



MATERIALS TESTING LABORATORY MILITARY ENGINEER SERVICES(MES)

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

Job No : 122/2022-2023(Steel)
 Name of Client : GE (Army) South, Dhaka.
 Ref.Itr.No : 6000/Misc/55/E-6 Dt. 17 Oct'2022.
 Project Name : Construction of 1 x SMBK.
 Dt. of Sample Collection: 19 Oct'2022

Copy No : 04
 Sample Specimen : Length 600mm , Dia 20mm
 Sample Grade : 60
 Frog Mark : Purbachal B-500 DWR.

| 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 load | Ultimate load | Ultimate Strength | Average Ultimate Strength | Ratio (Fult/Fy) | 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 | (Fult/Fy) | 8inch | 5d | 8inch | 5d |
| 1 | 0.787 | 0.789 | 0.4869 | 1.662 | 1.662 2.474 | 39229.01 | 80561 | 81615 563 | 52488.44 | 107791 | 108709 750 | 1.34 | 18.5 | | | |
| | 20.00 | 20.030 | 314.1593 | 2.474 | | 174.50 | 556 | | 233.48 | 743 | | | | | | |
| 2 | 0.787 | 0.789 | 0.4869 | 1.662 | | 40466.53 | 83102 | | 53356.55 | 109573 | | | | | | |
| | 20.00 | 20.030 | 314.1593 | 2.474 | 180.00 | 573 | 237.34 | 756 | | | | | | | | |
| 3 | 0.787 | 0.789 | 0.4869 | 1.662 | 39531.46 | 81182 | 52961.74 | 108763 | | | | | | | | |
| | 20.00 | 20.030 | 314.1593 | 2.474 | 175.84 | 560 | 235.58 | 750 | | | | | | | | |

Cautions:

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

Ovservation on Specimen(if any):

| Minimum Standard Requirements (BDS/ISO 6935-2:1991(E)) | | | | Minimum Standard Requirements(ASTM A615/A616M-96a) | | | | | | | | | |
|--------------------------------------------------------|-------------------------------|----------------------------|-----------------|----------------------------------------------------|-------------------------------|----------------------------|-------|-------------------------------|----------------------------|-------------------------------------------|----|-------------|----------------|
| Grade | Y/strength N/mm2 or Mpa | Ult.Str N/mm2 or Mpa | Elongation % | ASTM A 615 M | | ASTM A 615 M | | ASTM A 615/A 615 M | | | | | |
| | | | | 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 |

Laboratory Technician

Test Performed By

Vetted By