

Syed Mohsin Ali  
 Manager QA/QC, Department, Bahria Town, (Pvt) Ltd Lahore

Test Performed By: Dr. /Engr.

DS. Asad Ali  
Gillani

Client Reference: QA/QC-Steel-2057

SOM Lab

Ref: 2752(Page-1/1)

Dated: 20-07-2020

Dated: 20-07-2020

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     | 2.633  | 8       | 0.993      | 0.79            | 0.774           | 26.04      | 35.14         | 72710                       | 74220                        | 98100                       | 100120                       | 1.30       | 8.0          | 16.3            |         |
| 2     | 2.644  | 8       | 0.995      | 0.79            | 0.777           | 26.07      | 34.76         | 72770                       | 73990                        | 97040                       | 98670                        | 1.20       | 8.0          | 15.0            |         |
| 3     | 1.537  | 6       | 0.759      | 0.44            | 0.452           | 14.39      | 20.59         | 72150                       | 70230                        | 103210                      | 100470                       | 1.20       | 8.0          | 15.0            |         |
| 4     | 1.532  | 6       | 0.757      | 0.44            | 0.450           | 15.49      | 21.41         | 77670                       | 75940                        | 107300                      | 104920                       | 1.10       | 8.0          | 13.8            |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |

**BEND TEST:**

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

Syed Saulat Raza

Test Performed By: Dr. /Engr.

M Irfan UI Hassan

Dy Director (TECH), Anti-Corruption Establishment, Sargodha, Region, Sargodha

Client Reference: ACE-SR-2020/4330

SOM Lab

Ref: 2753(Page-1/1)

Dated: 18-07-2020

Dated: 20-07-2020

Test: Tension Test & Bend Test

Test Specification:

ASTM-A-615

Deformed

Gauge Length: 8 inch

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     | 1.206  | 6       | 0.671      | 0.44            | 0.354           | 9.38       | 14.68         | 47010                       | 58430                        | 73580                       | 91450                        | 1.20       | 8.0          | 15.0            |         |
| 2     | 1.391  | 6       | 0.722      | 0.44            | 0.409           | 10.14      | 15.90         | 50840                       | 54700                        | 79710                       | 85750                        | 1.30       | 8.0          | 16.3            |         |
| 3     | 0.572  | 4       | 0.462      | 0.20            | 0.168           | 4.69       | 6.93          | 51710                       | 61560                        | 76440                       | 91000                        | 1.00       | 8.0          | 12.5            |         |
| 4     | 0.582  | 4       | 0.467      | 0.20            | 0.171           | 4.99       | 7.34          | 55080                       | 64420                        | 80940                       | 94660                        | 1.10       | 8.0          | 13.8            |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |

**BEND TEST:**

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

Maj Adnan khalid®

Test Performed By: Dr. /Engr.

M Irfan UI Hassan

Dy Dir MTL, Proposed Commercial Plaza, DRGCC Ph-III, DHA Ph-VI, (M/S Construct)

Client Reference: 408/241/E/Lab/947/5561

SOM Lab

Ref: 2754(Page-1/1)

Dated: 20-07-2020

Dated: 20-07-2020

Test: Tension Test & Bend Test

Test Specification:

ASTM-A-615

Deformed Bar (Kamran

Gauge Length: 8 inch

Sample Type:

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     | 1.472  | 6       | 0.743      | 0.44            | 0.433           | 13.15      | 19.24         | 65910                       | 66980                        | 96420                       | 97980                        | 1.20       | 8.0          | 15.0            |         |
| 2     | 1.462  | 6       | 0.740      | 0.44            | 0.430           | 13.66      | 19.78         | 68470                       | 70060                        | 99130                       | 101430                       | 1.10       | 8.0          | 13.8            |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               | -       |

**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)

Riasat Ali Khan  
Construction of Apex Mall. Faisalabad

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

Client Reference: ni  
Dated: nil

SOM Lab  
Ref: 2756(Page-1/1)  
Dated: 20-07-2020

Test: Tension Test & Bend Test Test Specification:

ASTM-A-615  
Deformed  
Bar

Gauge Length: 8 inch Sample Type:

| S.No. | Weight | Dia.    |            | Area            |                 | Yield Load | Ultimate Load | Yield Stress                |                              | Ult. Stress                 |                              | Elongation | Gauge Length | %age Elongation | Remarks |
|-------|--------|---------|------------|-----------------|-----------------|------------|---------------|-----------------------------|------------------------------|-----------------------------|------------------------------|------------|--------------|-----------------|---------|
|       |        | Nominal | Calculated | Nominal         | Calculated      |            |               | (according to nominal area) | (according to measured area) | (according to nominal area) | (according to measured area) |            |              |                 |         |
|       | lb/ft  | #       | in         | in <sup>2</sup> | in <sup>2</sup> | Tons       | Tons          | psi                         | psi                          | psi                         | psi                          | in         | in           | %               |         |
| 1     | 2.579  | 8       | 0.982      | 0.79            | 0.758           | 28.44      | 36.90         | 79400                       | 82750                        | 103020                      | 107370                       | 1.20       | 8.0          | 15.0            |         |
| 2     | 1.062  | 5       | 0.630      | 0.31            | 0.312           | 10.50      | 13.91         | 74700                       | 74220                        | 98990                       | 98360                        | 1.30       | 8.0          | 16.3            |         |
| 3     | 1.055  | 5       | 0.628      | 0.31            | 0.310           | 9.68       | 12.03         | 68900                       | 68900                        | 85580                       | 85580                        | 1.20       | 8.0          | 15.0            |         |
| 4     | 0.661  | 4       | 0.497      | 0.20            | 0.194           | 6.63       | 8.66          | 73070                       | 75330                        | 95550                       | 98500                        | 1.10       | 8.0          | 13.8            |         |
| 5     | 0.656  | 4       | 0.496      | 0.20            | 0.193           | 6.42       | 8.41          | 70820                       | 73390                        | 92740                       | 96100                        | 1.00       | 8.0          | 12.5            |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |

**BEND TEST:**

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

Riasat Ali Khan  
Construction of Apex Mall. Faisalabad

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

Client Reference: ni  
Dated: nil

SOM Lab  
Ref: 2756(Page-1/1)  
Dated: 20-07-2020

Test: Tension Test & Bend Test Test Specification:

ASTM-A-615  
Deformed  
Bar

Gauge Length: 8 inch Sample Type:

| S.No. | Weight | Dia.    |            | Area            |                 | Yield Load | Ultimate Load | Yield Stress                |                              | Ult. Stress                 |                              | Elongation | Gauge Length | %age Elongation | Remarks |
|-------|--------|---------|------------|-----------------|-----------------|------------|---------------|-----------------------------|------------------------------|-----------------------------|------------------------------|------------|--------------|-----------------|---------|
|       |        | Nominal | Calculated | Nominal         | Calculated      |            |               | (according to nominal area) | (according to measured area) | (according to nominal area) | (according to measured area) |            |              |                 |         |
|       | lb/ft  | #       | in         | in <sup>2</sup> | in <sup>2</sup> | Tons       | Tons          | psi                         | psi                          | psi                         | psi                          | in         | in           | %               |         |
| 1     | 2.579  | 8       | 0.982      | 0.79            | 0.758           | 28.44      | 36.90         | 79400                       | 82750                        | 103020                      | 107370                       | 1.20       | 8.0          | 15.0            |         |
| 2     | 1.062  | 5       | 0.630      | 0.31            | 0.312           | 10.50      | 13.91         | 74700                       | 74220                        | 98990                       | 98360                        | 1.30       | 8.0          | 16.3            |         |
| 3     | 1.055  | 5       | 0.628      | 0.31            | 0.310           | 9.68       | 12.03         | 68900                       | 68900                        | 85580                       | 85580                        | 1.20       | 8.0          | 15.0            |         |
| 4     | 0.661  | 4       | 0.497      | 0.20            | 0.194           | 6.63       | 8.66          | 73070                       | 75330                        | 95550                       | 98500                        | 1.10       | 8.0          | 13.8            |         |
| 5     | 0.656  | 4       | 0.496      | 0.20            | 0.193           | 6.42       | 8.41          | 70820                       | 73390                        | 92740                       | 96100                        | 1.00       | 8.0          | 12.5            |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |
| -     | -      | -       | -          | -               | -               | -          | -             | -                           | -                            | -                           | -                            | -          | -            | -               |         |

**BEND TEST:**

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