

**Product Test Certificate**

13106

25/09/2013

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	13260M10002	13260M10042	75	75	4	Any	AS/NZS 1163	C350 L0	Hyundai Steel	MTL/17219		Kol/533	BO,CC +note 9
2	13260M10043	13260M10063	75	75	4	Any	AS/NZS 1163	C350 L0	BSL	MTL/17219		BSL/632	BO,CC +note 9
3	13260M10064	13260M10097	75	75	5	Any	AS/NZS 1163	C350 L0/C450 L0	BSL	MTL/17219		BSL/632	BO,CC +note 9
4	13260M10098	13261M10001	75	75	6	Any	AS/NZS 1163	C350 L0	BSL	MTL/17219	MTL/17219	BSL/632	BO,CC +note 9
5	13261M10002	13261M10021	75	75	4	Any	AS/NZS 1163	C350 L0	YPE	MTL/17219		FS/14877	BO,CC +note 9
6	13261M10022	13261M10045	75	75	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
1	M75006	5.7	1.3	79.5	0.7	0.5	1.0	3.0	0.0	1.4	2.1	0.1	1.4	0.1	20	4	T 2407- 1646	A	443	544	24				
2	7354849	14.7	1.4	98.0	0.6	1.1	1.8	2.4	0.5	2.2	3.1	0.2	1.3	0.3	32	4	T 2407- 1647	A	413	463	30				
3	7364759	15.1	1.6	101.0	0.7	1.3	1.1	2.1	0.5	2.2	2.9	0.2	1.5	0.3	33	5	T 2407- 1648	A	465	555	23				
4	7364759	15.1	1.6	101.0	0.7	1.3	1.1	2.1	0.5	2.2	2.9	0.2	1.5	0.3	33	5	T 2409- 1649	A	488	558	20	57	62	68	62
5	09M466A001	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 2409- 1650	A	467	534	23				
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 2409- 1651	A	402	484	28				

**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	M75006	13260M10002	13260M10003	13260M10004	13260M10005	13260M10006	13260M10007	13260M10008	13260M10009	13260M10010	13260M10011	13260M10012	13260M10013
	M75006	13260M10014	13260M10015	13260M10016	13260M10017	13260M10018	13260M10019	13260M10020	13260M10021	13260M10022	13260M10023	13260M10024	13260M10025
	M75006	13260M10026	13260M10027	13260M10028	13260M10029	13260M10030	13260M10031	13260M10032	13260M10033	13260M10034	13260M10035	13260M10036	13260M10037
	M75006	13260M10038	13260M10039	13260M10040	13260M10041	13260M10042							
2	7354849	13260M10043	13260M10044	13260M10045	13260M10046	13260M10047	13260M10048	13260M10049	13260M10050	13260M10051	13260M10052	13260M10053	13260M10054
	7354849	13260M10054	13260M10055	13260M10056	13260M10057	13260M10058	13260M10059	13260M10060	13260M10061	13260M10062	13260M10063		
3	7364759	13260M10064	13260M10065	13260M10066	13260M10067	13260M10068	13260M10069	13260M10070	13260M10071	13260M10072	13260M10073	13260M10074	13260M10075
	7364759	13260M10076	13260M10077	13260M10078	13260M10079	13260M10080	13260M10081	13260M10082	13260M10083	13260M10084	13260M10085	13260M10086	13260M10087
	7364759	13260M10088	13260M10089	13260M10090	13260M10091	13260M10092	13260M10093	13260M10094	13260M10095	13260M10096	13260M10097		
4	7364759	13260M10098	13260M10099	13260M10100	13260M10101	13260M10102	13260M10103	13260M10104	13260M10105	13260M10106	13260M10107	13261M10001	
5	09M466A001	13261M10002	13261M10003	13261M10004	13261M10005	13261M10006	13261M10007	13261M10008	13261M10009	13261M10010	13261M10012	13261M10013	13261M10014
	09M466A001	13261M10014	13261M10015	13261M10016	13261M10017	13261M10018	13261M10019	13261M10020	13261M10021				
6	6363189	13261M10022	13261M10023	13261M10024	13261M10025	13261M10026	13261M10027	13261M10028	13261M10029	13261M10030	13261M10031	13261M10032	13261M10033
	6363189	13261M10034	13261M10035	13261M10036	13261M10037	13261M10038	13261M10039	13261M10040	13261M10041	13261M10042	13261M10043	13261M10044	13261M10045

**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**