

POSCO

Mill Test Certificate

Certificate No. : 141223-FK01-PS-00001-0002
 Date of Issue : Dec., 24, 2014
 Surface Finish : Dull

Order No. : 01S1390123

PO No. : 01S1390123

Supplier : DAE WOO INTERNATIONAL CORP.

Commodity : TITANIUM CR COIL

Customer : GRANDIS TITANIUM

Spec & Type : ASTM-B265 GRADE2

| Size | Product No. | Quantity | Weight (kg) | Heat No. | Position | Tensile Test | | | Hardness HV | Band Test | Division | Chemical Composition (%) | | | | | | | | | | | |
|-------------------------|-------------|----------|-------------|----------|----------|--------------|----------|--------|-------------|-----------|----------|--------------------------|-------|-------|--------|--------|--------|---------|---------|---------|------|--------|--|
| | | | | | | YS (MPa) | TS (MPa) | EL (%) | | | | C | Si | Mn | P | S | Ti | H (ppm) | N (ppm) | O (ppm) | Fe | | |
| 0.8x1200xC | QDD0725B | 1 | 2.023 | SK50120 | T | 348 | 441 | 28 | 172B | Good | L | 0.0120 | 0.010 | 0.010 | 0.0100 | 0.0100 | 0.0100 | Balance | 3.0 | 55 | 980 | 0.0500 | |
| *** Sub Total (020) *** | | 1 | 2.023 (kg) | | | | | | | | P | | | | | | | Balance | 16.0 | | | | |
| 1.0x1200xC | QDE1687B | 1 | 3.393 | SK50134 | T | 365 | 479 | 25 | 171.1 | Good | L | 0.0100 | 0.010 | 0.010 | 0.0100 | 0.0100 | 0.0100 | Balance | 10.0 | 50 | 1020 | 0.0700 | |
| *** Sub Total (030) *** | | 1 | 3.393 (kg) | | | | | | | | P | | | | | | | Balance | 28.0 | | | | |
| *** Grade Total *** | | 2 | 5.416 (kg) | | | | | | | | | | | | | | | | | | | | |
| *** Grand Total *** | | 3 | 8.878 (kg) | | | | | | | | | | | | | | | | | | | | |

Position - T : Top, M : Middle, B : Bottom
 Tensile Test Direction : Transversal, Gauge Length : 50mm(Reckardler),
 YP Method : 0.2% off-set
 Bend Test - Direction : Transversal, Angle : 180°
 Division - L : Ladle Analysis, P : Products Analysis

We hereby certify that the material herein has been made in accordance with the order and above specification.

This Mill Test Certificate cannot be copied for any purpose.

Surveyor To :

M.S. JANG

POSOC

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Chief of material testing section

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