

Test Performed by: S. Asad Ali Gillani

Muhammad Qasim  
Project Manager  
Alwasal Traders & Consultants Lahore.

Client Reference No.: UET/MP/24002

Dated: 16-10-2024

SOM Lab Ref: CED/SOM/020 (Page 1/1)

Dated: 16-10-2024

Test Type: Load Test

Sample Type: Pultruded Fiber Glass for Highway Guard Rail

### Load Test Results

| Sr No. | Sample Type   | Ultimate Load (kN) |
|--------|---|--------------------|
| 1      | Pultruded Fiber Glass C-Chanel<br>(2" x 4") 5mm Thickness | 10.20              |
| 2      | Pultruded Fiber Glass Tube<br>(2" x 3") 5mm Thickness     | 12.20              |
| 3      | Pultruded Fiber Glass Guard Rail<br>(5mm Thickness)       | 5.40               |

Note: Please always confirm the results on web [www.uet-civil.edu.pk](http://www.uet-civil.edu.pk)

**Test Performed By:** Dr. Syed Asad Ali Gillani

Muhammad Imran Khan  
Director (Coord) Central Zone,  
NHA, Lahore.  
(Fiber Glass Profile Guard Rail for Highway Safety)

**Client Reference:** Gen/Dir(CZ)/NHA/2024/528

Dated: 01-10-2024

**SOM Laboratory Reference:** CED/SOM/021(Page-1/1)

Dated: 16-10-2024

**Test:** Tensile Test

**Specification:** AASHTO-M180

**Sample Type:** Fiber Glass Profile Guard Rail

### Tensile Test

| Sample Type | Size of Sample (mm) | Ultimate Load (kN) | Ultimate Stress (MPa) |
|-------------|---------------------|--------------------|-----------------------|
| Guard Rail  | 17.0 x 5.0          | 2.45               | 28.82                 |
|             | 17.0 x 5.0          | 2.25               | 26.47                 |
| Guard Rail  | 16.0 x 5.0          | 2.30               | 28.75                 |
|             | 18.0 x 5.0          | 3.45               | 38.33                 |

**Note:** Please always confirm the results of above report on web: [www.uet-civil.edu.pk](http://www.uet-civil.edu.pk)

Sana Miraj (Civil Engineer)  
Building Standards Ltd.(Army Welfare Trust Woolen Mill Lahore)

**Test Performed By:** Dr. /Engr. Wasim Abbas

**Client Reference:** GT/LTR/241016-042

**SOM Lab Ref:** 023 (Page-1/1)

**Dated:** 16-10-2024

**Dated:** 16-10-2024

**Test:** Tension Test

**Test Specification:** ASTM-A-615

**Guage Length:** 200 mm

**Sample Type:** Plain Bar

| S.No. | Weight | Dia.    |            | Area            |                 | Yield Load | Ultimate Load | Yield Stress                |                              | Ult. Stress                 |                              | Elongation | Gauge Length | %age Elongation | Remarks |
|-------|--------|---------|------------|-----------------|-----------------|------------|---------------|-----------------------------|------------------------------|-----------------------------|------------------------------|------------|--------------|-----------------|---------|
|       |        | Nominal | Calculated | Nominal         | Calculated      |            |               | (according to nominal area) | (according to measured area) | (according to nominal area) | (according to measured area) |            |              |                 |         |
|       | kg/m   | mm      | mm         | mm <sup>2</sup> | mm <sup>2</sup> | kN         | kN            | MPa                         | MPa                          | MPa                         | MPa                          | mm         | mm           | %               |         |
| 1     | 2.229  | 19      | 19.02      | 284             | 284             | 80.70      | 126.20        | 284                         | 285                          | 444                         | 445                          | 47.5       | 200          | 23.8            |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |

**BEND TEST:**

|    |                        |  |
|----|------------------------|--|
| -- | No Bend test performed | <b>Note:-</b><br><br>Only One Sample Received and Tested |
|    |                        |  |
|    |                        |  |
|    |                        |  |
|    |                        |  |

Note: Please always confirm the results of above report on web [www.uet-civil.edu.pk](http://www.uet-civil.edu.pk)

Waqas Ahmed Ghumman,PM  
High-Q Constructions Lhr.(Const Of High-Q Mall at 3-A Gulberg II Lahore)

**Test Performed By:** Dr. /Engr. Nauman Khurram

**Client Reference:** QC/HQ/CIVIL/243  
**SOM Lab Ref:** CED/SOM/025 (Page-1/1)  
**Test:** Tension Test & Bend Test  
**Sample Type:** Deformed Bar

**Dated:** 16-10-2024  
**Dated:** 16-10-2024  
**Test Specification:** ASTM-A 615  
**Gauge Length:** 200 mm

| S.No. | Weight | Dia.    |            | Area            |                 | Yield Load | Ultimate Load | Yield Stress                |                              | Ult. Stress                 |                              | Elongation | Gauge Length | %age Elongation | Remarks |
|-------|--------|---------|------------|-----------------|-----------------|------------|---------------|-----------------------------|------------------------------|-----------------------------|------------------------------|------------|--------------|-----------------|---------|
|       |        | Nominal | Calculated | Nominal         | Calculated      |            |               | (according to nominal area) | (according to measured area) | (according to nominal area) | (according to measured area) |            |              |                 |         |
|       | kg/m   | mm      | mm         | mm <sup>2</sup> | mm <sup>2</sup> | kN         | kN            | MPa                         | MPa                          | MPa                         | MPa                          | mm         | mm           | %               |         |
| 1     | 3.874  | 25      | 25.05      | 491             | 493             | 242.70     | 325.70        | 494                         | 493                          | 664                         | 661                          | 37.5       | 200          | 18.8            |         |
| 2     | 3.869  | 25      | 25.05      | 491             | 493             | 237.50     | 328.50        | 484                         | 482                          | 669                         | 667                          | 35.0       | 200          | 17.5            |         |
| 3     | 0.881  | 12      | 11.95      | 113             | 112             | 57.00      | 73.20         | 504                         | 508                          | 647                         | 653                          | 27.5       | 200          | 13.8            |         |
| 4     | 0.865  | 12      | 11.85      | 113             | 110             | 57.20      | 72.00         | 506                         | 520                          | 637                         | 654                          | 30.0       | 200          | 15.0            |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |

**BEND TEST:**

|      |  |   |
|------|--|---|
| 25mm | Sample bend through 180 degrees Satisfactorily without any crack | <b>Note:-</b><br><br>Only Six Samples Received and Tested |
| 12mm | Sample bend through 180 degrees Satisfactorily without any crack |   |
|      |  |   |
|      |  |   |

Note: Please always confirm the results of above report on web [www.uet-civil.edu.pk](http://www.uet-civil.edu.pk)

Farid Masood  
GM-Technical Gharibwal Cement Ltd.Lahore

Test Performed By: Dr. /Engr. Asad Ali Gillani

Client Reference: GCL/Purchase/UET/TEST/004

Dated: 16-10-2024

SOM Lab Ref: CED/SOM/022 (Page-1/1)

Dated: 16-10-2024

Test: Tension Test & Bend Test

Test Specification: ASTM-A 615

Sample Type: Deformed Bar

Gauge Length: 200 mm

| S.No. | Weight | Dia.    |            | Area            |                 | Yield Load | Ultimate Load | Yield Stress                |                              | Ult. Stress                 |                              | Elongation | Gauge Length | %age Elongation | Remarks |
|-------|--------|---------|------------|-----------------|-----------------|------------|---------------|-----------------------------|------------------------------|-----------------------------|------------------------------|------------|--------------|-----------------|---------|
|       |        | Nominal | Calculated | Nominal         | Calculated      |            |               | (according to nominal area) | (according to measured area) | (according to nominal area) | (according to measured area) |            |              |                 |         |
|       | kg/m   | mm      | mm         | mm <sup>2</sup> | mm <sup>2</sup> | kN         | kN            | MPa                         | MPa                          | MPa                         | MPa                          | mm         | mm           | %               |         |
| 1     | 3.864  | 25      | 25.03      | 398             | 492             | 256.70     | 321.00        | 646                         | 522                          | 807                         | 653                          | 37.5       | 200          | 18.8            |         |
| 2     | 3.843  | 25      | 24.97      | 398             | 490             | 255.70     | 321.70        | 643                         | 523                          | 809                         | 658                          | 37.5       | 200          | 18.8            |         |
| 3     | 2.390  | 20      | 19.69      | 314             | 305             | 164.20     | 207.20        | 523                         | 540                          | 660                         | 681                          | 32.5       | 200          | 16.3            |         |
| 4     | 2.390  | 20      | 19.69      | 314             | 305             | 165.70     | 208.50        | 527                         | 545                          | 664                         | 685                          | 35.0       | 200          | 17.5            |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |

**BEND TEST:**

|      |  |   |
|------|--|---|
| 25mm | Sample bend through 180 degrees Satisfactorily without any crack | <b>Note:-</b><br><br>Only Six Samples Received and Tested |
| 20mm | Sample bend through 180 degrees Satisfactorily without any crack |   |
|      |  |   |
|      |  |   |

Note: Please always confirm the results of above report on web [www.uet-civil.edu.pk](http://www.uet-civil.edu.pk)

Muhammad Shamroze, RE

Test Performed By: Dr. /Engr. Nauman Khurram

Nespak PRSWSSP, Darya Khan. (Punjab Rural Sustainable Water Supply and Sanitation Project, Pkg-I)

Client Reference: 4608/PRSWSSP/RE/DYK/295

SOM Lab

Ref: 017 (Page-1/1)

Dated: 14-10-2024

Dated: 16-10-2024

Test: Tension Test & Bend Test

Test Specification:

ASTM-A-615

Gauge Length: 8 inch

Sample Type:

Deformed Bar (Sheikhoo Steel)

| S.No. | Weight | Dia.    |            | Area            |                 | Yield Load | Ultimate Load | Yield Stress                |                              | Ult. Stress                 |                              | Elongation | Gauge Length | %age Elongation | Remarks |
|-------|--------|---------|------------|-----------------|-----------------|------------|---------------|-----------------------------|------------------------------|-----------------------------|------------------------------|------------|--------------|-----------------|---------|
|       |        | Nominal | Calculated | Nominal         | Calculated      |            |               | (according to nominal area) | (according to measured area) | (according to nominal area) | (according to measured area) |            |              |                 |         |
|       | lb/ft  | #       | in         | in <sup>2</sup> | in <sup>2</sup> | Tons       | Tons          | psi                         | psi                          | psi                         | psi                          | in         | in           | %               |         |
| 1     | 2.581  | 8       | 0.982      | 0.79            | 0.758           | 23.31      | 32.98         | 65090                       | 67830                        | 92060                       | 95950                        | 1.40       | 8.0          | 17.5            |         |
| 2     | 2.570  | 8       | 0.980      | 0.79            | 0.755           | 23.57      | 33.38         | 65800                       | 68850                        | 93200                       | 97520                        | 1.60       | 8.0          | 20.0            |         |
| 3     | 1.514  | 6       | 0.753      | 0.44            | 0.445           | 14.44      | 19.62         | 72400                       | 71590                        | 98360                       | 97250                        | 1.50       | 8.0          | 18.8            |         |
| 4     | 1.508  | 6       | 0.751      | 0.44            | 0.443           | 14.93      | 19.52         | 74860                       | 74350                        | 97850                       | 97190                        | 1.50       | 8.0          | 18.8            |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |

**BEND TEST:**

|     |  |   |
|-----|--|---|
| # 8 | Sample bend through 180 degrees Satisfactorily without any crack | <b>Note:-</b><br><br>Only Six Samples Received and Tested |
| # 6 | Sample bend through 180 degrees Satisfactorily without any crack |   |
|     |  |   |
|     |  |   |

Note: Please always confirm the results of above report on web [www.uet-civil.edu.pk](http://www.uet-civil.edu.pk)

Zahid Mughal  
C/O M/S Amanah Noor Residence Model Town, Lahore.

**Test Performed By:** Dr. /Engr. Nauman Khurram

**Client Reference:** Nil

**SOM Lab**

**Ref:** 018 (Page-1/1)

**Dated:** Nil

**Dated:** 16-10-2024

**Test:** Tension Test & Bend Test

**Test Specification:** ASTM-A-615

ASTM-A-615

**Gauge Length:** 8 inch

**Sample Type:** Deformed Bar

Deformed Bar

| S.No. | Weight | Dia.    |            | Area            |                 | Yield Load | Ultimate Load | Yield Stress                |                              | Ult. Stress                 |                              | Elongation | Gauge Length | %age Elongation | Remarks |
|-------|--------|---------|------------|-----------------|-----------------|------------|---------------|-----------------------------|------------------------------|-----------------------------|------------------------------|------------|--------------|-----------------|---------|
|       |        | Nominal | Calculated | Nominal         | Calculated      |            |               | (according to nominal area) | (according to measured area) | (according to nominal area) | (according to measured area) |            |              |                 |         |
|       | lb/ft  | #       | in         | in <sup>2</sup> | in <sup>2</sup> | Tons       | Tons          | psi                         | psi                          | psi                         | psi                          | in         | in           | %               |         |
| 1     | 2.658  | 8       | 0.997      | 0.79            | 0.781           | 25.84      | 35.65         | 72140                       | 72970                        | 99520                       | 100670                       | 1.40       | 8.0          | 17.5            |         |
| 2     | 1.406  | 6       | 0.725      | 0.44            | 0.413           | 8.51       | 9.91          | 42670                       | 45460                        | 49670                       | 52910                        | 1.50       | 8.0          | 18.8            |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |

**BEND TEST:**

|     |  |  |
|-----|--|--|
| # 8 | Sample bend through 180 degrees Satisfactorily without any crack | <b>Note:-</b><br><br>Only Four Samples Received and Tested |
| # 6 | Sample bend through 180 degrees Satisfactorily without any crack |  |
|     |  |  |
|     |  |  |

Note: Please always confirm the results of above report on web [www.uet-civil.edu.pk](http://www.uet-civil.edu.pk)

Mehvish Rana

Test Performed By:

Dr. /Engr.

Asad Ali Gillani

M.E. DHA Lab (Const of 2 Marla Shops Sector H,R,U & V) (M/S Elore Engineering)

Client Reference: 701/13/Lab/DHA

SOM Lab

Ref: 019 (P-1/1)

Dated: 15-10-2024

Dated: 16-10-2024

Test: Tension Test & Bend Test

Test Specification:

ASTM-A-615

Deformed Bar (Naveena Steel)

Gauge Length: 8 inch

Sample Type:

| S.No. | Weight | Dia.    |            | Area            |                 | Yield Load | Ultimate Load | Yield Stress                |                              | Ult. Stress                 |                              | Elongation | Gauge Length | %age Elongation | Remarks |
|-------|--------|---------|------------|-----------------|-----------------|------------|---------------|-----------------------------|------------------------------|-----------------------------|------------------------------|------------|--------------|-----------------|---------|
|       |        | Nominal | Calculated | Nominal         | Calculated      |            |               | (according to nominal area) | (according to measured area) | (according to nominal area) | (according to measured area) |            |              |                 |         |
|       | lb/ft  | #       | in         | in <sup>2</sup> | in <sup>2</sup> | Tons       | Tons          | psi                         | psi                          | psi                         | psi                          | in         | in           | %               |         |
| 1     | 1.503  | 6       | 0.750      | 0.44            | 0.442           | 15.62      | 19.37         | 78280                       | 77930                        | 97080                       | 96640                        | 1.30       | 8.0          | 16.3            |         |
| 2     | 1.502  | 6       | 0.749      | 0.44            | 0.441           | 15.51      | 19.18         | 77770                       | 77590                        | 96160                       | 95940                        | 1.40       | 8.0          | 17.5            |         |
| 3     | 0.671  | 4       | 0.501      | 0.20            | 0.197           | 6.75       | 8.74          | 74420                       | 75550                        | 96340                       | 97800                        | 1.10       | 8.0          | 13.8            |         |
| 4     | 0.673  | 4       | 0.502      | 0.20            | 0.198           | 6.70       | 8.74          | 73850                       | 74600                        | 96340                       | 97310                        | 1.30       | 8.0          | 16.3            |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |

**BEND TEST:**

|     |  |   |
|-----|--|---|
| # 6 | Sample bend through 180 degrees Satisfactorily without any crack | <b>Note:-</b><br><br>Only Six Samples Received and Tested |
| # 4 | Sample bend through 180 degrees Satisfactorily without any crack |   |
|     |  |   |
|     |  |   |

Note: Please always confirm the results of above report on web [www.uet-civil.edu.pk](http://www.uet-civil.edu.pk)

Engineer Muhammad Irfan  
Dy Dir Infra. DHA Gujranwala.(Sector K & D)

Test Performed By: Dr. /Engr. Asad Ali Gillani

Client Reference: 111/DD/Lab/D/189

SOM Lab

Ref: 024 (Page-1/1)

Dated: 11-10-2024

Dated: 16-10-2024

Test: Tension Test & Bend Test

Test Specification:

ASTM-A-615

Gauge Length: 8 inch

Sample Type:

Deformed Bar

| S.No. | Weight | Dia.    |            | Area            |                 | Yield Load | Ultimate Load | Yield Stress                |                              | Ult. Stress                 |                              | Elongation | Gauge Length | %age Elongation | Remarks |
|-------|--------|---------|------------|-----------------|-----------------|------------|---------------|-----------------------------|------------------------------|-----------------------------|------------------------------|------------|--------------|-----------------|---------|
|       |        | Nominal | Calculated | Nominal         | Calculated      |            |               | (according to nominal area) | (according to measured area) | (according to nominal area) | (according to measured area) |            |              |                 |         |
|       | lb/ft  | #       | in         | in <sup>2</sup> | in <sup>2</sup> | Tons       | Tons          | psi                         | psi                          | psi                         | psi                          | in         | in           | %               |         |
| 1     | 0.668  | 4       | 0.500      | 0.20            | 0.196           | 6.73       | 8.51          | 74190                       | 75710                        | 93860                       | 95780                        | 1.20       | 8.0          | 15.0            | 5162    |
| 2     | 0.668  | 4       | 0.500      | 0.20            | 0.196           | 6.88       | 8.66          | 75880                       | 77430                        | 95550                       | 97500                        | 1.30       | 8.0          | 16.3            | 5162    |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |

**BEND TEST:**

|     |  |   |
|-----|--|---|
| # 4 | Sample bend through 180 degrees Satisfactorily without any crack | <b>Note:-</b><br><br>Only Three Samples Received and Tested |
|     |  |   |
|     |  |   |
|     |  |   |

Note: Please always confirm the results of above report on web [www.uet-civil.edu.pk](http://www.uet-civil.edu.pk)

Baig Construction Co.  
Lahore.(Digital World Pakistan Multan Road Manga)

Test Performed By: Dr. /Engr. Wasim Abbas

Client Reference: Nil

SOM Lab

Ref: 026 (P-1/1)

Dated: Nil

Dated: 16-10-2024

Test: Tension Test & Bend Test

Test Specification:

ASTM-A-615

Gauge Length: 8 inch

Sample Type:

Deformed Bar (Aziz Steel)

| S.No. | Weight | Dia.    |            | Area            |                 | Yield Load | Ultimate Load | Yield Stress                |                              | Ult. Stress                 |                              | Elongation | Gauge Length | %age Elongation | Remarks |
|-------|--------|---------|------------|-----------------|-----------------|------------|---------------|-----------------------------|------------------------------|-----------------------------|------------------------------|------------|--------------|-----------------|---------|
|       |        | Nominal | Calculated | Nominal         | Calculated      |            |               | (according to nominal area) | (according to measured area) | (according to nominal area) | (according to measured area) |            |              |                 |         |
|       | lb/ft  | #       | in         | in <sup>2</sup> | in <sup>2</sup> | Tons       | Tons          | psi                         | psi                          | psi                         | psi                          | in         | in           | %               |         |
| 1     | 2.734  | 8       | 1.011      | 0.79            | 0.803           | 23.52      | 37.46         | 65650                       | 64590                        | 104580                      | 102890                       | 1.40       | 8.0          | 17.5            |         |
| 2     | 1.495  | 6       | 0.748      | 0.44            | 0.439           | 13.22      | 21.17         | 66270                       | 66420                        | 106130                      | 106370                       | 1.30       | 8.0          | 16.3            |         |
| 3     | 0.671  | 4       | 0.501      | 0.20            | 0.197           | 5.83       | 9.04          | 64300                       | 65280                        | 99710                       | 101230                       | 1.10       | 8.0          | 13.8            |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |

**BEND TEST:**

|     |  |   |
|-----|--|---|
| # 8 | Sample bend through 180 degrees Satisfactorily without any crack | <b>Note:-</b><br><br>Only Six Samples Received and Tested |
| # 6 | Sample bend through 180 degrees Satisfactorily without any crack |   |
| # 4 | Sample bend through 180 degrees Satisfactorily without any crack |   |
|     |  |   |

Note: Please always confirm the results of above report on web [www.uet-civil.edu.pk](http://www.uet-civil.edu.pk)

