

**Product Test Certificate**

**13104**

**19/09/2013**

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	13256M10019	13259M10006	100	50	2	Any	AS/NZS 1163	C350 L0	YPE	MTL/17219		FS/14877	BO,CC +note 9
2	13259M10007	13259M10028	100	50	2	Any	AS/NZS 1163	C350 L0	BSL	MTL/17219		BSL/632	BO,CC +note 9
3	13259M10029	13259M10030	100	50	2.5	Any	AS/NZS 1163	C350 L0	BSL	MTL/17219		BSL/632	BO,CC +note 9
4	13259M10041	13259M10058	100	50	2.5	Any	AS/NZS 1163	C350 L0	YPE	MTL/17219		FS/14877	BO,CC +note 9
5	13259M10059	13259M10069	100	50	3	Any	AS/NZS 1163	C350 L0	YPE	MTL/17219		FS/14877	BO,CC +note 9
6	13259M10070	13259M10081	100	50	3	Any	AS/NZS 1163	C350 L0	BSL	MTL/17219		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	36L453	13.0	1.4	45.0	0.1	0.2	1.1	2.2	0.2	2.3	4.0	0.2	0.1	0.3	22	4	T 2407- 1640	A	415	475	25				
2	7369369	17.2	1.2	76.0	0.7	1.1	1.0	2.1	0.3	2.3	3.5	0.2	0.1	0.3	31	4	T 2407- 1641	A	421	494	35				
3	6350549	15.5	1.5	76.0	0.9	1.8	1.3	1.5	0.3	2.1	3.5	0.2	0.1	0.3	29	5	T 2407- 1642	A	379	464	32				
4	36L459	13.0	1.7	45.0	0.1	0.3	1.1	2.2	0.2	2.3	3.6	0.2	0.1	0.3	22	4	T 2407- 1643	A	409	473	29				
5	01L715A00	19.0	1.4	83.0	1.0	0.6	2.0	4.0	0.3	2.0	3.2	0.0	0.1	0.3	34	5	T 2407- 1644	A	498	582	24				
6	6363189	15.6	1.7	74.0	0.7	1.3	1.1	1.9	0.5	2.0	3.5	0.2	0.1	0.3	29	5	T 2407- 1645	A	368	452	32				

**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**

<b>Line</b>	<b>Heat</b>	<b>Pack numbers</b>
1	36L453	13256M10019 13256M10020 13256M10021 13256M10022 13256M10023 13256M10024 13256M10025 13256M10026 13256M10027 13256M10028 13256M10029 13256M10030
	36L453	13256M10031 13256M10032 13256M10033 13256M10034 13256M10035 13256M10036 13256M10037 13256M10038 13256M10039 13256M10040 13256M10041 13256M10042
	36L453	13256M10043 13256M10044 13256M10045 13256M10046 13256M10047 13256M10048 13256M10049 13256M10050 13256M10051 13256M10052 13256M10053 13256M10054
	36L453	13259M10001 13259M10002 13259M10003 13259M10004 13259M10005 13259M10006
2	7369369	13259M10007 13259M10008 13259M10009 13259M10010 13259M10011 13259M10012 13259M10013 13259M10014 13259M10015 13259M10016 13259M10017 13259M10018
	7369369	13259M10019 13259M10020 13259M10021 13259M10022 13259M10023 13259M10024 13259M10025 13259M10026 13259M10027 13259M10028
3	6350549	13259M10029 13259M10030
4	36L459	13259M10041 13259M10042 13259M10043 13259M10044 13259M10045 13259M10046 13259M10047 13259M10048 13259M10049 13259M10050 13259M10051 13259M10052
	36L459	13259M10053 13259M10054 13259M10055 13259M10056 13259M10057 13259M10058
5	01L715A00	13259M10059 13259M10060 13259M10061 13259M10062 13259M10063 13259M10064 13259M10065 13259M10066 13259M10067 13259M10068 13259M10069
6	6363189	13259M10070 13259M10071 13259M10072 13259M10073 13259M10074 13259M10075 13259M10076 13259M10077 13259M10078 13259M10079 13259M10080 13259M10081

**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***