

# MATERIAL TESTING LABORATORY

### **MILITARY ENGINEER SERVICES (MES)**

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

Job No : 144/19-20(Steel). Copy No. : 01

Name of Client : GE (Air) Chattogram. Sample Specimen : Length 600 mm Dia 10mm

Ref Itr No : 6005/47/12/E-6 Dt. 05 September'2019. Sample Grade : 60

Project Name : EinC/193 of 2017-2018. Frog Mark : AKS 500W

Date of Collection : Wednesday, 11 September, 2019

| Sample<br>No | Nominal<br>Dia | Actual Dia      | Area Under<br>Test | Actual Unit<br>Weight | Average<br>Actual Unit<br>Weight | Yield or<br>Proof Load | Yield or<br>Proof<br>Strength | Average<br>Yield or<br>Proof<br>Strength | Ultimate<br>Load  | Ultimate<br>Strength | Average<br>Ultimate<br>Strength |       | gation<br>gauge<br>gth) | auge Elonga |      |
|--------------|----------------|-----------------|--------------------|-----------------------|----------------------------------|------------------------|-------------------------------|--|-------------------|----------------------|---------------------------------|-------|-------------------------|-------------|------|
|              | inch<br>mm     | inch<br>mm      | sq.inch<br>sq.mm   | lb/ft<br>kg/m         | lb/ft<br>kg/m                    | lb<br>kn               | psi<br>Mpa                    | psi<br>Mpa                               | lb<br>kn          | psi<br>Mpa           | psi<br>Mpa                      | 8inch | 5d**                    | 8inch       | 5d** |
| 1            | 0.394<br>10    | 0.396<br>10.056 | 0.1217<br>78.5398  | 0.419<br>0.624        |                                  | 10961.74<br>48.76      | 90045<br>621                  |  | 12805.18<br>56.96 | 105187<br>725        |                                 | 16.5  |                         |             |      |
| 2            | 0.394<br>10    | 0.396<br>10.056 | 0.1217<br>78.5398  | 0.419<br>0.624        | 0.419<br>0.624                   | 10885.3<br>48.42       | 89417<br>616                  | 89694<br>618                             | 12814.17<br>57    | 105261<br>726        | 105674<br>729                   | 17.5  |                         | 17          |      |
| 3            | 0.394<br>10    | 0.396<br>10.056 | 0.1217<br>78.5398  | 0.419<br>0.624        | •                                | 10910.03<br>48.53      | 89620<br>618                  |  | 12973.79<br>57.71 | 106572<br>735        |                                 | 16.5  |                         |             |      |

### **Cautions:**

- 1. Samples as supplied to the laboratory have been tested. The laboratory authority does not bear any responsibility as to the representative charecter 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.

| Minimu   | m Standard I    | Requiremen      | nts (BDS/ISO | Minimum Standard Requirments(ASTM A615/A616M-96a) |                 |                 |              |                 |                 |   |             |             |                |
|----------|-----------------|-----------------|--------------|---|-----------------|-----------------|--------------|-----------------|-----------------|---|-------------|-------------|----------------|
|          | 6935-2          | 2:1991(E)       |              | ASTM A 615 M                                      |                 |                 | ASTM A 615 M |                 |                 | ASTM A 615/A 615 M                        |             |             |                |
| Grade    | Y/strength      | Ult.Str         | Elongation   | Grade   | Y/strength      | Ult.Str         | Grade        | Y/strength      | Ult.Str         | Minimum Elongation in 8"(203.2 mm) GL (%) |             |             |                |
|          | N/mm2 or<br>Mpa | N/mm2 or<br>Mpa | %            |   | psi<br>(kg/cm2) | psi<br>(kg/cm2) |              | Mpa<br>(kg/cm2) | Mpa<br>(kg/cm2) | 10<br>mm                                  | 13,16,19 mm | 22,25<br>mm | 29,32,36<br>mm |
| 300      | 300             | 330             | 16           | 40  | 40000(2810)     | 70000(4910)     | 300          | 300(3050)       | 500(5090)       | 11  | 12          |             | (100)          |
| 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              |

This is a computer genarated copy

No signature is required

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

Test Performed By

Vetted By