

Product Test Certificate

13024

27/03/2013

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	13074M10037	13074M10044	40	40	3	Any	AS/NZS 1163	C350 L0	BSL	MTL/17219		BSL/632	BO,CC +note 9
2	13077M10005	13077M10012	40	40	4	Any	AS/NZS 1163	C350 L0	BSL	MTL/17219		BSL/632	BO,CC +note 9
3	13077M10013	13077M10021	50	25	1.6	Any	AS/NZS 1163	C350 L0	BSL	MTL/17219		BSL/632	BO,CC +note 9
4	13077M10022	13077M10032	50	25	2	Any	AS/NZS 1163	C350 L0	BSL	MTL/17219		BSL/632	BO,CC +note 9
5	13077M10033	13078M10002	50	25	2.5	Any	AS/NZS 1163	C350 L0	BSL	MTL/17219		BSL/632	BO,CC +note 9
6	13078M10003	13078M10007	50	25	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																	MPa		%	Joules			
1	6345399	15.3	1.7	74.0	0.5	1.2	0.9	1.7	0.2	1.6	3.4	0.2	0.1	0.3	29	5	T2240-1129	A	514	572	24				
2	7337529	14.4	1.6	100.0	0.7	1.0	1.5	1.8	0.3	2.0	3.6	0.2	1.4	0.3	32	5	T2240-1131	A	508	589	20				
3	7337569	14.5	1.4	73.0	0.7	1.1	1.3	1.6	0.3	2.2	3.2	0.2	0.1	0.3	28	4	T2240-1132	A	411	469	34				
4	7323359	16.2	1.7	74.0	1.0	1.2	1.1	1.9	0.5	2.3	3.8	0.2	0.1	0.3	30	5	T2240-1133	A	448	510	28				
5	7336159	14.6	2.1	75.0	0.9	1.1	1.1	2.1	0.3	2.2	3.9	0.2	0.1	0.3	28	6	T2240-1134	A	419	471	33				
6	6337899	15.8	1.6	74.0	1.8	0.9	1.5	3.4	0.4	2.8	3.3	0.2	0.1	0.3	29	6	T2240-1135	A	414	463	33				

Notes: 1) $CE=C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15$; 2) $SiE=Si+2.5P$; 3) Gauge Length for E= $5.65\sqrt{So}$; 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	6345399	13074M10037	13074M10038	13074M10039	13074M10040	13074M10041	13074M10042	13074M10043	13074M10044			
2	7337529	13077M10005	13077M10006	13077M10007	13077M10008	13077M10009	13077M10010	13077M10011	13077M10012			
3	7337569	13077M10014	13077M10015	13077M10016	13077M10017	13077M10018	13077M10019	13077M10020	13077M10021			
4	7323359	13077M10022	13077M10023	13077M10024	13077M10025	13077M10026	13077M10027	13077M10028	13077M10029	13077M10030	13077M10031	13077M10032
5	7336159	13077M10033	13077M10034	13077M10035	13078M10001	13078M10002						
6	6337899	13078M10003	13078M10004	13078M10005	13078M10006	13078M10007						

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*