

Product Test Certificate

14007

21/01/2014

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	14009M10047	14010M10004	100	50	2.5	Any	AS/NZS 1163	C350 L0	Nam Kim	MTL/17219		FS/14877	BO,CC +note 9
2	14010M10005	14010M10011	100	50	2.5	Any	AS/NZS 1163	C350 LO	BSL	MTL/17219		BSL/632	BO,CC +note 9
3	14010M10014	14010M10024	100	50	2	Any	AS/NZS 1163	C350 L0	BSL	MTL/17219		BSL/632	BO,CC +note 9
4	14010M10025	14010M10039	100	50	2.5	Any	AS/NZS 1163	C350 L0	BSL	MTL/17219		BSL/632	BO,CC +note 9
5	14010M10047	14010M10056	100	50	2.3	Any	AS/NZS 1163	C350 L0	BSL	MTL/17219		BSL/632	BO,CC +note 9
6	14010M10057	14013M10011	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	02XBTK130914	13.0	2.0	77.0	2.0	1.0	1.0	3.0	1.0	1.0	5.6	1.0	1.0	1.0	27	7	T2484-1984	A	426	449	17				
2	6377309	16.0	1.1	76.0	0.8	1.5	1.5	1.6	0.3	2.9	3.1	0.2	0.1	0.0	30	4	T2484-1985	A	395	476	32				
3	6377309	16.0	1.1	76.0	0.8	1.5	1.5	1.6	0.3	2.9	3.1	0.2	0.1	0.0	30	4	T2484-1986	A	387	475	37				
4	6379809	14.7	1.6	73.0	0.7	1.2	1.6	2.7	0.4	3.0	3.6	0.2	0.1	0.0	28	5	T2484-1987	A	449	517	30				
5	6361629	16.0	1.5	76.0	0.7	1.1	1.3	1.6	0.2	1.6	3.7	0.2	0.1	0.3	30	4	T2484-1988	A	441	519	31				
6	6377109	15.1	1.0	73.0	0.8	1.0	1.5	1.9	0.8	2.8	3.4	0.2	0.1	0.0	28	3	T2484-2002	A	422	503	34				

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 CI 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	02XBTK13091411	14009M10047 14009M10048 14009M10049 14009M10050 14009M10051 14009M10052 14009M10053 14009M10054 14009M10055 14009M10056 14009M10057 14009M10058
	02XBTK13091411	14009M10059 14010M10001 14010M10002 14010M10003 14010M10004
2	6377309	14010M10005 14010M10006 14010M10007 14010M10008 14010M10009 14010M10010 14010M10011
3	6377309	14010M10014 14010M10015 14010M10016 14010M10017 14010M10018 14010M10019 14010M10020 14010M10021 14010M10022 14010M10023 14010M10024
4	6379809	14010M10025 14010M10026 14010M10027 14010M10028 14010M10029 14010M10030 14010M10031 14010M10032 14010M10033 14010M10034 14010M10035 14010M10036
	6379809	14010M10037 14010M10038 14010M10039
5	6361629	14010M10047 14010M10048 14010M10049 14010M10050 14010M10051 14010M10052 14010M10053 14010M10054 14010M10055 14010M10056
6	6377109	14010M10057 14010M10058 14010M10059 14010M10060 14010M10061 14010M10062 14010M10063 14010M10064 14010M10065 14010M10066 14010M10067 14010M10068
	6377109	14010M10069 14013M10001 14013M10002 14013M10003 14013M10004 14013M10005 14013M10006 14013M10007 14013M10008 14013M10009 14013M10010 14013M10011

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***