# Product Test Certificate

**161040** Certificate Number

**13/04/2016** Date

| PackFrom | PackTo | RHS/SHS/CHS Nominal Size (mm) d /do | b | t | L | Specification | Grade | Product Description |
|---|---|---|---|---|---|---|---|---|
| 16096M10008 | 16096M10015 | 50 | 25 | 2.5 | Any | AS1163 | C350L0 | Painted 50x25x2.5 |

| Heat No. | Steel Supplier | Testing Authority/NATA (ILAC) No | | | Steel Making Process | Steel Chemical Analysis (% x100) As supplied by Steelmaker ("L") | | | | | | | | | | | | | | | Mechanical Test Results (Orientation-"L") | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | | | | | Testing Report No-Sample ID | Condition | Tensile Test | | | Impact Test at 0°C | | | |
| | | | | | | | | | | | | | | | | | | | | | | | YS | TS | E | 1 | 2 | 3 | Avg |
| | | Tensile | Impact | Chemical | | C | P | Mn | Si | S | Ni | Cr | Mo | Cu | Al | Ti | Nb | V | B | CE | SiE | | | MPa | | % | Joules | | | |
| 1T431 | Import | MTL/17279 | | SS/19570 | BO,CC | 14 | 1.2 | 50 | <2 | 1 | <1 | 2 | <1 | 1 | 5.2 | <1 | <1 | <1 | <0.05 | 23 | 5 | T3134-5258 | A | 350 | 445 | 44 | | | | |
| 1T553 | Import | MTL/17279 | | SS/19570 | BO,CC | 15 | 1.4 | 49 | <2 | 1.1 | <1 | 2 | <1 | | 6 | <1 | <1 | <1 | <0.05 | 24 | 6 | T3137-5263 | A | 379 | 457 | 38 | | | | |

**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√So; **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 (b) of AS/NZS 1163; **6)** Data in the table refers to the samples representative for each line;

**7)** BO,SC= Basic Oxigen,Continuous (Slab) Casting; ALS=Australian Laboratory Services Industrial; MTL = Mec Test Laboratories; SS=Spectrometer Services Pty Ltd; BSL=Bluescope Steel;

**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".

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| Packs covered by this certificate | |
|---|---|
| **Heat** | **Pack Numbers** |
| 1T431 | 16096M10008 16096M10012 16096M10013 |
| 1T553 | 16096M10013 16096M10014 16096M10015 |

**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**