

Muhammad Danish Khurshid
 Manager Construction, Orient Electronics (Pvt) Ltd, Lahore

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

Client Reference: OSH-SO/UET/ Steel Test/140721-29

Dated: 12-07-2021

SOM Lab Ref: CED/SOM/4667 (Page-1/1)

Dated: 13-07-2021

Test: Tensile Test & Bend Test

Test Specification: ASTM-A-615

Sample Type: Deformed Bar

Gauge Length: 200 mm

| S.No. | Weight | Dia. | | Area | | Yield Load | Ultimate Load | Yield Stress | | Ult. Stress | | Elongation | Gauge Length | %age Elongation | Remarks |
|-------|--------|---------|------------|-----------------|-----------------|------------|---------------|-----------------------------|------------------------------|-----------------------------|------------------------------|------------|--------------|-----------------|---------|
| | | Nominal | Calculated | Nominal | Calculated | | | (according to nominal area) | (according to measured area) | (according to nominal area) | (according to measured area) | | | | |
| | kg/m | mm | mm | mm ² | mm ² | kN | kN | MPa | MPa | MPa | MPa | mm | mm | % | |
| 1 | 1.002 | 13 | 12.77 | 133 | 128 | 64.20 | 90.50 | 484 | 502 | 682 | 708 | 32.5 | 200 | 16.3 | |
| 2 | 1.008 | 13 | 12.79 | 133 | 128 | 64.20 | 87.70 | 484 | 500 | 661 | 683 | 35.0 | 200 | 17.5 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |

BEND TEST:

| | | |
|------|--|---|
| 13mm | Sample bend through 180 degrees Satisfactorily without any crack | Note:- Only Three Samples Received and Tested |
| | | |
| | | |
| | | |

Note: Please always confirm the results of above report on web www.uet-civil.edu.pk

Irfan Siddique
Building Standards Ltd. Lahore

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

Client Reference: GT/LTR/210701-074
SOM Lab Ref: CED/SOM/4677 (Page-1/1)

Dated: 13-07-2021
Dated: 13-07-2021

Test: Tension Test
Sample Type: Deformed Bar

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 ² | mm ² | kN | kN | MPa | MPa | MPa | MPa | mm | mm | % | |
| 1 | 0.992 | 12 | 12.67 | 113 | 126 | 58.50 | 85.00 | 517 | 465 | 752 | 675 | 35.0 | 200 | 17.5 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

BEND TEST:

| | | |
|----|------------------------|--|
| -- | No Bend test performed | Note:- Only One Sample Received and Tested |
| | | |
| | | |
| | | |

Note: Please always confirm the results of above report on web www.uet-civil.edu.pk

Engr. Shahbaz Khan

Test Performed By:

Dr. /Engr.

S. Asad Ali Gillani

Project Manager/Resident Head (Civil) JHC -48 MW Jaggran -II, Hydropower Project

Client Reference: E314-JHC-EPCC-OC-405

Dated: 13-07-2021

SOM Lab Ref: CED/SOM/4668(Page-1/1)

Dated: 13-07-2021

Test: Tension Test & Bend Test

Test Specification: ASTM -615

Sample Type: Deformed Bar

Gauge Length: 50 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 ² | mm ² | kN | kN | MPa | MPa | MPa | MPa | mm | mm | % | |
| 1 | 4.043 | 25 | 25.61 | 491 | 515 | 252.00 | 354.70 | 513 | 490 | 723 | 689 | 30.0 | 200 | 15.0 | |
| 2 | 4.089 | 25 | 25.75 | 491 | 521 | 296.00 | 367.50 | 603 | 569 | 749 | 706 | 30.0 | 200 | 15.0 | |
| 3 | 0.905 | 13 | 12.12 | 133 | 115 | 65.20 | 82.00 | 491 | 566 | 618 | 712 | 22.5 | 200 | 11.3 | |
| 4 | 0.934 | 13 | 12.31 | 133 | 119 | 64.50 | 87.00 | 486 | 543 | 655 | 732 | 32.5 | 200 | 16.3 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |

BEND TEST:

| | | |
|------|--|---|
| 25mm | Sample bend through 180 degrees Satisfactorily without any crack | Note:- Only Six Samples Received and Tested |
| 13mm | 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

Engr. Shahbaz Khan

Test Performed By:

Dr. /Engr.

S. Asad Ali Gillani

Project Manager/Resident Head (Civil) JHC -48 MW Jaggran -II, Hydropower Project

Client Reference: E314-JHC-EPCC-OC-407

Dated: 13-07-2021

SOM Lab Ref: CED/SOM/4669(Page-1/1)

Dated: 13-07-2021

Test: Tension Test & Bend Test

Test Specification: ASTM -615

Sample Type: Deformed Bar

Gauge Length: 50 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 ² | mm ² | kN | kN | MPa | MPa | MPa | MPa | mm | mm | % | |
| 1 | 3.031 | 22 | 22.17 | 380 | 386 | 236.50 | 281.00 | 622 | 613 | 739 | 728 | 35.0 | 200 | 17.5 | |
| 2 | 3.016 | 22 | 22.12 | 380 | 384 | 234.50 | 280.00 | 617 | 611 | 737 | 729 | 35.0 | 200 | 17.5 | |
| 3 | 2.228 | 19 | 19.01 | 284 | 284 | 146.70 | 183.00 | 517 | 517 | 645 | 645 | 32.5 | 200 | 16.3 | |
| 4 | 2.207 | 19 | 18.92 | 284 | 281 | 148.50 | 183.70 | 524 | 529 | 648 | 654 | 25.0 | 200 | 12.5 | |
| 5 | 1.567 | 16 | 15.94 | 201 | 200 | 103.20 | 133.00 | 513 | 517 | 661 | 667 | 30.0 | 200 | 15.0 | |
| 6 | 1.590 | 16 | 16.06 | 201 | 203 | 102.70 | 131.50 | 511 | 508 | 654 | 650 | 25.0 | 200 | 12.5 | |
| 7 | 1.007 | 12 | 12.78 | 113 | 128 | 65.00 | 87.50 | 575 | 507 | 774 | 683 | 30.0 | 200 | 15.0 | |
| 8 | 1.002 | 12 | 12.75 | 113 | 128 | 65.70 | 89.00 | 581 | 515 | 787 | 698 | 32.5 | 200 | 16.3 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |

BEND TEST:

| | | |
|------|--|--|
| 22mm | Sample bend through 180 degrees Satisfactorily without any crack | Note:- Only Twelve Samples Received and Tested |
| 19mm | Sample bend through 180 degrees Satisfactorily without any crack | |
| 16mm | Sample bend through 180 degrees Satisfactorily without any crack | |
| 12mm | Sample bend through 180 degrees Satisfactorily without any crack | |
| | | |

Note: Please always confirm the results of above report on web www.uet-civil.edu.pk

Engr. Shahbaz Khan

Test Performed By:

Dr. /Engr.

S. Asad Ali Gillani

Project Manager/Resident Head (Civil) JHC -48 MW Jaggran -II, Hydropower Project

Client Reference: E314-JHC-EPCC-OC-408

Dated: 13-07-2021

SOM Lab Ref: CED/SOM/4670(Page-1/1)

Dated: 13-07-2021

Test: Tension Test & Bend Test

Test Specification: ASTM -615

Sample Type: Deformed Bar

Gauge Length: 50 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 ² | mm ² | kN | kN | MPa | MPa | MPa | MPa | mm | mm | % | |
| 1 | 3.937 | 25 | 25.26 | 491 | 501 | 267.50 | 341.00 | 545 | 534 | 695 | 681 | 32.5 | 200 | 16.3 | |
| 2 | 3.910 | 25 | 25.18 | 491 | 498 | 267.50 | 339.70 | 545 | 538 | 692 | 683 | 30.0 | 200 | 15.0 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |

BEND TEST:

| | | |
|------|--|---|
| 25mm | Sample bend through 180 degrees Satisfactorily without any crack | Note:- Only Three Samples Received and Tested |
| | | |
| | | |
| | | |

Note: Please always confirm the results of above report on web www.uet-civil.edu.pk

Maj. General Farhan Akhtar
(Retd.)

Test Performed By: Dr. /Engr.

S. Asad Ali
Gillani

Lahore Garrison Education System C/O Headquarters 4 Corps, 9 Link Tufail Road, Lahore Cantt

Client Reference: 8C/BWC/209

SOM Lab 4665Page-
Ref: 1/1)

Dated: 12-07-2021

Dated: 13-07-2021

Test: Tension Test & Bend Test

Test Specification: ASTM-A-615

Guage 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 ² | in ² | Tons | Tons | psi | psi | psi | psi | in | in | % | |
| 1 | 1.502 | 6 | 0.749 | 0.44 | 0.441 | 14.12 | 19.54 | 70770 | 70610 | 97950 | 97730 | 1.10 | 8.0 | 13.8 | |
| 2 | 1.500 | 6 | 0.749 | 0.44 | 0.441 | 14.02 | 19.54 | 70260 | 70100 | 97950 | 97730 | 1.00 | 8.0 | 12.5 | |
| 3 | 0.660 | 4 | 0.497 | 0.20 | 0.194 | 6.34 | 8.72 | 69920 | 72080 | 96110 | 99080 | 1.00 | 8.0 | 12.5 | |
| 4 | 0.661 | 4 | 0.497 | 0.20 | 0.194 | 6.47 | 8.82 | 71380 | 73590 | 97230 | 100240 | 1.00 | 8.0 | 12.5 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |

BEND TEST:

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

Note: Please always confirm the results of above report on web www.uet-civil.edu.pk

Abid Mann
Construction Manager, One Liberty, Lahore

Test Performed By: Dr. /Engr.

S. Asad Ali
Gillani

Client Reference: OL/2021/07/05

Dated: 13-07-2021

SOM Lab

Ref: 4666(Page-1/1)

Dated: 13-07-2021

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 ² | in ² | Tons | Tons | psi | psi | psi | psi | in | in | % | |
| 1 | 2.648 | 8 | 0.995 | 0.79 | 0.778 | 25.69 | 37.99 | 71720 | 72820 | 106060 | 107700 | 1.10 | 8.0 | 13.8 | |
| 2 | 2.627 | 8 | 0.991 | 0.79 | 0.772 | 25.89 | 38.18 | 72290 | 73970 | 106580 | 109060 | 1.10 | 8.0 | 13.8 | |
| 3 | 1.451 | 6 | 0.736 | 0.44 | 0.426 | 13.46 | 22.12 | 67450 | 69660 | 110880 | 114520 | 1.00 | 8.0 | 12.5 | |
| 4 | 1.456 | 6 | 0.738 | 0.44 | 0.428 | 13.15 | 22.40 | 65910 | 67760 | 112260 | 115400 | 1.10 | 8.0 | 13.8 | |
| 5 | 0.641 | 4 | 0.489 | 0.20 | 0.188 | 5.20 | 7.90 | 57330 | 60990 | 87120 | 92680 | 1.40 | 8.0 | 17.5 | |
| 6 | 0.644 | 4 | 0.491 | 0.20 | 0.189 | 5.12 | 7.80 | 56430 | 59720 | 85990 | 91000 | 1.40 | 8.0 | 17.5 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |

Witnessed By: Abid Mann, Client Purchaser

BEND TEST:

| | | |
|-----|--|--|
| # 8 | Sample bend through 180 degrees Satisfactorily without any crack | Note:- Only Nine Samples Received and Tested |
| # 6 | Sample bend through 180 degrees Satisfactorily without any crack | |
| # 4 | Sample bend through 180 degrees Satisfactorily without any crack | |
| | | |

Note: Please always confirm the results of above report on web www.uet-civil.edu.pk

Sub Divisional Officer

Test Performed By:

Dr. /Engr.

S Asad Ali Gillani

Punjab Employees Social Security Institution ahesd Office, 3-A Gulberg V Lahore

Client Reference: SS.DC()/96

SOM Lab

Ref:

4671(Page-1/1)

Dated: 16-06-2021

Dated:

13-07-2021

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 ² | in ² | Tons | Tons | psi | psi | psi | psi | in | in | % | |
| 1 | 2.651 | 8 | 0.996 | 0.79 | 0.779 | 29.36 | 34.45 | 81960 | 83120 | 96190 | 97550 | 1.40 | 8.0 | 17.5 | |
| 2 | 2.662 | 8 | 0.998 | 0.79 | 0.782 | 29.28 | 34.78 | 81730 | 82570 | 97100 | 98090 | 1.30 | 8.0 | 16.3 | |
| 3 | 1.531 | 6 | 0.757 | 0.44 | 0.450 | 15.31 | 19.44 | 76750 | 75040 | 97440 | 95270 | 1.30 | 8.0 | 16.3 | |
| 4 | 1.526 | 6 | 0.755 | 0.44 | 0.448 | 15.72 | 19.54 | 78790 | 77380 | 97950 | 96200 | 1.10 | 8.0 | 13.8 | |
| 5 | 0.656 | 4 | 0.496 | 0.20 | 0.193 | 6.78 | 8.89 | 74750 | 77470 | 98020 | 101580 | 1.00 | 8.0 | 12.5 | |
| 6 | 0.659 | 4 | 0.497 | 0.20 | 0.194 | 7.16 | 9.17 | 78910 | 81350 | 101170 | 104300 | 1.00 | 8.0 | 12.5 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |

BEND TEST:

| | | |
|-----|--|--|
| # 8 | Sample bend through 180 degrees Satisfactorily without any crack | Note:- Only Nine Samples Received and Tested |
| # 6 | Sample bend through 180 degrees Satisfactorily without any crack | |
| # 4 | Sample bend through 180 degrees Satisfactorily without any crack | |
| | | |

Note: Please always confirm the results of above report on web www.uet-civil.edu.pk

MYCO Engineers

Test Performed By:

Dr. /Engr.

S Asad Ali Gillani

65-Jafar Town Sher-e-Rabbani Chowk, Link Raiwind Road,\ Lahore

Client Reference: MEC/BEV/SMC/05

SOM Lab

Ref:

4672(Page-1/1)

Dated: 13-07-2021

Dated:

13-07-2021

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 ² | in ² | Tons | Tons | psi | psi | psi | psi | in | in | % | |
| 1 | 1.496 | 6 | 0.748 | 0.44 | 0.440 | 16.31 | 20.13 | 81750 | 81750 | 100910 | 100910 | 1.30 | 8.0 | 16.3 | |
| 2 | 1.503 | 6 | 0.750 | 0.44 | 0.442 | 16.74 | 20.39 | 83900 | 83520 | 102190 | 101730 | 1.20 | 8.0 | 15.0 | |
| 3 | 0.666 | 4 | 0.500 | 0.20 | 0.196 | 6.01 | 8.12 | 66320 | 67680 | 89590 | 91420 | 1.20 | 8.0 | 15.0 | |
| 4 | 0.670 | 4 | 0.501 | 0.20 | 0.197 | 6.14 | 8.07 | 67670 | 68700 | 89030 | 90390 | 1.30 | 8.0 | 16.3 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |

BEND TEST:

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

Note: Please always confirm the results of above report on web www.uet-civil.edu.pk

Hashir Zia (Civil Engineer)
Downtown Mall & Residences, Lahore

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

Client Reference: Nil

SOM Lab

Ref: 4674(Page-1/1)

Dated: Nil

Dated: 13-07-2021

Test: Tension 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 ² | in ² | Tons | Tons | psi | psi | psi | psi | in | in | % | |
| 1 | 2.623 | 8 | 0.991 | 0.79 | 0.771 | 27.14 | 35.83 | 75760 | 77620 | 100030 | 102500 | 1.10 | 8.0 | 13.8 | |
| 2 | 1.502 | 6 | 0.749 | 0.44 | 0.441 | 13.56 | 19.36 | 67960 | 67800 | 97030 | 96810 | 1.50 | 8.0 | 18.8 | |
| 3 | 0.662 | 4 | 0.498 | 0.20 | 0.195 | 5.98 | 8.53 | 65990 | 67680 | 94090 | 96500 | 1.20 | 8.0 | 15.0 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |

BEND TEST:

| | | |
|----|------------------------|---|
| -- | No Bend test performed | Note:- Only Three Samples Received and Tested |
| | | |
| | | |
| | | |

Note: Please always confirm the results of above report on web www.uet-civil.edu.pk

Sajid Abid
Tijaarat Developers, Lahore

Test Performed By: Dr. /Engr.

S. Asad Ali
Gillani

Client Reference: nil

Dated: 13-07-2021

Test: Tension Test & Bend Test

Gauge Length: 8 inch

Test Specification:

Sample Type:

SOM Lab

Ref: 4675(Page-1/1)

Dated: 13-07-2021

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 ² | in ² | Tons | Tons | psi | psi | psi | psi | in | in | % | |
| 1 | 2.695 | 8 | 1.004 | 0.79 | 0.792 | 21.41 | 31.35 | 59760 | 59610 | 87510 | 87290 | 1.50 | 8.0 | 18.8 | |
| 2 | 2.655 | 8 | 0.997 | 0.79 | 0.780 | 21.02 | 30.91 | 58680 | 59440 | 86290 | 87390 | 1.40 | 8.0 | 17.5 | |
| 3 | 1.484 | 6 | 0.745 | 0.44 | 0.436 | 13.51 | 18.32 | 67700 | 68320 | 91820 | 92660 | 1.40 | 8.0 | 17.5 | |
| 4 | 1.466 | 6 | 0.741 | 0.44 | 0.431 | 13.46 | 17.89 | 67450 | 68860 | 89670 | 91550 | 1.50 | 8.0 | 18.8 | |
| 5 | 0.639 | 4 | 0.489 | 0.20 | 0.188 | 6.63 | 8.56 | 73070 | 77730 | 94420 | 100450 | 1.20 | 8.0 | 15.0 | |
| 6 | 0.642 | 4 | 0.491 | 0.20 | 0.189 | 6.68 | 8.63 | 73630 | 77910 | 95210 | 100750 | 1.10 | 8.0 | 13.8 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |

BEND TEST:

| | | |
|-----|--|--|
| # 8 | Sample bend through 180 degrees Satisfactorily without any crack | Note:- Only Nine Samples Received and Tested |
| # 6 | Sample bend through 180 degrees Satisfactorily without any crack | |
| # 4 | Sample bend through 180 degrees Satisfactorily without any crack | |
| | | |

Note: Please always confirm the results of above report on web www.uet-civil.edu.pk

Muhammad Naveed Siddique
Resident Engineer, Velosi Integrity & Safety Pakistan (Pvt) Ltd.

Test Performed By:

Dr. /Engr.

S. Asad Ali
Gillani

Client Reference: VISP/CON/FSD-016

Dated: 03-07-2021

Test: Tension Test & Bend Test

Gauge Length: 8 inch

Test Specification:

Sample Type:

SOM Lab

Ref: 4676(Page-1/2)

Dated: 13-07-2021

ASTM-A-615

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 ² | in ² | Tons | Tons | psi | psi | psi | psi | in | in | % | |
| 1 | 1.506 | 6 | 0.751 | 0.44 | 0.443 | 15.90 | 21.22 | 79710 | 79170 | 106380 | 105660 | 1.20 | 8.0 | 15.0 | |
| 2 | 1.548 | 6 | 0.761 | 0.44 | 0.455 | 16.18 | 20.71 | 81090 | 78420 | 103830 | 100400 | 1.30 | 8.0 | 16.3 | |
| 3 | 0.678 | 4 | 0.503 | 0.20 | 0.199 | 6.68 | 8.54 | 73630 | 74000 | 94200 | 94670 | 1.40 | 8.0 | 17.5 | |
| 4 | 0.670 | 4 | 0.501 | 0.20 | 0.197 | 6.75 | 8.53 | 74420 | 75550 | 94090 | 95520 | 1.30 | 8.0 | 16.3 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |

BEND TEST:

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

Note: Please always confirm the results of above report on web www.uet-civil.edu.pk

Muhammad Naveed Siddique
Resident Engineer, Velosi Integrity & Safety Pakistan (Pvt) Ltd.

Test Performed By: Dr. /Engr.

S. Asad Ali
Gillani

Client Reference: VISP/CON/FSD-012

Dated: 29-03-2021

Test: Tension Test & Bend Test

Gauge Length: 8 inch

Test Specification:

Sample Type:

SOM Lab

Ref: 4676(Page-2/2)

Dated: 13-07-2021

ASTM-A-615

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 ² | in ² | Tons | Tons | psi | psi | psi | psi | in | in | % | |
| 1 | 1.482 | 6 | 0.745 | 0.44 | 0.436 | 17.40 | 23.24 | 87220 | 88020 | 116500 | 117570 | 1.10 | 8.0 | 13.8 | |
| 2 | 0.582 | 4 | 0.467 | 0.20 | 0.171 | 5.61 | 8.10 | 61830 | 72310 | 89370 | 104520 | 1.20 | 8.0 | 15.0 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |

BEND TEST:

| | | |
|-----|--|--|
| # 6 | Sample bend through 180 degrees Satisfactorily without any crack | Note:- 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

