


# TEST CERTIFICATE

Customer: <b>H J ASMUSS AND CO LTD</b> <b>PO BOX 14-441</b> <b>AUCKLAND</b>	Supplier: INFRABUILD STEEL NEWCASTLE, N.S.W. AUSTRALIA A.B.N. 42 004 651 325
Ship To: TAURANGA CD WELLINGTONTAURANGA,	Sales Order No: Z0216 Printed on: 18/12/2020

 <p>Accredited for compliance with ISO/IEC 17025 - Testing. This document shall not be reproduced except in full.</p>	<p>Chemical results as identified are from InfraBuild Steel NSW 2482 Approved Signatory - A. Prasad Mechanical results as identified are from InfraBuild Steel NSW 0279 Approved Signatory - G. Irani</p>
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STEELMAKING: Electric Arc - Billet Cast

INSPECTION: Supplier  
CERTIFICATION: Supplier

## ITEMS COVERED BY THIS TEST CERTIFICATE

Item No	Heat No	Customer Order	Section	Grade
1135X	759499	106321	40MM X 40MM X 5MM ANGLE	300PLUS (AS/NZS 3679.1-300)
1136X	758960	106321	50MM X 50MM X 3MM ANGLE	300PLUS (AS/NZS 3679.1-300)
1137X	758881	106321	50MM X 50MM X 5MM ANGLE	300PLUS (AS/NZS 3679.1-300)
1216X	759626	106714	40MM X 5MM S.E. FLAT	300PLUS (AS/NZS 3679.1-300)
1217X	759627	106714	40MM X 6MM S.E. FLAT	300PLUS (AS/NZS 3679.1-300)
1219X	759437	106714	50MM X 6MM S.E. FLAT	300PLUS (AS/NZS 3679.1-300)
1220X	759318	106714	50MM X 20MM S.E. FLAT	300PLUS (AS/NZS 3679.1-300)
1221X	759302	106714	75MM X 12MM S.E. FLAT	300PLUS (AS/NZS 3679.1-300)
1222X	759320	106714	75MM X 20MM S.E. FLAT	300PLUS (AS/NZS 3679.1-300)
1224X	759208	106714	100MM X 12MM S.E. FLAT	300PLUS (AS/NZS 3679.1-300)

## 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	Nb
1135X	759499	2482	L	.20	.014	.75	.20	.033	.069	.16	.017	.25	.001	.001
1136X	758960	2482	L	.16	.016	.96	.21	.028	.059	.12	.011	.23	.001	.002
1137X	758881	2482	L	.19	.015	.74	.190	.032	.066	.13	.010	.24	.001	.001
1216X	759626	2482	L	.19	.012	.74	.21	.025	.065	.14	.014	.24	.001	.002
1217X	759627	2482	L	.20	.014	.73	.198	.029	.080	.15	.016	.22	.001	.002
1219X	759437	2482	L	.21	.013	.77	.20	.028	.083	.15	.015	.23	.001	.001
1220X	759318	2482	L	.21	.016	.76	.21	.031	.063	.15	.011	.24	.001	.001
1221X	759302	2482	L	.21	.017	.80	.21	.027	.079	.16	.016	.21	.001	.001
1222X	759320	2482	L	.19	.011	.75	.198	.026	.057	.13	.010	.21	.001	.001
1224X	759208	2482	L	.21	.013	.79	.20	.028	.055	.14	.008	.20	.001	.001

Item No	Heat / Unit No	NATA Lab	L/P	Ti	B	V	CF1
1135X	759499	2482	L	.001	.0004	.002	.38
1136X	758960	2482	L	.001	.0004	.003	.37
1137X	758881	2482	L	.001	.0003	.002	.36
1216X	759626	2482	L	.001	.0003	.003	.36
1217X	759627	2482	L	.001	.0004	.003	.37
1219X	759437	2482	L	.001	.0004	.002	.39
1220X	759318	2482	L	.001	.0005	.002	.39
1221X	759302	2482	L	.001	.0005	.002	.40
1222X	759320	2482	L	.001	.0004	.002	.36
1224X	759208	2482	L	.001	.0005	.002	.39

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

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**Certificate No.: 030065**

Transmission Date: 18/12/20

## MECHANICAL TESTING

### Tensile AS 1391

Item No	Heat No	NATA Lab	Cat	YS MPa	UTS MPa	Lo	ELONGN %
1135X	759499	0279	B	365	520	A	39
1135X	759499	0279	B	365	520	A	39
1136X	758960	0279	B	370	520	A	42
1136X	758960	0279	B	370	520	A	44
1137X	758881	0279	B	370	530	A	41
1137X	758881	0279	B	370	530	A	44
1216X	759626	0279	B	385	510	A	36
1216X	759626	0279	B	385	520	A	38
1217X	759627	0279	B	385	510	A	35
1217X	759627	0279	B	385	510	A	35
1219X	759437	0279	B	385	530	A	35
1219X	759437	0279	B	390	530	A	35
1220X	759318	0279	B	325	490	A	28
1220X	759318	0279	B	345	490	A	28
1221X	759302	0279	B	340	530	A	31
1221X	759302	0279	B	335	530	A	34
1222X	759320	0279	B	305	500	A	31
1222X	759320	0279	B	315	500	A	31
1224X	759208	0279	B	325	520	A	33
1224X	759208	0279	B	310	520	A	30

Yield Strength - determined in accordance with requirements of nominated product standard

TEST CATEGORY (Cat) B=Batch

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


## BUNDLES

Item No	Heat No	Bundles
1135X	759499	RM3618109
1136X	758960	RM3600375
1137X	758881	RM3600109
1216X	759626	RM3621343
1217X	759627	RM3621309
1219X	759437	RM3615646
1220X	759318	RM3611981
1221X	759302	RM3611527
1222X	759320	RM3611766
1224X	759208	RM3608698 RM3608699

## COMMENTS

INFRABUILD STEEL SYDNEY IS QUALITY ENDORSED TO ISO 9001 UNDER SAI GLOBAL. CERTIFICATE NO: QEC2212. LAB 2482 - THE METHODS OF SAMPLING AND CHEMICAL ANALYSIS ARE CARRIED OUT IN ACCORDANCE TO IN-HOUSE PROCEDURES SWP/NQ779 & SWP.CCM.004; LAB 0279 - SAMPLING CONDUCTED IN ACCORDANCE TO IN-HOUSE PROCEDURE SWP/MT11. MECHANICAL TESTING CONDUCTED IN ACCORDANCE TO THE REFERENCED STANDARD.

To view Measurement Uncertainty [click here](#)

<p>I certify the conformance of the material to the specification (unless noted otherwise) and that the information on this certificate is in accordance with the records of the company.</p> <p>S. Armitage - Quality Services Superintendent</p>  <p>Certified True Copy 18/12/20</p>
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