

Product Test Certificate	13012	28/02/2013
	Number	Date

Line	Pack NoNo included		RHS/SHS/CHS Nominal Size (mm)				Specification	Grade	Steel Supplier	Testing Authority/ NATA (ILAC) Accreditation No			Steelmaking process
	From	To	d /do	b	t	L				Tensile	Impact	Chemical	
1	13045M10039	13045M10043	100	50	2.5	Any	AS/NZS 1163	C350 L0	BSL	MTL/17219		BSL/632	BO,CC +note 9
2	13045M10044	13045M10063	100	50	2	Any	AS/NZS 1163	C350 L0	BSL	ALS/218		BSL/632	BO,CC +note 9
3	13045M10064	13045M10081	100	50	2.5	Any	AS/NZS 1163	C350 L0 /C450L0	BSL	ALS/218		BSL/632	BO,CC +note 9
4	13045M10082	13049M10011	100	50	3	Any	AS/NZS 1163	C350 L0 /C450L0	BSL	ALS/218		BSL/632	BO,CC +note 9
5	13049M10012	13049M10041	75	75	3	Any	AS/NZS 1163	C350 L0	BSL	ALS/218		BSL/632	BO,CC +note 9
6	13049M10042	13049M10051	75	75	2.5	Any	AS/NZS 1163	C350 L0 /C450L0	BSL	ALS/218		BSL/632	BO,CC +note 9

Line	STEEL CHEMICAL ANALYSES (%)-As supplied by Steelmaker ("L")																MECHANICAL TEST RESULTS (Orientation-"L")									
	HEAT No	C	P	Mn	Si	S	Ni	Cr	Mo	Cu	Al	Ti	Nb	V	CE	SiE	Testing Report No- Sample ID	Condition	Tensile test			Impact test at 0°C				
		x100																	YS	TS	E	1	2	3	Ave	
																			MPa		%		Joules			
1	7337879	14.9	1.5	74.0	0.8	1.1	1.3	1.8	0.2	2.0	3.7	0.2	0.1	0.3	28	5	T2206-1055	A	366	454	37					
2	7335049	13.9	2.1	73.0	0.8	0.9	1.3	2.8	0.3	2.7	3.4	0.2	0.1	0.3	27	6	2797-3-1056	A	399	477	40					
3	6331069	15.2	2.0	74.0	0.5	1.1	1.3	1.7	0.4	1.5	3.7	0.2	0.1	0.3	29	6	2797-3-1057	A	462	523	33					
4	7324239	16.2	2.0	74.0	0.9	1.0	2.5	2.6	0.2	2.5	3.6	0.2	0.1	0.3	30	6	2797-3-1058	A	478	555	29					
5	6340259	15.2	1.5	75.0	0.7	0.9	1.3	2.3	0.3	2.0	3.0	0.2	0.1	0.3	29	4	2797-3-1059	A	434	517	35					
6	6331069	15.2	2.0	74.0	0.5	1.1	1.3	1.7	0.4	1.5	3.7	0.2	0.1	0.3	29	6	2797-3-1060	A	455	530	31					

Notes: **1)** CE=C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15; **2)** SiE=Si+2.5P; **3)** Gauge Length for E= 5.65vSo; **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 Oxygen,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 the steel supplier " 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	7337879	13045M10039 13045M10040 13045M10041 13045M10042 13045M10043
2	7335049	13045M10044 13045M10045 13045M10046 13045M10047 13045M10048 13045M10049 13045M10050 13045M10051 13045M10052 13045M10053 13045M10054 13045M10055 13045M10056 13045M10057 13045M10058 13045M10059 13045M10060 13045M10061 13045M10062 13045M10063
3	6331069	13045M10064 13045M10065 13045M10066 13045M10067 13045M10068 13045M10069 13045M10070 13045M10071 13045M10072 13045M10073 13045M10074 13045M10075 13045M10076 13045M10077 13045M10078 13045M10079 13045M10080 13045M10081
4	7324239	13045M10082 13045M10083 13045M10084 13045M10085 13045M10086 13045M10087 13045M10088 13049M10001 13049M10002 13049M10003 13049M10004 13049M10005 13049M10006 13049M10007 13049M10008 13049M10009 13049M10010 13049M10011
5	6340259	13049M10012 13049M10013 13049M10014 13049M10015 13049M10016 13049M10017 13049M10018 13049M10019 13049M10020 13049M10021 13049M10022 13049M10023 13049M10024 13049M10025 13049M10026 13049M10027 13049M10028 13049M10029 13049M10030 13049M10031 13049M10032 13049M10033 13049M10034 13049M10035 13049M10036 13049M10037 13049M10038 13049M10039 13049M10040 13049M10041
6	6331069	13049M10042 13049M10043 13049M10044 13049M10045 13049M10046 13049M10047 13049M10048 13049M10049 13049M10050 13049M10051

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

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