# BANGKOK STEEL WIRE CO., LTD.

24/10 MOO 6 BANGSAOTHONG, SAMUTPRAKARN 10570, THAILAND.

TEL. (66) 2105-0204 FAX. (66) 2105-0208


## MILL TEST CERTIFICATE

**Customer :** BANGKOK STEEL WIRE CO.,LTD.

**Description of Goods :** 7-WIRE STRANDS FOR PRESTRESSED CONCRETE

(AS/NZS 4672.1 - 7 Wire Ordinary - 12.7 - 1870 - Relax 2 - Left)

**Nominal Diameter :** 12.70 mm

**Specification :** AS/NZS 4672.1:2007

**Certificate No :** 002

**Page No :** 1/1

**Date :** OCTOBER 09, 2019

**Invoice No :**

QUALITY ASSURANCE DIVISION BSW QUALITY ASSURANCE SECTION

| No. | Coil No. | Diameter (mm) | Mass (g/m) | Nominal Area ($mm^2$) | Tensile Load (kN) | 0.1%Yield Load (kN) | 0.2%Yield Load (kN) | Elon-gation (%) | Young's Modulus ($kN/mm^2$) | Straight-ness (mm) | Quantity (Meters) | Weight Coil (Kgs) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 291-001-029-13 | 12.81 | 781.0732 | 98.60 | 185.05 | 172.53 | 174.09 | 7.15 | 194.32 | 4.29 | 3,496 | 2,731 |
| 2 | 291-002-030-13 | 12.83 | 783.9717 | 98.60 | 187.80 | 178.86 | 180.52 | 6.10 | 196.52 | 4.20 | 3,484 | 2,731 |
| 3 | 291-003-795-21 | 12.85 | 784.7127 | 98.60 | 190.28 | 179.08 | 181.23 | 6.52 | 200.42 | 4.41 | 3,456 | 2,712 |
| 4 | 291-003-795-25 | 12.85 | 784.7127 | 98.60 | 190.28 | 179.08 | 181.23 | 6.52 | 200.42 | 4.41 | 3,908 | 3,067 |
| 5 | 295-010-863-35 | 12.83 | 784.4759 | 98.60 | 185.53 | 178.52 | 179.89 | 6.02 | 191.93 | 4.72 | 3,692 | 2,896 |
| 6 | B188-552-894-31 | 12.84 | 783.9550 | 98.60 | 187.23 | 177.14 | 178.88 | 5.85 | 198.62 | 6.98 | 3,930 | 3,081 |
| 7 | B188-552-894-32 | 12.84 | 783.9550 | 98.60 | 187.23 | 177.14 | 178.88 | 5.85 | 198.62 | 6.98 | 3,908 | 3,064 |
| 8 | B188-552-894-33 | 12.84 | 783.9550 | 98.60 | 187.23 | 177.14 | 178.88 | 5.85 | 198.62 | 6.98 | 3,919 | 3,072 |
| **Min.** | | 12.81 | 781.0732 | 98.60 | 185.05 | 172.53 | 174.09 | 5.85 | 191.93 | 4.20 | | **8** |
| **Max.** | | 12.85 | 784.7127 | 98.60 | 190.28 | 179.08 | 181.23 | 7.15 | 200.42 | 6.98 | Grand total | **23,354** |
| **Avg.** | | 12.84 | 783.8514 | 98.60 | 187.58 | 177.44 | 179.20 | 6.23 | 197.43 | 5.37 | - | |
| **Lower Spec Limit.** | | - | **758.5200** | **98.60** | **184.00** | **151.00** | **156.00** | **3.50** | **185.00** | - | **TIS. 420-2540(1997)** | |
| **Upper Spec Limit.** | | - | **804.9600** | - | - | - | | - | **205.00** | **25.00** | **AS/NZS 4672.1:2007** | |

**Remark : Left Hand Lay**

| Approve | Check | Issue |
|---|---|---|
| | | |

FM6-13, REV. : 0, 01/11/16