AUSTRALIAN PIPE & TUBE

Product Test Certificate

15024	26/03/2015
Number	Date

Line	Pack NoNo included		RHS/SHS/CHS Nominal Size (mm)				Specification	Grade	Steel Supplier	Testing Authority/ NATA (ILAC) No			Steelmaking process
	From	To	d /do	b	t	L				Tensile	Impact	Chemical	
1	15078M10042	15078M10072	89	89	5	Any	AS/NZS 1163	C350 L0	Shang Chen Steel	MTL/17219		Shang Chen	BO,CC
2	15078M10073	15078M10090	89	89	5	Any	AS/NZS 1163	C350 L0	Shang Chen Steel	MTL/17219		Shang Chen	BO,CC
3	15078M10091	15078M10107	89	89	6	Any	AS/NZS 1163	C350 L0	Shang Chen Steel	MTL/17219	MTL/17219	Shang Chen	BO,CC
4	15078M10108	15078M10112	89	89	5	Any	AS/NZS 1163	C350 L0	Shang Chen Steel	MTL/17219		Shang Chen	BO,CC
5	15082M10001	15082M10016	89	89	6	Any	AS/NZS 1163	C350 L0	Shang Chen Steel	MTL/17219	MTL/17219	Shang Chen	BO,CC
6	15082M10017	15082M10041	89	89	5	Any	AS/NZS 1163	C350 L0	Bengang Steel	MTL/17219		Bengang Ste	BO,CC

Line	STEEL CHEMICAL ANALYSES (%)-As supplied by Steelmaker ("L")																MECHANICAL TEST RESULTS (Orientation-"L")								
		C	P	Mn	Si	S	Ni	Cr	Mo	Cu	Al	Ti	Nb	V	B	CE	SiE	Testing Report No-Sample ID	Condition	Tensile test			Impact test at 0°C			
	HEAT No	x100																		YS	TS	E	1	2	3	Ave
																				MPa		%	Joules			
1	8S254	16.0	1.0	79.0	1.0	0.9	1.0	0.0		1.0	4.5	0.0	1.5			30	4	T2849-3122	A	417	502	29				
2	8S254	16.0	1.0	79.0	1.0	0.9	1.0	0.0		1.0	4.5	0.0	1.5			30	4	T2849-3123	A	402	498	30				
3	4U321	9.0	1.0	71.0	2.0	0.6	1.0	2.0		1.0	3.8	1.0	2.5	0.0		22	5	T2851-3124	A	443	519	30	67	67	80	80
4	8S254	16.0	1.0	79.0	1.0	0.9	1.0	0.0		1.0	4.5	0.0	2.0			30	4	T2849-3123	A	402	498	30				
5	8S502	17.0	1.3	80.0	2.0	0.7	1.0	1.0		0.0	4.2	0.0	2.0			31	5	T2851-3126	A	416	518	29	71	74	69	69
6	1428975	14.0	1.6	73.0	2.0	0.4	0.4	4.3	0.1	0.4	2.9	1.9	0.1	0.0	0.12	27	6	T2851-3127	A	422	508	29				

Notes: 1) CE=C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15; **2)** SiE=Si+2.5P; **3)** Gauge Length for E= 5.65√So; **4)** Impact test piece thickness is 5 mm; **5)** For t less than 6 mm L0 properties derived as per Cl 10.6.2.2 of AS/NZS 1163; **6)** Data in the table refers to the samples representative for each line; **7)** BSL=BlueScope Steel; YPE=Yien Phui Enterprise CO., LTD; BO,SC= Basic Oxigen,Continuous (Slab) Casting; ALS=Australian Laboratory Services Industrial; **8)** The production date in the format yyddd constitutes the first 5 digits of the pack number and is printed on each length; **9)** Information provided by BSL " STEEL FEED: IN ACCORDANCE WITH CLAUSES 6 AND 10.6.2.2 OF AS/NZS 1163:2009 THESE COILS WERE PRODUCED FROM ALUMINIUM FULLY KILLED, FINE GRAINED STEEL AND ALUMINIUM HAS BEEN USED AS THE GRAIN REFINING ELEMENT".

Packs covered by this certificate

Line	Heat	Pack numbers
1	8S254	15078M10042 15078M10043 15078M10044 15078M10045 15078M10046 15078M10047 15078M10048 15078M10049 15078M10050 15078M10051 15078M10052 15078M10053 15078M10054
	8S254	15078M10055 15078M10056 15078M10057 15078M10058 15078M10059 15078M10060 15078M10061 15078M10062 15078M10063 15078M10064 15078M10065 15078M10066 15078M10067
	8S254	15078M10068 15078M10069 15078M10070 15078M10071 15078M10072
2	8S254	15078M10073 15078M10074 15078M10075 15078M10076 15078M10077 15078M10078 15078M10079 15078M10080 15078M10081 15078M10082 15078M10083 15078M10084 15078M10085
	8S254	15078M10086 15078M10087 15078M10088 15078M10089 15078M10090
3	4U321	15078M10091 15078M10092 15078M10093 15078M10094 15078M10095 15078M10096 15078M10097 15078M10098 15078M10099 15078M10100 15078M10101 15078M10102 15078M10103
	4U321	15078M10104 15078M10105 15078M10106 15078M10107
4	8S254	15078M10108 15078M10109 15078M10110 15078M10111 15078M10112
5	8S502	15082M10001 15082M10002 15082M10003 15082M10004 15082M10005 15082M10006 15082M10007 15082M10008 15082M10009 15082M10010 15082M10011 15082M10012 15082M10013
	8S502	15082M10014 15082M10015 15082M10016
6	1428975	15082M10017 15082M10018 15082M10019 15082M10020 15082M10021 15082M10022 15082M10023 15082M10024 15082M10025 15082M10026 15082M10027 15082M10028 15082M10029
	1428975	15082M10030 15082M10031 15082M10032 15082M10033 15082M10034 15082M10035 15082M10036 15082M10037 15082M10038 15082M10039 15082M10040 15082M10041

Australian Pipe & Tube confirms that products listed above were manufactured, tested, and supplied in full compliance with the specifications quoted in this certificate

Authorized signatory: ***R.Fisher***