

Babar Ali

**Test Performed By:**

Dr. /Engr.

Asad Ali Gillani

Const. Manager, Guarantee Engr.(Pvt)Ltd (Beaconhouse School System TNS 2 Gulberg-III Lahore)

**Client Reference:** TNS/GE/ST/002

**Dated:** 03-12-2021

**SOM Lab Ref:** CED/SOM/5412(Page-1/1)

**Dated:** 03-12-2021

**Test:** Tension Test & Bend Test

**Test Specification:** ASTM-A 615

**Sample Type:** M S 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     | 3.990  | 25      | 25.43      | 491             | 508             | 251.20     | 340.70        | 512                         | 495                          | 694                         | 671                          | 35.0       | 200          | 17.5            |         |
| 2     | 3.988  | 25      | 25.43      | 491             | 508             | 252.00     | 338.20        | 513                         | 496                          | 689                         | 666                          | 27.5       | 200          | 13.8            |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |

**Witnessed By:** Muhammad Ali Khan (Asst. Manager ,Clint: TNS-02)

**BEND TEST:**

|      |  |   |
|------|--|---|
| 25mm | 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)

Engr.Usman Khalid

**Test Performed By:**

**Dr. /Engr.**

S. Asad Ali Gillani

P &CE Izhar Construction (Pvt.)Ltd.(Const. Of Ocean Ceramic Title Proj. at M-3 Industrial Area,Fsd)

**Client Reference:** ICPL/CONST-OCT/21/116

**Dated:** 03-12-2021

**SOM Lab Ref:** CED/SOM/5415(Page-1/2)

**Dated:** 03-12-2021

**Test:** Tension Test & Bend Test

**Test Specification:** ASTM-A 615

**Sample Type:** M S Deformed Bar (Mughal Steel)

**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     | 0.895  | 12      | 12.05      | 113             | 114             | 65.20      | 80.20         | 576                         | 572                          | 709                         | 704                          | 22.5       | 200          | 11.3            |         |
| 2     | 0.894  | 12      | 12.04      | 113             | 114             | 64.20      | 78.70         | 568                         | 564                          | 696                         | 691                          | 22.5       | 200          | 11.3            |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |

**BEND TEST:**

|      |  |   |
|------|--|---|
| 12mm | 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)

Engr.Usman Khalid

**Test Performed By:**

Dr. /Engr.

S. Asad Ali Gillani

P &CE Izhar Construction (Pvt.)Ltd.(Const. Of Ocean Ceramic Title Proj. at M-3 Industrial Area,Fsd)

**Client Reference:** ICPL/CONST-OCT/21/117

**Dated:** 03-12-2021

**SOM Lab Ref:** CED/SOM/5415(Page-2/2)

**Dated:** 03-12-2021

**Test:** Tension Test & Bend Test

**Test Specification:** ASTM-A 615

**Sample Type:** M S Deformed Bar (Mughal Steel)

**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     | 2.180  | 20      | 18.81      | 314             | 278             | 158.50     | 194.50        | 505                         | 571                          | 619                         | 700                          | 30.0       | 200          | 15.0            |         |
| 2     | 2.223  | 20      | 18.99      | 314             | 283             | 158.20     | 192.70        | 504                         | 559                          | 613                         | 681                          | 30.0       | 200          | 15.0            |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |

**BEND TEST:**

|      |  |   |
|------|--|---|
| 20mm | 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)

Altaf Hussain  
M.E AS Eterprises.(Project:Style Textile Raiwind)

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

**Client Reference:** STR/ASE/  
**SOM Lab Ref:** CED/SOM/5467(Page-1/1)

**Dated:** 15-12-2021  
**Dated:** 15-12-2021

**Test:** Tension Test & Bend Test  
**Sample Type:** M S Deformed Bar (Mughal Steel)

**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     | 2.457  | 20      | 19.96      | 314             | 313             | 168.50     | 217.00        | 536                         | 539                          | 691                         | 694                          | 25.0       | 200          | 12.5            |         |
| 2     | 2.462  | 20      | 19.98      | 314             | 314             | 171.20     | 217.00        | 545                         | 546                          | 691                         | 692                          | 25.0       | 200          | 12.5            |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |

**Witnessed By:** Altaf Hussain (M.E)

**BEND TEST:**

|      |  |   |
|------|--|---|
| 20mm | 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)

PTC Area  
Office, Jehlum. (Mannan Associates)

Test Performed By: Dr. /Engr. Asad Gillani

Client Reference: Nil

SOM Lab

Ref: 5410(Page-1/1)

Dated: 03-12-2021

Dated: 03-12-2021

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     | 1.481  | 6       | 0.744      | 0.44            | 0.435           | 15.26      | 18.76         | 76490                       | 77370                        | 94020                       | 95100                        | 1.10       | 8.0          | 13.8            |         |
| 2     | 0.655  | 4       | 0.494      | 0.20            | 0.192           | 6.19       | 8.31          | 68230                       | 71080                        | 91610                       | 95430                        | 1.20       | 8.0          | 15.0            |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |

**BEND TEST:**

|     |  |  |
|-----|--|--|
| # 6 | Sample bend through 180 degrees Satisfactorily without any crack | <b>Note:-</b><br><br>Only Four 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)

Al Manzal Traders  
Jehlum.

Test Performed By: Dr. /Engr. Asad Gillani

Client Reference: Nil

SOM Lab

Ref: 5411(Page-1/2)

Dated: 03-12-2021

Dated: 03-12-2021

Test: Tension Test & Bend Test

Test Specification:

ASTM-A-615

Gauge Length: 8 inch

Sample Type:

Deformed Bar (Mehboob 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     | 1.540  | 6       | 0.759      | 0.44            | 0.453           | 10.55      | 16.23         | 52890                       | 51370                        | 81340                       | 79010                        | 1.60       | 8.0          | 20.0            |         |
| 2     | 1.534  | 6       | 0.758      | 0.44            | 0.451           | 10.45      | 16.18         | 52380                       | 51100                        | 81090                       | 79110                        | 1.20       | 8.0          | 15.0            |         |
| 3     | 0.657  | 4       | 0.496      | 0.20            | 0.193           | 5.15       | 7.75          | 56770                       | 58830                        | 85430                       | 88530                        | 1.40       | 8.0          | 17.5            |         |
| 4     | 0.656  | 4       | 0.496      | 0.20            | 0.193           | 5.05       | 7.77          | 55650                       | 57660                        | 85660                       | 88760                        | 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<br>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)

Al Manzal Traders  
Jehlum.

Test Performed By: Dr. /Engr. Asad Gillani

Client Reference: Nil

SOM Lab

Ref: 5411(Page-2/2)

Dated: 03-12-2021

Dated: 03-12-2021

Test: Tension Test & Bend Test

Test Specification: ASTM-A-615

Gauge Length: 8 inch

Sample Type:

Deformed Bar (Mehboob Steel)G-60

| 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     | 1.505  | 6       | 0.750      | 0.44            | 0.442           | 15.24      | 20.10         | 76390                       | 76040                        | 100760                      | 100300                       | 1.30       | 8.0          | 16.3            |         |
| 2     | 1.492  | 6       | 0.747      | 0.44            | 0.438           | 15.29      | 20.13         | 76640                       | 76990                        | 100910                      | 101370                       | 1.20       | 8.0          | 15.0            |         |
| 3     | 0.660  | 4       | 0.497      | 0.20            | 0.194           | 7.54       | 8.69          | 83180                       | 85760                        | 95770                       | 98740                        | 0.90       | 8.0          | 11.3            |         |
| 4     | 0.653  | 4       | 0.494      | 0.20            | 0.192           | 7.46       | 8.61          | 82290                       | 85710                        | 94990                       | 98940                        | 0.80       | 8.0          | 10.0            |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |

**BEND TEST:**

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

Waqas Ali  
Variant,Lahore

Test Performed By: Dr. /Engr. Asad Gillani

Client Reference: VA/29/2

SOM Lab

Ref: 5413(Page-1/1)

Dated: 03-12-2021

Dated: 03-12-2021

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     | 2.601  | 8       | 0.986      | 0.79            | 0.764           | 23.06      | 33.08         | 64370                       | 66560                        | 92350                       | 95490                        | 1.50       | 8.0          | 18.8            |         |
| 2     | 2.631  | 8       | 0.992      | 0.79            | 0.773           | 22.96      | 32.98         | 64090                       | 65500                        | 92060                       | 94090                        | 1.40       | 8.0          | 17.5            |         |
| 3     | 1.498  | 6       | 0.748      | 0.44            | 0.440           | 14.63      | 19.64         | 73320                       | 73320                        | 98460                       | 98460                        | 1.30       | 8.0          | 16.3            |         |
| 4     | 1.501  | 6       | 0.749      | 0.44            | 0.441           | 14.83      | 19.67         | 74350                       | 74180                        | 98610                       | 98390                        | 1.20       | 8.0          | 15.0            |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |

Witnessed By: Muhammad Khurram.(35201-2458690-9)

**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)



Sub Divisional officer,

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

HSD Lalian.(ADP No.4247 Rehabilitation/Improvement Of Rd From Ahmad Nager To Sial Morr)

**Client Reference:** 52/L

**SOM Lab**

**Ref:** 5414(Page-1/1)

**Dated:** 22-11-2021

**Dated:** 03-12-2021

**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     | 2.689  | 8       | 1.003      | 0.79            | 0.790           | 24.97      | 35.98         | 69720                       | 69720                        | 100460                      | 100460                       | 1.20       | 8.0          | 15.0            |         |
| 2     | 2.685  | 8       | 1.002      | 0.79            | 0.789           | 25.10      | 36.03         | 70070                       | 70150                        | 100600                      | 100730                       | 1.40       | 8.0          | 17.5            |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |

**BEND TEST:**

|     |  |   |
|-----|--|---|
| # 8 | 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)

Muhammad Sajjad Arain

Test Performed By: Dr. /Engr. Asad Gillani

RE ACE Consultants-Lahore.(Const. Of Lodhran-Multan Project Section (N-5))(North Bound 62KM)

Client Reference: RE/ACE/LMP/2021/108

SOM Lab

Ref: 5416(Page-1/1)

Dated: 29-11-2021

Dated: 03-12-2021

Test: Tension Test & Bend Test

Test Specification:

ASTM-A-615

Gauge Length: 8 inch

Sample Type:

Deformed Bar (Ittehad 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     | 2.666  | 8       | 0.998      | 0.79            | 0.783           | 28.49      | 35.90         | 79540                       | 80250                        | 100230                      | 101130                       | 1.20       | 8.0          | 15.0            |         |
| 2     | 2.574  | 8       | 0.981      | 0.79            | 0.756           | 24.89      | 32.77         | 69500                       | 72620                        | 91490                       | 95610                        | 1.10       | 8.0          | 13.8            |         |
| 3     | 1.131  | 5       | 0.650      | 0.31            | 0.332           | 10.42      | 13.53         | 74120                       | 69210                        | 96240                       | 89860                        | 1.00       | 8.0          | 12.5            |         |
| 4     | 1.036  | 5       | 0.622      | 0.31            | 0.304           | 10.50      | 13.35         | 74700                       | 76170                        | 95000                       | 96880                        | 1.20       | 8.0          | 15.0            |         |
| 5     | 0.715  | 4       | 0.517      | 0.20            | 0.210           | 6.63       | 10.04         | 73070                       | 69590                        | 110720                      | 105450                       | 1.20       | 8.0          | 15.0            |         |
| 6     | 0.759  | 4       | 0.533      | 0.20            | 0.223           | 7.10       | 10.55         | 78350                       | 70270                        | 116340                      | 104340                       | 1.10       | 8.0          | 13.8            |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |

**BEND TEST:**

|     |  |  |
|-----|--|--|
| # 8 | Sample bend through 180 degrees Satisfactorily without any crack | <b>Note:-</b><br><br>Only Nine Samples Received and Tested |
| # 5 | 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)

Ahmad Ijaz

Test Performed By: Dr. /Engr. Asad Gillani

Quantity Surveyor M/S Linker.(Const. Of Over Head Water Tanks-Dream Gardens,Wazirabad)

Client Reference: Nil

SOM Lab

Ref: 5417(Page-1/1)

Dated: 02-12-2021

Dated: 03-12-2021

Test: Tension Test & Bend Test

Test Specification: ASTM-A-615

Gauge Length: 8 inch

Sample Type: Deformed Bar (FF 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     | 1.042  | 5       | 0.624      | 0.31            | 0.306           | 9.76       | 13.58         | 69410                       | 70310                        | 96600                       | 97860                        | 1.30       | 8.0          | 16.3            |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |

**BEND TEST:**

|     |  |   |
|-----|--|---|
| # 5 | Sample bend through 180 degrees Satisfactorily without any crack | <b>Note:-</b><br><br>Only Two 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)