

Faisal Masood  
Director Steel Sons Lahore.

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

Client Reference: Nil

Dated : 14-07-2023

SOM Lab Ref: CED/SOM/2566(Page-1/1)

Dated : 14-07-2023

Test: Tension Test & Bend Test

Test Specification: ASTM-F 1554

Sample Type: J-Bolt

Gauge Length: 200 m

| 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         | m            | %               |         |
| 1     | 3.480  | 25      | 23.75      | 491             | 443             | 177.20     | 272.20        | 361                         | 400                          | 555                         | 615                          | 45.0       | 200          | 22.5            |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |

**BEND TEST:**

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

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

Engr. Hassan Mehmood

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

RE G3 Engg Consult.(Const.of DHA Newlife Residency Appartments at 273/1Q Block Ph-II  
DHA.Lhr)

Client Reference: G3/DHA-NLD/RE/176

SOM Lab

Ref: 2556 (Page-1/1)

Dated: 13-07-2023

Dated: 14-07-2023

Test: Tension Test & Bend Test  
inc

Test Specification:

ASTM-A-615

Gauge Length: 8 h

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     | 2.67<br>6 | 8       | 1.00<br>0  | 0.7<br>9        | 0.78<br>6       | 22.75      | 34.42         | 63520                       | 63840                        | 96100                       | 96590                        | 1.4<br>0   | 8.<br>0      | 17.<br>5        |         |
| 2     | 2.73<br>3 | 8       | 1.01<br>1  | 0.7<br>9        | 0.80<br>3       | 22.02      | 33.69         | 61470                       | 60480                        | 94050                       | 92530                        | 1.6<br>0   | 8.<br>0      | 20.<br>0        |         |
| 3     | 2.70<br>2 | 8       | 1.00<br>5  | 0.7<br>9        | 0.79<br>4       | 22.91      | 33.71         | 63950                       | 63630                        | 94110                       | 93640                        | 1.3<br>0   | 8.<br>0      | 16.<br>3        |         |
| -     | -         | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -         | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -         | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -         | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -         | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -         | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -         | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |

**BEND TEST:**

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

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  
Asst Dir Infra. DHA Gujranwala.(Sector L)

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

Client Reference: 111/15/AD/RS/Lab/Sec L/350

Dated: 13-07-2023

Test: Tension Test & Bend Test

Test Specification:

Gauge Length: 8 h

Sample Type:

SOM Lab

Ref: 2557 (Page-1/1)

Dated: 14-07-2023

ASTM-A-615

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     | 1.514  | 6       | 0.753      | 0.44            | 0.445           | 15.01      | 19.32         | 75210                       | 74370                        | 96830                       | 95740                        | 1.20       | 8.0          | 15.0            | Mughal  |
| 2     | 1.493  | 6       | 0.748      | 0.44            | 0.439           | 14.37      | 18.45         | 72050                       | 72210                        | 92480                       | 92690                        | 1.40       | 8.0          | 17.5            | Mughal  |
| 3     | 1.498  | 6       | 0.748      | 0.44            | 0.440           | 14.34      | 20.51         | 71890                       | 71890                        | 102800                      | 102800                       | 1.30       | 8.0          | 16.3            | Kamran  |
| 4     | 1.481  | 6       | 0.744      | 0.44            | 0.435           | 11.67      | 16.79         | 58510                       | 59180                        | 84160                       | 85120                        | 1.30       | 8.0          | 16.3            | Kamran  |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |

**BEND TEST:**

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

Omar Sadiq  
Project Manager One Liberty Mall and H&S Hotel Lahore.

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

Client Reference: OL/OS/2023/59

SOM Lab

Ref: 2558 (Page-1/1)

Dated: 14-07-2023

Dated: 14-07-2023

Test: Tension Test & Bend Test

Test Specification:

ASTM-A-615

Gauge Length: 8 h

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     | 2.629  | 8       | 0.992      | 0.79            | 0.773           | 21.66      | 34.51         | 60480                       | 61810                        | 96330                       | 98450                        | 1.60       | 8.0          | 20.0            |         |
| 2     | 2.649  | 8       | 0.995      | 0.79            | 0.778           | 22.12      | 35.02         | 61760                       | 62710                        | 97750                       | 99260                        | 1.60       | 8.0          | 20.0            |         |
| 3     | 1.469  | 6       | 0.742      | 0.44            | 0.432           | 12.51      | 19.98         | 62700                       | 63860                        | 100150                      | 102000                       | 1.50       | 8.0          | 18.8            |         |
| 4     | 1.476  | 6       | 0.743      | 0.44            | 0.434           | 12.41      | 19.67         | 62190                       | 63040                        | 98610                       | 99980                        | 1.60       | 8.0          | 20.0            |         |
| 5     | 0.640  | 4       | 0.489      | 0.20            | 0.188           | 5.83       | 8.46          | 64300                       | 68400                        | 93300                       | 99260                        | 1.10       | 8.0          | 13.8            |         |
| 6     | 0.659  | 4       | 0.497      | 0.20            | 0.194           | 5.12       | 7.77          | 56430                       | 58180                        | 85660                       | 88310                        | 1.20       | 8.0          | 15.0            |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |

**BEND TEST:**

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

M. Tariq Shahzad  
 Exec Dir Projects, The Lake City Developers (Pvt) Ltd Lahore.

Test Performed By: Dr. /Engr. Irfan UI Hassan

Client Reference: LCRG/Test/017

SOM Lab

Ref: 2559 (Page-1/2)

Dated: 13-07-2023

Dated: 14-07-2023

Test: Tension Test & Bend Test

Test Specification:

ASTM-A-615

inc

Deformed

Gauge Length: 8 h

Sample Type:

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     | 2.65<br>2 | 8       | 0.99<br>6  | 0.7<br>9        | 0.77<br>9       | 23.65      | 36.51         | 66020                       | 66960                        | 10194<br>0                  | 10338<br>0                   | 1.5<br>0   | 8.<br>0      | 18.<br>8        |         |
| 2     | 2.65<br>6 | 8       | 0.99<br>7  | 0.7<br>9        | 0.78<br>1       | 23.62      | 36.26         | 65940                       | 66700                        | 10123<br>0                  | 10239<br>0                   | 1.5<br>0   | 8.<br>0      | 18.<br>8        |         |
| -     | -         | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -         | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -         | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -         | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -         | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -         | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -         | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |

**BEND TEST:**

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

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

M. Tariq Shahzad  
 Exec Dir Projects, The Lake City Developers (Pvt) Ltd Lahore.

Test Performed By: Dr. /Engr. Irfan UI Hassan

Client Reference: LCRG/Test/016

SOM Lab

Ref: 2559 (Page-2/2)

Dated: 14-07-2023

Dated: 14-07-2023

Test: Tension Test & Bend Test

Test Specification:

ASTM-A-615

inc

Deformed

Gauge Length: 8 h

Sample Type:

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     | 1.487  | 6       | 0.746      | 0.44            | 0.437           | 12.79      | 19.18         | 64130                       | 64570                        | 96160                       | 96820                        | 1.60       | 8.0          | 20.0            |         |
| 2     | 1.488  | 6       | 0.746      | 0.44            | 0.437           | 13.17      | 19.39         | 66020                       | 66470                        | 97180                       | 97850                        | 1.60       | 8.0          | 20.0            |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |

**BEND TEST:**

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

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

Executive Engineer (B&W) Test Performed By: Dr. /Engr. Asad Ali Gillani  
 UVAS,Lahore.(Construction Of Faculty Hostel Building at CVAS Jhang)

Client Reference: E.E 837

Dated: 17-04-2023

Test: Tension Test & Bend Test

Test Specification: ASTM-A-615

Gauge Length: 8 h

Sample Type: Deformed Bar (Sheikhoo Steel)

SOM Lab

Ref: 2560 (Page-1/1)

Dated: 14-07-2023

| 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     | 1.509  | 6       | 0.751      | 0.44            | 0.443           | 14.22      | 18.93         | 71280                       | 70800                        | 94880                       | 94240                        | 1.40       | 8.0          | 17.5            |         |
| 2     | 0.671  | 4       | 0.501      | 0.20            | 0.197           | 6.34       | 8.58          | 69920                       | 70990                        | 94650                       | 96090                        | 1.10       | 8.0          | 13.8            |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |

**BEND TEST:**

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

Sheikhoo Steel

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

Director Projects, Sheikhoo Sugar Mills (Steel Div), Anwar Abad Kot Addu, Muzaffargarh.

Client Reference: Nil

SOM Lab

Ref: 2561 (Page-1a/1)

Dated: 13-07-2023

Dated: 14-07-2023

Test: Tension Test Test

Test Specification: ASTM-A-615

Gauge Length: 8 h inc

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     | 2.643  | 8       | 0.995      | 0.79            | 0.777           | 25.66      | 35.04         | 71630                       | 72830                        | 97810                       | 99450                        | 1.20       | 8.00         | 15.00           | H# 228-R |
| 2     | 2.657  | 8       | 0.997      | 0.79            | 0.781           | 25.10      | 34.83         | 70070                       | 70870                        | 97240                       | 98360                        | 1.30       | 8.00         | 16.03           | H# 229-R |
| 3     | 2.638  | 8       | 0.993      | 0.79            | 0.775           | 24.82      | 33.71         | 69300                       | 70640                        | 94110                       | 95930                        | 1.40       | 8.00         | 17.05           | H# 230-R |
| 4     | 2.641  | 8       | 0.994      | 0.79            | 0.776           | 24.43      | 34.12         | 68220                       | 69450                        | 95250                       | 96970                        | 1.50       | 8.00         | 18.08           | H# 231-R |
| 5     | 2.646  | 8       | 0.995      | 0.79            | 0.778           | 23.41      | 33.25         | 65370                       | 66380                        | 92830                       | 94260                        | 1.50       | 8.00         | 18.08           | H# 232-R |
| 6     | 2.627  | 8       | 0.991      | 0.79            | 0.772           | 23.47      | 33.49         | 65510                       | 67040                        | 93490                       | 95670                        | 1.40       | 8.00         | 17.05           | H# 233-R |
| 7     | 2.636  | 8       | 0.993      | 0.79            | 0.775           | 23.57      | 33.38         | 65800                       | 67070                        | 93200                       | 95000                        | 1.50       | 8.00         | 18.08           | H# 234-R |
| 8     | 2.632  | 8       | 0.992      | 0.79            | 0.773           | 24.59      | 33.84         | 68640                       | 70150                        | 94480                       | 96560                        | 1.40       | 8.00         | 17.05           | H# 235-R |
| 9     | 2.633  | 8       | 0.993      | 0.79            | 0.774           | 25.10      | 34.61         | 70070                       | 71510                        | 96620                       | 98610                        | 1.40       | 8.00         | 17.05           | H# 236-R |
| 10    | 2.642  | 8       | 0.994      | 0.79            | 0.776           | 26.22      | 35.29         | 73200                       | 74520                        | 98520                       | 100300                       | 1.40       | 8.00         | 17.05           | H# 237-R |

**BEND TEST:**

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

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



Sheikhoo Steel

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

Director Projects, Sheikhoo Sugar Mills (Steel Div), Anwar Abad Kot Addu, Muzaffargarh.

SOM Lab

Client Reference: Nil

Ref: 2561 (Page-1b/1)

Dated: 13-07-2023

Dated: 14-07-2023

Test: Tension Test Test

Test Specification: ASTM-A-615

Gauge Length: 8 h inc

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     | 2.634  | 8       | 0.993      | 0.79            | 0.774           | 24.16      | 33.40         | 67450                       | 68840                        | 93260                       | 95190                        | 1.50       | 8.00         | 18.8            | H# 238-R |
| 2     | 2.637  | 8       | 0.993      | 0.79            | 0.775           | 25.25      | 35.09         | 70490                       | 71860                        | 97950                       | 99850                        | 1.40       | 8.00         | 17.5            | H# 239-R |
| 3     | 2.618  | 8       | 0.990      | 0.79            | 0.769           | 23.85      | 33.76         | 66590                       | 68410                        | 94250                       | 96830                        | 1.40       | 8.00         | 17.5            | H# 240-R |
| 4     | 2.613  | 8       | 0.989      | 0.79            | 0.768           | 24.99      | 34.88         | 69780                       | 71780                        | 97380                       | 100170                       | 1.50       | 8.00         | 18.8            | H# 241-R |
| 5     | 2.634  | 8       | 0.993      | 0.79            | 0.774           | 25.10      | 34.56         | 70070                       | 71510                        | 96470                       | 98470                        | 1.40       | 8.00         | 17.5            | H# 242-R |
| 6     | 2.627  | 8       | 0.991      | 0.79            | 0.772           | 24.92      | 34.51         | 69580                       | 71200                        | 96330                       | 98580                        | 1.50       | 8.00         | 18.8            | H# 243-R |
| 7     | 2.609  | 8       | 0.988      | 0.79            | 0.767           | 24.41      | 33.49         | 68160                       | 70200                        | 93490                       | 96290                        | 1.40       | 8.00         | 17.5            | H# 244-R |
| 8     | 2.620  | 8       | 0.990      | 0.79            | 0.770           | 24.03      | 33.79         | 67080                       | 68820                        | 94340                       | 96790                        | 1.50       | 8.00         | 18.8            | H# 245-R |
| 9     | 2.618  | 8       | 0.990      | 0.79            | 0.769           | 24.46      | 33.74         | 68300                       | 70170                        | 94200                       | 96770                        | 1.40       | 8.00         | 17.5            | H# 246-R |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |          |

**BEND TEST:**

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

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

Nazia Asif  
Plot # 542-D EME Phase-12 Lahore.

Test Performed By: Dr. /Engr. Irfan UI Hassan

Client Reference: Nil  
Dated: 14-07-2023

SOM Lab  
Ref: 2562 (Page-1/1)  
Dated: 14-07-2023

Test: Tension Test & Bend Test  
inc  
Gauge Length: 8 h

Test Specification: ASTM-A-615  
Deformed  
Sample Type: 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     | 0.673  | 4       | 0.502      | 0.20            | 0.198           | 7.19       | 8.41          | 79250                       | 80050                        | 92740                       | 93680                        | 1.20       | 8.0          | 15.0            |         |
| 2     | 0.672  | 4       | 0.501      | 0.20            | 0.197           | 6.63       | 7.80          | 73070                       | 74180                        | 85990                       | 87300                        | 1.30       | 8.0          | 16.3            |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |

**BEND TEST:**

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

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

Assistant Director (Technical)  
Anti-Corruption Estb.Multan Regn,Multan.(ACE Multan)

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

Client Reference: ACE.MR-(163)/23/4812

SOM Lab

Ref: 2563 (Page-1/1)

Dated: 13-07-2023

Dated: 14-07-2023

Test: Tension Test & Bend Test

Test Specification:

ASTM-A-615

Gauge Length: 8 h

Sample Type:

Deformed Bar (Agha 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           | 27.03      | 33.81         | 75470                       | 74250                        | 94400                       | 92870                        | 1.40       | 8.0          | 17.5            |         |
| 2     | 2.682  | 8       | 1.002      | 0.79            | 0.788           | 26.22      | 36.72         | 73200                       | 73380                        | 102510                      | 102770                       | 1.60       | 8.0          | 20.0            |         |
| 3     | 0.668  | 4       | 0.500      | 0.20            | 0.196           | 5.68       | 8.63          | 62610                       | 63890                        | 95210                       | 97150                        | 1.40       | 8.0          | 17.5            |         |
| 4     | 0.667  | 4       | 0.500      | 0.20            | 0.196           | 5.56       | 8.53          | 61270                       | 62520                        | 94090                       | 96010                        | 1.30       | 8.0          | 16.3            |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |

**BEND TEST:**

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

Divisional Forest Officer

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

Gujrat Forest Division.(Const of Office Building Of The Conservation Of Forest Officer)

Client Reference: 1048/AC

SOM Lab

Ref: 2564 (Page-1/1)

Dated: 26-05-2023

Dated: 14-07-2023

Test: Tension Test & Bend Test

Test Specification:

ASTM-A-615

inc

Deformed

Gauge Length: 8 h

Sample Type:

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     | 1.496  | 6       | 0.748      | 0.44            | 0.440           | 16.77      | 20.76         | 84050                       | 84050                        | 104080                      | 104080                       | 1.20       | 8.0          | 15.0            |         |
| 2     | 1.496  | 6       | 0.748      | 0.44            | 0.440           | 16.48      | 20.39         | 82620                       | 82620                        | 102190                      | 102190                       | 1.10       | 8.0          | 13.8            |         |
| 3     | 0.670  | 4       | 0.501      | 0.20            | 0.197           | 6.52       | 8.69          | 71940                       | 73040                        | 95770                       | 97230                        | 1.20       | 8.0          | 15.0            |         |
| 4     | 0.672  | 4       | 0.501      | 0.20            | 0.197           | 6.60       | 8.69          | 72730                       | 73840                        | 95770                       | 97230                        | 1.30       | 8.0          | 16.3            |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |

**BEND TEST:**

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

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

Test Performed by: S. Asad Ali Gillani

AF Steel  
Re Rolling Mills Lahore.

Client Reference No.: AFS/Letter # B-0112

Dated: 14-07-2023

SOM Lab Ref: CED/SOM/2565 (Page 1/1)

Dated:14-07-2023

Test Type: Tensile Test

Sample Type: Anchor Bolts

Test Specification: ASTM – F-1554

Gauge Length: 200 mm

| S.No. | Diameter | Area            | Yield Load | Ultimate Load | Yield Stress | Ultimate. Stress | Elongation | Gauge Length | %age Elongation | Remarks |
|-------|----------|-----------------|------------|---------------|--------------|------------------|------------|--------------|-----------------|---------|
|       | mm       | mm <sup>2</sup> | kN         | kN            | MPa          | MPa              | mm         | mm           | %               |         |
| 1     | M28      | 615             | 260.0      | 383.5         | 422          | 623              | 40.0       | 200          | 20.0            |         |
| 2     | M25      | 490             | 228.7      | 309.5         | 466          | 631              | 37.5       | 200          | 18.8            |         |
| 3     | M20      | 314             | 139.5      | 195.2         | 444          | 622              | 35.0       | 200          | 17.5            |         |
| 4     | M20      | 314             | 158.2      | 196.0         | 503          | 624              | 37.5       | 200          | 18.8            |         |

**Note:-**

**Only Four**

**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)

