AUSTRALIAN PIPE & TUBE

Product Test Certificate

14147	30/10/2014
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	14295M10013	14296M10014	100	50	2	Any	AS/NZS 1163	C350 L0	Bengang Steel	MTL/17219		Bengang Ste	BO,CC
2	14296M10015	14296M10033	100	50	2.5	Any	AS/NZS 1163	C350 L0	Bengang Steel	MTL/17219		Bengang Ste	BO,CC
3	14296M10034	14296M10037	100	50	3	Any	AS/NZS 1163	C350 L0	Bengang Steel	MTL/17219		Bengang Ste	BO,CC
4	14296M10038	14296M10045	100	50	4	Any	AS/NZS 1163	C350 L0	Bengang Steel	MTL/17219		Bengang Ste	BO,CC
5	14296M10046	14300M10001	100	50	5	Any	AS/NZS 1163	C350 L0	Bengang Steel	MTL/17219		Bengang Ste	BO,CC
6	14300M10002	14300M10007	100	50	6	Any	AS/NZS 1163	C350 L0	Bengang Steel	MTL/17219	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	1435270	14.0	1.0	72.0	1.7	0.6	0.5	2.6	0.2	0.4	2.7	1.9	0.1	0.2	0.0	27	4	T2735-2865	A	462	537	26				
2	1435117	14.0	1.2	71.0	1.6	0.8	0.6	2.5	0.2	0.4	2.7	1.9	0.1	0.2	0.0	27	5	T2735-2866	A	379	472	37				
3	1475458	14.0	1.0	72.0	1.7	0.6	0.5	2.6	0.2	0.4	2.7	1.9	0.1	0.2	0.0	27	4	T2735-2867	A	370	472	36				
4	1474902P23	16.0	1.2	72.0	2.2	0.6	0.8	2.6	0.2	0.4	2.9	1.9	0.1	0.2	0.0	28	5	T2735-2868	A	403	511	26				
5	1435116	15.0	1.2	72.0	2.2	0.6	0.8	2.6	0.2	0.4	2.9	1.9	0.1	0.2	0.0	28	5	T2735-2869	A	407	495	29				
6	1407409421	15.0	1.2	72.0	2.2	0.6	0.8	2.6	0.2	0.4	2.9	1.9	0.1	0.2	0.0	28	5	T2741-2870	A	378	473	32	100	110	94	101

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	1435270	14295M10013 14295M10014 14295M10015 14295M10016 14295M10017 14295M10018 14295M10019 14295M10020 14295M10021 14295M10022 14295M10023 14295M10024 14296M10001
	1435270	14296M10002 14296M10003 14296M10004 14296M10005 14296M10006 14296M10007 14296M10008 14296M10009 14296M10010 14296M10011 14296M10012 14296M10013 14296M10014
2	1435117	14296M10015 14296M10016 14296M10017 14296M10018 14296M10019 14296M10020 14296M10021 14296M10022 14296M10023 14296M10024 14296M10025 14296M10026 14296M10027
	1435117	14296M10028 14296M10029 14296M10030 14296M10031 14296M10032 14296M10033
3	1475458	14296M10034 14296M10035 14296M10036 14296M10037
4	1474902P23	14296M10038 14296M10039 14296M10040 14296M10041 14296M10042 14296M10043 14296M10044 14296M10045
5	1435116	14296M10046 14296M10047 14296M10048 14296M10049 14296M10050 14300M10001
6	1407409421	14300M10002 14300M10003 14300M10004 14300M10005 14300M10006 14300M10007

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***