



Product Test Certificate	15137	18/11/2015
	Number	Date

Line	Pack NoNo included		RHS/SHS/CHS Nominal Size (mm)				Specification	Grade	Steel Supplier	Testing Authority/ NATA (ILAC) No			Steelmaking process
	From	To	d /do	b	t	L				Tensile	Impact	Chemical	
1	15344M10067	15344M10068	75	75	4	Any	AS1163	C350 L0	Hyundai Steel	MTL/17219		KOLAS/533	BO,CC
2	15344M10069	15344M10076	75	75	5	Any	AS1163	C350 L0	BSL	MTL/17219		BSL/632	BO,CC +note 9
3	15344M10077	15344M10088	75	75	6	Any	AS1163	C350 L0	Hyundai Steel	MTL/17219	MTL/17219	KOLAS/533	BO,CC
4	15345M10005	15345M10021	89	89	2	Any	AS1163	C350 L0	YPE	MTL/17219		SS/19570	BO,CC
5	15345M10022	15345M10044	89	89	5	Any	AS1163	C350 L0	Hyundai Steel	MTL/17219		KOLAS/533	BO,CC
6	15345M10045	15345M10060	89	89	6	Any	AS1163	C350 L0	Hyundai Steel	MTL/17219	MTL/17219	KOLAS/533	BO,CC

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	B	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	N47089	16.2	1.4	99.0	1.1	0.7	0.0	0.0	0.0	1.5	3.2	0.1	1.0	0.0	0.0	33.7	33.7	T3070-3863	A	458	521	27				
2	7470369	14.9	2.0	98.0	0.6	1.0	0.6	1.6	0.2	0.7	3.1	0.2	1.6	0.3	0.03	32	32	T3071-3864	A	481	566	27				
3	N46881	16.2	1.4	107.0	1.2	0.7	1.0	2.0	0.0	1.5	3.6	0.1	2.0	0.1	0.01	35	35	T3071-3865	A	488	563	26	62	64	66	66
4	15LD2477	12.0	2.0	48.0	2.0	1.1	1.0	1.0	1.0	1.0	3.9	1.0	1.0	1.0	0.00	21	21	T3071-3866	A	384	480	36				
5	N50995	15.7	1.7	103.0	1.4	0.3	1.0	2.0	0.0	1.4	3.7	0.1	1.8	0.1	0.01	34	34	T3071-3868	A	469	562	28				
6	N54648	16.5	1.2	102.5	2.1	0.7	1.0	2.0	0.0	1.6	3.3	0.1	1.9	0.0	0.01	35	35	T3071-3871	A	484	556	27	71	64	64	64

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 BSL " 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	N47089	15344M10067	15344M10068												
2	7470369	15344M10069	15344M10070	15344M10071	15344M10072	15344M10073	15344M10074	15344M10075	15344M10076						
3	N46881	15344M10077	15344M10078	15344M10079	15344M10080	15344M10081	15344M10082	15344M10083	15344M10084	15344M10085	15344M10086	15344M10087	15344M10088		
4	15LD2477	15345M10005	15345M10006	15345M10007	15345M10008	15345M10009	15345M10010	15345M10011	15345M10012	15345M10013	15345M10014	15345M10015	15345M10016	15345M10017	
	15LD2477	15345M10018	15345M10019	15345M10020	15345M10021										
5	N50995	15345M10022	15345M10023	15345M10024	15345M10025	15345M10026	15345M10027	15345M10028	15345M10029	15345M10030	15345M10031	15345M10032	15345M10033	15345M10034	
	N50995	15345M10035	15345M10036	15345M10037	15345M10038	15345M10039	15345M10040	15345M10041	15345M10042	15345M10043	15345M10044				
6	N54648	15345M10045	15345M10046	15345M10047	15345M10048	15345M10049	15345M10050	15345M10051	15345M10052	15345M10053	15345M10054	15345M10055	15345M10056	15345M10057	
	N54648	15345M10058	15345M10059	15345M10060											

Australian Pipe & Tube confirms that products listed above were manufactured, tested, and supplied in full compliance with the specifications quoted in this certificate

Authorized signatory: ***R.Fisher***