



MATERIAL TESTING LABORATORY

MILITARY ENGINEER SERVICES (MES)

TEST RESULTS FOR TENSILE STRENGTH OF PLAIN/DEFORMED/RIBBED COLD TWISTED M.S. BARS

| | | | |
|--------------------|--|-----------------|--------------------------|
| Job No | : 320/18-19(Steel). | Copy No. | : 04 |
| Name of Client | : GE (Navy) Dhaka. | Sample Specimen | : Length 600 mm Dia 20mm |
| Ref Itr No | : CEN/91 of 2017-2018/19/E-2.Dt 25 April 2019. | Sample Grade | : 60 |
| Project Name | : CEN/91 of 2017-2018. | Frog Mark | : RSRM 400 W. |
| Date of Collection | : Thursday, 9 May, 2019 | | |

| Sample No | Nominal Dia | Actual Dia | Area Under Test | Actual Unit Weight | Average Actual Unit Weight | Yield or Proof Load | Yield or Proof Strength | Average Yield or Proof Strength | Ultimate Load | Ultimate Strength | Average Ultimate Strength | Elongation % (gauge length) | | Average Elongation % (gauge length) | |
|-----------|-------------|-----------------|--------------------|--------------------|----------------------------|---------------------|-------------------------|---------------------------------|--------------------|-------------------|---------------------------|-----------------------------|------|-------------------------------------|------|
| | inch mm | inch mm | sq.inch sq.mm | lb/ft kg/m | lb/ft kg/m | lb kn | psi Mpa | psi Mpa | lb kn | psi Mpa | psi Mpa | 8inch | 5d** | 8inch | 5d** |
| 1 | 0.787 20 | 0.792 20.121 | 0.4869 314.1593 | 1.677 2.496 | 1.677 2.496 | 32253.49 143.47 | 66236 457 | 65165 449 | 50409.15 224.23 | 103521 714 | 101280 698 | 21.5 | | 26 | |
| 2 | 0.787 20 | 0.792 20.121 | 0.4869 314.1593 | 1.677 2.496 | | 32060.15 142.61 | 65839 454 | | 49896.58 221.95 | 102468 706 | | 26 | | | |
| 3 | 0.787 20 | 0.792 20.121 | 0.4869 314.1593 | 1.677 2.496 | | 30882.15 137.37 | 63420 437 | | 47648.48 211.95 | 97851 675 | | 30 | | | |

Cautions:

1. Samples as supplied to the laboratory have been tested. The laboratory authority does not bear any responsibility as to the representative character of the samples to be tested.
2. It is recommended that the samples are sent in a secure and sealed cover/packet/container under signature of the competent authority.
3. In order to avoid fraudulent fabrication of the test results, it is recommended that all test reports should be collected by duly authorized person and not by the contractor/supplier.

Observation on Specimen(if any):

- 1.

| Minimum Standard Requirements (BDS/ISO 6935-2:1991(E)) | | | | Minimum Standard Requirements (ASTM A615/A616M-96a) | | | | | | | | | |
|--|-----------------|-----------------|------------|---|-------------------------------|----------------------------|--------------|-------------------------------|----------------------------|---|-------------|----------------|----|
| Grade | Y/strength | Ult.Str | Elongation | ASTM A 615 M | | | ASTM A 615 M | | | ASTM A 615/A 615 M | | | |
| | N/mm2 or Mpa | N/mm2 or Mpa | % | Grade | Y/strength psi (kg/cm2) | Ult.Str psi (kg/cm2) | Grade | Y/strength Mpa (kg/cm2) | Ult.Str Mpa (kg/cm2) | Minimum Elongation in 8"(203.2 mm) GL (%) | | | |
| | | | | | | | | | 10 mm | 13,16,19 mm | 22,25 mm | 29,32,36 mm | |
| 300 | 300 | 330 | 16 | 40 | 40000(2810) | 70000(4910) | 300 | 300(3050) | 500(5090) | 11 | 12 | .. | .. |
| 400/400w | 400 | 440 | 14 | 60 | 60000(4210) | 90000(6310) | 420 | 420(4275) | 620(6295) | 9 | 9 | 8 | 7 |
| 500/500w | 500 | 550 | 14 | 75 | 75000(5255) | 100000(7015) | 520 | 520(5275) | 690(7010) | .. | 7 | 7 | 6 |

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No signature is required

Note : [1 Mpa = 145 Psi, 1 kg/cm2 = 14.223 psi]

Laboratory Technician

Test Performed By

Vetted By