern B=Batch

GAUGE LENGTH (Lo) A=5.65 * square root of the original cross-sectional area of the test piece.



TEST CERTIFICATE



Customer: COIL STEELS PTY LTD PO BOX 1594 BROWNS PLAINS BC Q L D 4118	Supplier: BLUESCOPE STEEL (AIS) PTY LTD PORT KEMBLA, N.S.W., AUSTRALIA. A.B.N. 19 000 019 625
Cust Order No: 27212 / 842066	Sales Order No: B2146 Printed At: Supplier MWS on: 03/06/2022

 Accredited for compliance with ISO/IEC 17025 - Testing.	I certify that the original records of the company show that the item(s) referred to on this certificate conform to the specification as stated. R.MATHIESSEN - BLUESCOPE STEEL APPROVED SIGNATORY Mechanical LAB 0631 M.GATRICK - BLUESCOPE STEEL APPROVED SIGNATORY Chemical LAB 0632
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STEELMAKING: Basic Oxygen - Slab Cast
SPECIFICATION: **AS/NZS 3678-350**
PRODUCT: **XLERPLATE**

INSPECTION: Supplier
CERTIFICATION: EN10204 3.1

CHEMICAL ANALYSIS

Percentage of element by mass (L=Cast, P=Product, -S=Soluble, -T=Total, CF=Chemical Formula, n=Min, x=Max)

Item No	Heat / Unit No	NATA Lab	L/P	C	P	Mn	Si	S	Ni	Cr	Mo	Cu	Al-T
0386	7837768	0632	L	.149	.024	1.20	.28	.013	.067	.034	.006	.037	.031
0387	7839429	0632	L	.160	.021	1.21	.29	.012	.014	.043	.003	.037	.036
0388	7841488	0632	L	.155	.020	1.16	.28	.011	.016	.039	.004	.052	.028

Item No	Heat / Unit No	NATA Lab	L/P	Ti	B-T	Nb	V	CF1	CF2	CF3
0386	7837768	0632	L	.017	<.0003	.001	.003	.36	.14	.02
0387	7839429	0632	L	.018	.0003	.001	<.003	.37	.10	.02
0388	7841488	0632	L	.016	.0003	.001	<.003	.36	.11	.02

CF1=C+ (MN/6) + ((CR+MO+V)/5) + ((CU+NI)/15) CF2=NI + CR + CU + MO CF3=NB + TI + V

MECHANICAL TESTING

Tensile AS 1391 :2020 B

Item No	Heat No	Tested Unit	NATA Lab	Cat	Loc	THICK mm	ReH MPa	Rm MPa	Lo	ELONGN %
0386	7837768	YM865	0631	B	TQF	25.00	395	510	A	28
0387	7839429	YM567	0631	B	TQM	10.00	415	530	A	34
0387	7839429	YM830	0631	B	TQM	10.00	400	520	A	35
0388	7841488	YN613	0631	P	TQM	12.00	390	520	A	31

ITEMS COVERED BY THIS CERTIFICATE

Item No	Heat No	Ordered Dimensions (mm)	No of Units	Mass (Tonnes)	Unit Identities
0386	7837768	2400.0X25.00X9600	2	9.044	YM867B1 YM870B1
0387	7839429	2400.0X10.00X9600	2	3.618	YN563B1 YN573C1
0388	7841488	2400.0X12.00X9600	2	4.340	YN613B1 YN613C1

COMMENTS

This test certificate is issued subject to the Uncertainty of Results statement set out on BlueScope Steel's Website www.bluescopesteelconnect.com. In order to rely upon this certificate, you must read the Uncertainty of Results statement. THIS PRODUCT IS SUPPLIED IN ACCORDANCE WITH THE REQUIREMENTS OF AS/NZS 3678:2016. SAMPLING AND CHEMICAL ANALYSIS ARE PERFORMED IN ACCORDANCE WITH BLUESCOPE STEEL PROCEDURE DH-LABS-QS-00 S05.07C. MECHANICAL TESTING HAS BEEN PERFORMED ON SAMPLES SUPPLIED BY THE RELEVANT PRODUCTION DEPARTMENTS. HEAT TREATMENT - PRODUCT AS ROLLED. Quality management system conforms to AS/NZS ISO 9001 as assessed by BSI (Certificate Number FS 594448).

MECHANICAL COMMENTS

TEST PIECE LOCATION (LOC) TQM=Transverse Quarter Middle TQF=Transverse Quarter Front End

TEST CATEGORY (CAT) P=Pattern B=Batch

GAUGE LENGTH (Lo) $A=5.65 \times \text{square root of the original cross-sectional area of the test piece.}$



BlueScope

TEST CERTIFICATE



Customer: INFRABUILD STEEL CENTRE STEPHEN MARTIN ARCHERFIELD Q L D 4108	Supplier: BLUESCOPE STEEL (AIS) PTY LTD PORT KEMBLA, N.S.W., AUSTRALIA. A.B.N. 19 000 019 625
Cust Order No: 7507024713	Sales Order No: B2093 Printed At: Supplier MWS on: 19/07/2022

 Accredited for compliance with ISO/IEC 17025 - Testing.	I certify that the original records of the company show that the item(s) referred to on this certificate conform to the specification as stated. R.MATHIESSEN - BLUESCOPE STEEL APPROVED SIGNATORY Mechanical LAB 0631 M.GATRICK - BLUESCOPE STEEL APPROVED SIGNATORY Chemical LAB 0632
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STEELMAKING: Basic Oxygen - Slab Cast
SPECIFICATION: **AS/NZS 3678-350**
PRODUCT: **XLERPLATE**

INSPECTION: Supplier
CERTIFICATION: EN10204 3.1

CHEMICAL ANALYSIS

Percentage of element by mass (L=Cast, P=Product, -S=Soluble, -T=Total, CF=Chemical Formula, n=Min, x=Max)

Item No	Heat / Unit No	NATA Lab	L/P	C	P	Mn	Si	S	Ni	Cr	Mo	Cu	Al-T
0290	7844498	0632	L	.152	.013	1.19	.28	.009	.009	.025	.002	.025	.032
0290	7844499	0632	L	.152	.013	1.19	.28	.009	.009	.025	.002	.025	.032
0290	7846549	0632	L	.152	.017	1.20	.31	.010	.015	.032	.003	.043	.039

Item No	Heat / Unit No	NATA Lab	L/P	Ti	B-T	Nb	V	CF1	CF2	CF3
0290	7844498	0632	L	.018	.0003	.001	<.003	.36	.06	.02
0290	7844499	0632	L	.018	.0003	.001	<.003	.36	.06	.02
0290	7846549	0632	L	.018	.0005	.001	<.003	.36	.09	.02

CF1=C+ (MN/6) + ((CR+MO+V)/5) + ((CU+NI)/15) CF2=NI + CR + CU + MO CF3=NB + TI + V

MECHANICAL TESTING

Tensile AS 1391 :2020 B

Item No	Heat No	Tested Unit	NATA Lab	Cat	Loc	THICK mm	ReH MPa	Rm MPa	Lo	ELONGN %
0290	7844498	YR968	0631	B	TQF	25.00	400	510	A	31
0290	7844498	YR969	0631	B	TQF	25.00	410	510	A	29
0290	7844499	YS660	0631	B	TQF	25.00	395	500	A	33
0290	7846549	YS614	0631	B	TQF	25.00	420	520	A	32
0290	7846549	YS619	0631	B	TQF	25.00	430	520	A	31

ITEMS COVERED BY THIS CERTIFICATE

Item No	Heat No	Ordered Dimensions (mm)	No of Units	Mass (Tonnes)	Unit Identities
0290	7844498	2400.0X25.00X9600	3	13.566	YS662A1 YS665A1 YS665B1
0290	7844499	2400.0X25.00X9600	1	4.522	YS659B1
0290	7846549	2400.0X25.00X9600	1	4.522	YS610A1

COMMENTS

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MECHANICAL COMMENTS

TEST PIECE LOCATION (LOC) TQF=Transverse Quarter Front End

TEST CATEGORY (CAT) B=Batch

GAUGE LENGTH (Lo) $A=5.65 \times \text{square root of the original cross-sectional area of the test piece.}$



BlueScope



Mill Test Certificate

Certificate No. : 220328-FP01PS-0005A1-0001

Date of Issue : May., 04, 2022

Order No. : 01S5438259

PO No. : ADS-2201-BR-G350-0304-01

(ACRS 190705)

Supplier : POSCO INTERNATIONAL CORPORATION

Commodity : PLATE

Customer : ADSTEEL BROKERS PTY LTD

Spec & Type : AS/NZS3678-350L0

Size	Product No.	Quantity	Weight (kg)	Heat No.	Position	Tensile Test			Impact Test	Division	Chemical Composition													
						YP (MPa)	TS	EL (%)	V Notch +0 °C Energy (Joule)		C (%)	Si (%)	Mn (%)	P (%)	S (%)	Cr (%)	Ni (%)	B (ppm)	Cu (%)	Mo (%)	Nb (%)	Ti (%)	V (%)	Sn-Al (%)
12x2400x9600	PB67799701-9703	3	6,510	SF54089	T	415	550	28	1: 159 2: 191 3: 171 A: 174	L	0.1589	0.342	1.393	0.0117	0.0028	0.031	0.017	2	0.013	0.005	0.012	0.0119	0.002	0.038
12x2400x9600	PB67799706	1	2,170	SF54089	T	415	550	28	1: 159 2: 191 3: 171 A: 174	L	0.1589	0.342	1.393	0.0117	0.0028	0.031	0.017	2	0.013	0.005	0.012	0.0119	0.002	0.038
*** Sub Total (010) ***		4	8,680 (kg)								CEQ (G) = C + Mn/6 + (Ni + Cu)/15 + (Cr + Mo + V)/5													
20x2400x9600	PB67816604	1	3,617	SB44400	T	383	548	27	1: 229 2: 255 3: 270 A: 251	L	0.1548	0.340	1.410	0.0163	0.0035	0.030	0.014	1	0.016	0.004	0.015	0.0130	0.004	0.031
*** Sub Total (030) ***		1	3,617 (kg)								CEQ (G) = C + Mn/6 + (Ni + Cu)/15 + (Cr + Mo + V)/5													
25x2400x9600	PC02205902	1	4,520	SB43874	T	414	553	28	1: 247 2: 236 3: 235 A: 239	L	0.1593	0.337	1.358	0.0119	0.0033	0.029	0.014	2	0.017	0.006	0.016	0.0154	0.003	0.038
25x2400x9600	PB67805401-5403	3	13,560	SF54092	T	389	537	30	1: 222 2: 232 3: 265 A: 240	L	0.1537	0.345	1.398	0.0142	0.0035	0.032	0.013	2	0.016	0.004	0.012	0.0122	0.003	0.037
*** Sub Total (040) ***		4	18,080 (kg)								CEQ (G) = C + Mn/6 + (Ni + Cu)/15 + (Cr + Mo + V)/5													

* Position - T : Top, M : Middle, B : Bottom
* Tensile Test, Direction : Transversal, Gauge Length : 5.65 √A₀ (Rectangular),
YP Method : Upper Point
* Impact Test, Direction : 1/4T Longitudinal, Full-Size : 10 mmX10 mm
* Division - L : Ladle Analysis
* Supply Condition : As-Rolled unless otherwise Heat Treated.

This material has been fully killed and made by basic oxygen process.
This material has been made by vacuum degassing process.
Test Certificate is issued according to ISO 10474/EN 10204 3.1.
We hereby certify that the material herein has been made in accordance with the order and above specification.
POSCO Korea operates a quality management system conforming to ISO 9001 as assessed by LRQA (Korea) Ltd.
(Certificate No : SEO2928304)
Testing specifications are AS1391:2020 for tensile testing and AS1544.2:2003 for Charpy V-notch testing.
Melted and Manufactured in Republic of Korea

Legal sanction can be imposed on forging. Improper use of product can cause safety issues.

Surveyor To :

T.C.BAE



Mill Test Certificate

Certificate No. : 220328-FP01PS-0005A1-0001

Date of Issue : May., 04, 2022

Order No. : 01S5438259

Supplier : POSCO INTERNATIONAL CORPORATION

Customer : ADSTEEL BROKERS PTY LTD

PO No. : ADS-2201-BR-G350-0304-01
(ACRS 190705)

Commodity : PLATE

Spec & Type : AS/NZS3678-350L0

Product No.	Division	Total-Al (%)	CEQ (%)	
PB67799701-9703	L	0.040	0.40	
PB67799706	L	0.040	0.40	
*** Sub Total (010) ***			4	8,680 (kg)
PB67816604	L	0.033	0.40	
*** Sub Total (030) ***			1	3,617 (kg)
PC02205902	L	0.039	0.40	
PB67805401-5403	L	0.038	0.40	
*** Sub Total (040) ***			4	18,080 (kg)

CEQ (G) = C + Mn/6 + (Ni + Cu)/15 + (Cr + Mo + V)/5

CEQ (G) = C + Mn/6 + (Ni + Cu)/15 + (Cr + Mo + V)/5

CEQ (G) = C + Mn/6 + (Ni + Cu)/15 + (Cr + Mo + V)/5

This material has been fully killed and made by basic oxygen process.
This material has been made by vacuum degassing process.
Test Certificate is issued according to ISO 10474/EN 10204 3.1.
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Melted and Manufactured in Republic of Korea

Legal sanction can be imposed on forging. Improper use of product can cause safety issues.

Surveyor To :

T.C.BAE











