

Product Test Certificate	13112	7/10/2013
	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	13269M10107	13269M10116	89	89	3.5	Any	AS/NZS 1163	C350 L0	Hyundai Steel	MTL/17219		Kol/533	BO,CC +note 9
2	13269M10120	13269M10122	89	89	2	Any	AS/NZS 1163	C350 L0	YPE	MTL/17219		FS/14877	BO,CC +note 9
3	13269M10123	13269M10143	89	89	5	Any	AS/NZS 1163	C350 L0	BSL	MTL/17219		BSL/632	BO,CC +note 9
4	13269M10144	13270M10007	89	89	6	Any	AS/NZS 1163	C350 L0	BSL	MTL/17219	MTL/17219	BSL/632	BO,CC +note 9
5	13270M10014	13270M10023	30	30	2	Any	AS/NZS 1163	C350 L0	BSL	MTL/17219		BSL/632	BO,CC +note 9
6	13270M10025	13273M10002	30	30	2.5	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	M75008	5.9	1.5	78.0	1.3	0.5	1.0	3.0	0.0	1.3	3.4	0.1	1.4	0.0	20	5	T 2416- 1681	A	403	473	32					
2	37L516	13.0	1.6	40.0	0.1	0.5	1.1	2.2	0.2	2.3	3.5	0.2	0.1	0.3	21	4	T 2416- 1679	A	403	462	27					
3	7366109	15.1	1.4	96.0	1.3	1.0	1.1	1.6	0.2	1.8	2.9	0.2	1.6	0.3	32	5	T 2416- 1682	A	487	570	16					
4	6354539	15.0	1.1	94.0	0.5	0.6	1.0	1.2	0.4	2.3	2.6	0.2	1.4	0.3	32	3	T 2420- 1686	A	503	552	23	58	45	53	52	
5	7363449	15.6	1.3	75.0	0.6	1.1	1.1	1.8	0.2	2.3	3.3	0.2	0.1	0.2	29	4	T 2420- 1687	A	456	502	24					
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	T 2420- 1688	A	491	533	18					

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".

