

Altaf Hussain

Test Performed By:

Dr. /Engr.

S. Asad Ali Gillani

M.E. A.S. Enterprises, Engineers (PROJECT: STYLE TEXTILE RAIWAND ROAD)

Client Reference: USD/ASE/18

Dated: 04-02-2020

SOM Lab Ref: CED/SOM/2083(Page-1/1)

Dated: 06-02-2020

Test: Tension Test & Bend Test

Test Specification: ASTM-A 615

Sample Type: M S Deformed Bar(AFCO Steel)

Gauge Length: 200 mm

| S.No. | Weight | Dia. | | Area | | Yield Load | Ultimate Load | Yield Stress | | Ult. Stress | | Elongation | Gauge Length | %age Elongation | Remarks |
|-------|--------|---------|------------|-----------------|-----------------|------------|---------------|-----------------------------|------------------------------|-----------------------------|------------------------------|------------|--------------|-----------------|---------|
| | | Nominal | Calculated | Nominal | Calculated | | | (according to nominal area) | (according to measured area) | (according to nominal area) | (according to measured area) | | | | |
| | kg/m | mm | mm | mm ² | mm ² | kN | kN | MPa | MPa | MPa | MPa | mm | mm | % | |
| 1 | 3.745 | 25 | 24.64 | 491 | 477 | 208.70 | 329.00 | 425 | 438 | 670 | 690 | 35.0 | 200 | 17.5 | |
| 2 | 3.733 | 25 | 24.61 | 491 | 476 | 207.50 | 328.50 | 423 | 437 | 669 | 691 | 35.0 | 200 | 17.5 | |
| 3 | 0.868 | 12 | 11.87 | 113 | 111 | 54.70 | 69.70 | 484 | 495 | 616 | 631 | 32.5 | 200 | 16.3 | |
| 4 | 0.929 | 12 | 12.27 | 113 | 118 | 50.50 | 79.20 | 447 | 427 | 700 | 670 | 30.0 | 200 | 15.0 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

BEND TEST:

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

Safsar Hussain
Resident Engineer, ACE, Danish School Mankera Residency,

Test Performed By:

Dr. /Engr.

S. Asad Ali
Gillani

Client Reference: ACE/RE-PDS/MNK/BHK/20/290

Dated: 02-02-2020

Test: Tension Test & Bend Test

Gauge Length: 8 inch

Test Specification:

Sample Type:

SOM Lab

Ref: 2186(Page-1/1)

Dated: 07-02-2020

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 | 1.073 | 5 | 0.633 | 0.31 | 0.315 | 12.25 | 14.58 | 87170 | 85790 | 103710 | 102060 | 1.00 | 8.0 | 12.5 | |
| 2 | 1.065 | 5 | 0.631 | 0.31 | 0.313 | 12.23 | 14.58 | 87030 | 86190 | 103710 | 102710 | 1.20 | 8.0 | 15.0 | |
| 3 | 0.674 | 4 | 0.502 | 0.20 | 0.198 | 6.34 | 9.48 | 69920 | 70630 | 104540 | 105600 | 1.10 | 8.0 | 13.8 | |
| 4 | 0.675 | 4 | 0.502 | 0.20 | 0.198 | 6.34 | 9.45 | 69920 | 70630 | 104200 | 105260 | 1.30 | 8.0 | 16.3 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |

BEND TEST:

| | | |
|-----|--|--|
| # 5 | 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

Faisal Hameed

Resident Engineer, Metroplan - Asian JV, Site Office Talang Road Mianwali

Test Performed By:

Dr. /Engr.

S. Asad Ali
Gillani

Client Reference: Metroplan Asian JV-Nexus-MMCH-RE-046

Dated: 05-02-2020

Test: Tension Test & Bend Test

Gauge Length: 8 inch

Test Specification:

Sample Type:

SOM Lab

Ref: 2187(Page-1/1)

Dated: 07-02-2020

ASTM-A-615

Deformed Bar(Moiz 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 | 2.662 | 8 | 0.998 | 0.79 | 0.782 | 25.23 | 34.96 | 70440 | 71160 | 97610 | 98610 | 1.60 | 8.0 | 20.0 | |
| 2 | 2.673 | 8 | 1.000 | 0.79 | 0.786 | 25.13 | 34.81 | 70150 | 70510 | 97190 | 97680 | 1.60 | 8.0 | 20.0 | |
| 3 | 1.474 | 6 | 0.743 | 0.44 | 0.433 | 13.51 | 19.72 | 67700 | 68800 | 98870 | 100470 | 1.40 | 8.0 | 17.5 | |
| 4 | 1.471 | 6 | 0.742 | 0.44 | 0.432 | 13.25 | 19.57 | 66430 | 67660 | 98100 | 99920 | 1.20 | 8.0 | 15.0 | |
| 5 | 1.032 | 5 | 0.621 | 0.31 | 0.303 | 9.53 | 13.99 | 67810 | 69380 | 99500 | 101800 | 1.30 | 8.0 | 16.3 | |
| 6 | 1.028 | 5 | 0.620 | 0.31 | 0.302 | 9.53 | 13.99 | 67810 | 69610 | 99500 | 102140 | 1.40 | 8.0 | 17.5 | |
| 7 | 0.662 | 4 | 0.498 | 0.20 | 0.195 | 5.93 | 8.56 | 65420 | 67100 | 94420 | 96850 | 1.20 | 8.0 | 15.0 | |
| 8 | 0.664 | 4 | 0.498 | 0.20 | 0.195 | 5.52 | 8.56 | 60930 | 62490 | 94420 | 96850 | 1.60 | 8.0 | 20.0 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |

BEND TEST:

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

Khalid Mahmood
Assistant Engineer University of Okara

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

Client Reference: Engg. Cell/UO/694

SOM Lab

Ref: 2188(Page-1/1)

Dated: 06-02-2020

Dated: 07-02-2020

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 | 2.689 | 8 | 1.003 | 0.79 | 0.790 | 26.17 | 33.44 | 73050 | 73050 | 93340 | 93340 | 1.40 | 8.0 | 17.5 | |
| 2 | 1.443 | 6 | 0.735 | 0.44 | 0.424 | 14.55 | 18.83 | 72910 | 75670 | 94370 | 97930 | 1.00 | 8.0 | 12.5 | |
| 3 | 0.663 | 4 | 0.498 | 0.20 | 0.195 | 7.54 | 9.60 | 83180 | 85320 | 105890 | 108610 | 1.20 | 8.0 | 15.0 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |

BEND TEST:

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

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

Khalid Mahmood
Assistant Engineer University of Okara

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

Client Reference: Engg. Cell/UO/696

SOM Lab

Ref: 2189(Page-1/1)

Dated: 06-02-2020

Dated: 07-02-2020

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 | 0.672 | 4 | 0.501 | 0.20 | 0.197 | 6.85 | 8.97 | 75540 | 76690 | 98920 | 100430 | 1.20 | 8.0 | 15.0 | |
| 2 | 0.664 | 4 | 0.498 | 0.20 | 0.195 | 6.80 | 8.94 | 74980 | 76900 | 98580 | 101110 | 1.20 | 8.0 | 15.0 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |

BEND TEST:

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

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

Naeem Yousaf
Resident Engineer, NESPAK (Pvt) Ltd. DHA Bahawalpur

Test Performed By:

Dr. /Engr.

S. Asad Ali
Gillani

Client Reference: 4401/Ny/05/20

Dated: 31-01-2020

Test: Tension Test & Bend Test

Gauge Length: 8 inch

Test Specification:

Sample Type:

SOM Lab

Ref: 2190(Page-1/1)

Dated: 07-02-2020

ASTM-A-615

Deformed Bar(Kamran 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 | 2.643 | 8 | 0.995 | 0.79 | 0.777 | 25.15 | 35.17 | 70210 | 71380 | 98180 | 99820 | 1.60 | 8.0 | 20.0 | |
| 2 | 2.647 | 8 | 0.995 | 0.79 | 0.778 | 24.97 | 35.88 | 69720 | 70800 | 100170 | 101720 | 1.80 | 8.0 | 22.5 | |
| 3 | 1.490 | 6 | 0.747 | 0.44 | 0.438 | 15.34 | 23.09 | 76900 | 77250 | 115730 | 116260 | 1.30 | 8.0 | 16.3 | |
| 4 | 1.499 | 6 | 0.749 | 0.44 | 0.441 | 13.00 | 18.76 | 65150 | 65000 | 94020 | 93800 | 1.80 | 8.0 | 22.5 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |

BEND TEST:

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

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

Engr Saeed Subhani
Resident Engineer, Raees Faheem & Associates.

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

Client Reference: RF/BQH/DHA/MT/06/20

SOM Lab

Ref: 2191(Page-1/1)

Dated: 07-02-2020

Dated: 07-02-2020

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 | 2.603 | 8 | 0.987 | 0.79 | 0.765 | 22.12 | 34.07 | 61760 | 63770 | 95110 | 98220 | 1.70 | 8.0 | 21.3 | |
| 2 | 2.607 | 8 | 0.988 | 0.79 | 0.766 | 22.85 | 34.40 | 63810 | 65800 | 96050 | 99060 | 1.60 | 8.0 | 20.0 | |
| 3 | 1.448 | 6 | 0.736 | 0.44 | 0.426 | 12.00 | 17.79 | 60140 | 62120 | 89160 | 92090 | 1.60 | 8.0 | 20.0 | |
| 4 | 1.454 | 6 | 0.737 | 0.44 | 0.427 | 12.10 | 17.89 | 60650 | 62500 | 89670 | 92400 | 1.70 | 8.0 | 21.3 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |

BEND TEST:

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

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

Syed Salman Liaqat
Resident Engineer, Jhall Road Flyover, NESPAK, (Pvt) Ltd. Sahiwal

Test Performed By:

Dr. /Engr.

S. Asad Ali
Gillani

Client Reference: 4116/03/SSL/2020/021

Dated: 04-02-2020

Test: Tension Test & Bend Test

Gauge Length: 8 inch

Test Specification:

Sample Type:

SOM Lab

Ref: 2193(Page-1/1)

Dated: 07-02-2020

ASTM-A-615

Deformed Bar (Pakistan Steel(SGI))

| 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 | 3.449 | 9 | 1.136 | 1.00 | 1.014 | 30.28 | 48.57 | 66770 | 65850 | 107130 | 105650 | 1.00 | 8.0 | 12.5 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |

BEND TEST:

| | | |
|-----|--|---|
| # 9 | Sample bend through 180 degrees Satisfactorily without any crack | Note:- Only Two Samples Received and Tested |
| | | |
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| | | |

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

RAF Construction Company
Lahore

Test Performed By:

Dr. /Engr.

S. Asad Ali
Gillani

Client Reference: Nil

Dated: 07-02-2020

Test: Tension Test & Bend Test

Gauge Length: 8 inch

Test Specification:

Sample Type:

SOM Lab

Ref: 2195(Page-1/1)

Dated: 07-02-2020

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 | 0.672 | 4 | 0.501 | 0.20 | 0.197 | 6.85 | 8.97 | 75540 | 76690 | 98920 | 100430 | 1.20 | 8.0 | 15.0 | |
| 2 | 0.664 | 4 | 0.498 | 0.20 | 0.195 | 6.80 | 8.94 | 74980 | 76900 | 98580 | 101110 | 1.20 | 8.0 | 15.0 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |

BEND TEST:

| | | |
|-----|--|---|
| # 4 | 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

Abdullah Muhammad Khadim
Resident Engineer, DAR Engineering

Test Performed By: Dr. /Engr.

S. Asad Ali
Gillani

Client Reference: DB-78/DAR/RE/ME/2020/0214

Dated: 07-02-2020

SOM Lab

Ref: 2196(Page-1/1)

Dated: 07-02-2020

Test: Tension Test & Bend Test

Test Specification:

ASTM-A-615

Gauge Length: 8 inch

Sample Type:

Deformed Bar(Kamran 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 | 1.476 | 6 | 0.743 | 0.44 | 0.434 | 13.53 | 20.18 | 67810 | 68740 | 101170 | 102570 | 1.50 | 8.0 | 18.8 | J-21 |
| 2 | 1.552 | 6 | 0.762 | 0.44 | 0.456 | 13.35 | 20.08 | 66940 | 64590 | 100660 | 97130 | 1.60 | 8.0 | 20.0 | J-21 |
| 3 | 1.021 | 5 | 0.618 | 0.31 | 0.300 | 10.16 | 14.34 | 72310 | 74720 | 102040 | 105440 | 1.20 | 8.0 | 15.0 | J-17 |
| 4 | 1.033 | 5 | 0.622 | 0.31 | 0.304 | 9.99 | 14.53 | 71070 | 72480 | 103340 | 105380 | 1.10 | 8.0 | 13.8 | J-17 |
| 5 | 0.659 | 4 | 0.497 | 0.20 | 0.194 | 5.86 | 8.41 | 64640 | 66640 | 92740 | 95610 | 1.50 | 8.0 | 18.8 | J-38 |
| 6 | 0.656 | 4 | 0.496 | 0.20 | 0.193 | 5.83 | 8.38 | 64300 | 66630 | 92400 | 95750 | 1.50 | 8.0 | 18.8 | J-38 |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |

BEND TEST:

| | | |
|-----|--|---|
| # 6 | Sample bend through 180 degrees Satisfactorily without any crack | Note:- Only Nine Samples Received and Tested |
| # 5 | Sample bend through 180 degrees Satisfactorily without any crack | |
| # 4 | Sample bend through 180 degrees Satisfactorily without any crack | |
| | | |

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

Sub Divisional Officer
Buildings Sub Division, C. M. Sectt: Lahore

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

Client Reference: SDO/CMS/1004

SOM Lab

Ref: 2197(Page-1/1)

Dated: 28-01-2020

Dated: 07-02-2020

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 | 1.500 | 6 | 0.749 | 0.44 | 0.441 | 12.28 | 19.03 | 61570 | 61430 | 95400 | 95180 | 1.70 | 8.0 | 21.3 | |
| 2 | 0.670 | 4 | 0.501 | 0.20 | 0.197 | 4.99 | 7.16 | 55080 | 55920 | 78910 | 80110 | 1.80 | 8.0 | 22.5 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |

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