

Engr. M Tauseef Akbar

**Test Performed By:**

Dr. /Engr. Irfan UI Hassan

ME Takmeel Square (Pvt.) Ltd.Villa # 30 (12M) DHA Bwp.(Civil Infrastructure Development Works)

**Client Reference:** TS/0028/Engr/33

**SOM Lab**

**Ref:** 793 (Page-1/1)

**Dated:** 23-08-2022

**Dated:** 24-08-2022

**Test:** Tension Test & Bend Test

**Test Specification:**

ASTM-A-615

**Gauge Length:** 8 inch

**Sample Type:**

Deformed Bar (Pak 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     | 2.466  | 8       | 0.961      | 0.79            | 0.725           | 22.32      | 29.46         | 62330                       | 67910                        | 82250                       | 89620                        | 1.50       | 8.0          | 18.8            |         |
| 2     | 1.573  | 6       | 0.767      | 0.44            | 0.462           | 17.40      | 21.43         | 87220                       | 83070                        | 107400                      | 102290                       | 1.20       | 8.0          | 15.0            |         |
| 3     | 0.687  | 4       | 0.507      | 0.20            | 0.202           | 7.21       | 9.91          | 79470                       | 78690                        | 109260                      | 108180                       | 1.20       | 8.0          | 15.0            |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |

**BEND TEST:**

|    |                        |   |
|----|------------------------|---|
| -- | No Bend test performed | <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)

Sub Divisional officer,

**Test Performed By:**

**Dr. /Engr. Nauman Khurram**

PHE:Sub Div Okara.(Extension/Improvement Of Water Supply Scheme Southern City,Okara)

**Client Reference:** 101

**SOM Lab**

**Ref:** 794 (Page-1/1)

**Dated:** 23-08-2022

**Dated:** 24-08-2022

**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     | 1.136  | 6       | 0.652      | 0.44            | 0.334           | 9.33       | 13.73         | 46760                       | 61590                        | 68830                       | 90670                        | 1.10       | 8.0          | 13.8            |         |
| 2     | 1.142  | 6       | 0.654      | 0.44            | 0.336           | 9.53       | 14.12         | 47780                       | 62560                        | 70770                       | 92670                        | 1.10       | 8.0          | 13.8            |         |
| 3     | 0.589  | 4       | 0.469      | 0.20            | 0.173           | 4.35       | 6.75          | 48000                       | 55490                        | 74420                       | 86030                        | 1.30       | 8.0          | 16.3            |         |
| 4     | 0.583  | 4       | 0.467      | 0.20            | 0.171           | 4.49       | 6.93          | 49460                       | 57850                        | 76440                       | 89400                        | 1.20       | 8.0          | 15.0            |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |

**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)

Muhammad Aftab

Test Performed By:

Dr. /Engr.

Nauman Khurram

Projects Coordinator Banu Mukhtar Contracting(Pvt.) Ltd.(Canal Residence Johar Town)

Client Reference: BML/CRJT/001

SOM Lab

Ref:

795 (Page-1/1)

Dated: 24-08-2022

Dated:

024-08-2022

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     | 2.690  | 8       | 1.004      | 0.79            | 0.791           | 26.55      | 35.83         | 74140                       | 74040                        | 100030                      | 99900                        | 1.20       | 8.0          | 15.0            |         |
| 2     | 1.486  | 6       | 0.746      | 0.44            | 0.437           | 14.12      | 18.22         | 70770                       | 71250                        | 91310                       | 91930                        | 1.30       | 8.0          | 16.3            |         |
| 3     | 0.635  | 4       | 0.488      | 0.20            | 0.187           | 6.47       | 8.51          | 71380                       | 76340                        | 93860                       | 100390                       | 1.00       | 8.0          | 12.5            |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |

**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)

Engr. Hassan Munir

Test Performed By: Dr. /Engr. Bilal Khokhar

CM Zameen Aurum,(Construction Of Zameen Aurum at Plot No.15 Block L,Gulberg-III Lahore)

Client Reference: ZD/ZA/STR028

SOM Lab

Ref: 796 (Page-1/1)

Dated: 24-08-2022

Dated: 24-08-2022

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     | 2.639  | 8       | 0.994      | 0.79            | 0.776           | 27.01      | 34.98         | 75420                       | 76780                        | 97670                       | 99430                        | 1.40       | 8.0          | 17.5            |         |
| 2     | 2.638  | 8       | 0.993      | 0.79            | 0.775           | 27.42      | 35.37         | 76550                       | 78040                        | 98750                       | 100660                       | 1.50       | 8.0          | 18.8            |         |
| 3     | 1.447  | 6       | 0.736      | 0.44            | 0.425           | 12.03      | 17.30         | 60290                       | 62420                        | 86710                       | 89770                        | 1.20       | 8.0          | 15.0            |         |
| 4     | 1.464  | 6       | 0.740      | 0.44            | 0.430           | 13.37      | 18.35         | 67040                       | 68600                        | 91970                       | 94110                        | 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 |   |
|     |  |   |
|     |  |   |

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

Abid Nadeem  
Activekey Solutions Lahore.

Test Performed By: Dr. /Engr. Nauman Khurram

Client Reference: Nil  
Dated: 24-08-2022

SOM Lab  
Ref: 797 (Page-1/1)  
Dated: 024-08-2022

Test: Tension Test & Bend Test  
Gauge Length: 8 inch

Test Specification: ASTM-A-615  
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     | 1.515  | 6       | 0.753      | 0.44            | 0.445           | 16.92      | 20.61         | 84820                       | 83870                        | 103310                      | 102150                       | 1.20       | 8.0          | 15.0            |         |
| 2     | 1.065  | 5       | 0.631      | 0.31            | 0.313           | 11.03      | 13.81         | 78470                       | 77720                        | 98270                       | 97330                        | 1.40       | 8.0          | 17.5            |         |
| 3     | 0.680  | 4       | 0.505      | 0.20            | 0.200           | 6.90       | 8.72          | 76100                       | 76100                        | 96110                       | 96110                        | 1.20       | 8.0          | 15.0            |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |

**BEND TEST:**

|    |                        |   |
|----|------------------------|---|
| -- | No Bend test performed | <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)