

Waqas Ahmed Ghumman
 High-Q Constructions Lhr.(Const Of High-Q Mall at 3-A Gulberg II Lahore)

Test Performed By: Dr. /Engr. Nauman Khurram

Client Reference: QC/HQ/CIVIL/189
SOM Lab Ref: CED/SOM/3695(Page-1/1)

Dated: 22-02-2024
Dated: 22-02-2024

Test: Tension Test & Bend 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 | 2.431 | 20 | 19.87 | 314 | 310 | 155.50 | 202.50 | 495 | 502 | 645 | 654 | 30.0 | 200 | 15.0 | |
| 2 | 2.436 | 20 | 19.88 | 314 | 310 | 154.20 | 200.70 | 491 | 497 | 639 | 647 | 32.5 | 200 | 16.3 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |

BEND TEST:

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

Project Manager

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

AMCORP Engg & Construction Pvt Ltd (Const Of ABL Upper Mall Lahore,Plote No.199&200)

Client Reference: AMC-UML/QAQC-01-24

SOM Lab

Ref: 3696 (Page-1/1)

Dated: 22-02-2024

Dated: 22-02-2024

Test: Tension Test & Bend Test

Test Specification:

ASTM-A-615

Gauge Length: 8 inch

Sample Type:

Deformed Bar (Markhor 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 | 22.94 | 33.59 | 64030 | 64690 | 93770 | 94730 | 1.20 | 8.0 | 15.0 | |
| 2 | 2.693 | 8 | 1.004 | 0.79 | 0.791 | 23.70 | 34.61 | 66170 | 66080 | 96620 | 96490 | 1.20 | 8.0 | 15.0 | |
| 3 | 1.474 | 6 | 0.743 | 0.44 | 0.433 | 14.27 | 18.86 | 71540 | 72690 | 94530 | 96060 | 1.30 | 8.0 | 16.3 | |
| 4 | 1.481 | 6 | 0.744 | 0.44 | 0.435 | 14.55 | 19.29 | 72910 | 73750 | 96670 | 97780 | 1.30 | 8.0 | 16.3 | |
| 5 | 1.060 | 5 | 0.630 | 0.31 | 0.312 | 11.23 | 14.58 | 79920 | 79410 | 103710 | 103040 | 1.10 | 8.0 | 13.8 | |
| 6 | 1.046 | 5 | 0.625 | 0.31 | 0.307 | 10.55 | 14.32 | 75060 | 75800 | 101890 | 102890 | 1.00 | 8.0 | 12.5 | |
| 7 | 0.670 | 4 | 0.501 | 0.20 | 0.197 | 6.57 | 9.14 | 72510 | 73610 | 100830 | 102370 | 0.90 | 8.0 | 11.3 | |
| 8 | 0.665 | 4 | 0.498 | 0.20 | 0.195 | 6.52 | 9.30 | 71940 | 73790 | 102520 | 105150 | 1.00 | 8.0 | 12.5 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |

BEND TEST:

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|-----|--|--|
| # 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

Engr.Faizan Hussain

Test Performed By: Dr./Engr. Nauman Khurram

Assistant Engineer B&W Deptt UET Lahore.(Const. Site Of Boundary Wall at Manawa Graveyard)

Client Reference: B&W/AEN/3431

SOM Lab

Ref: 3697 (Page-1/1)

Dated: 16-02-2024

Dated: 22-02-2024

Test: Tension Test & Bend Test

Test Specification: ASTM-A-615

Gauge Length: 8 inch

Sample Type: Deformed Bar (Mughal 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 | 2.680 | 8 | 1.002 | 0.79 | 0.788 | 26.20 | 35.60 | 73140 | 73320 | 99380 | 99630 | 1.50 | 8.0 | 18.8 | |
| 2 | 1.484 | 6 | 0.745 | 0.44 | 0.436 | 14.44 | 18.71 | 72400 | 73070 | 93760 | 94620 | 1.60 | 8.0 | 20.0 | |
| 3 | 0.662 | 4 | 0.498 | 0.20 | 0.195 | 6.49 | 8.36 | 71610 | 73440 | 92180 | 94540 | 1.30 | 8.0 | 16.3 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |

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 | |
| # 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

Takmeel Square (Pvt.) Ltd.
DHA Bahwalpur.(Takmeel Square Smelter)

Test Performed By: Dr. /Engr. Nauman Khurram

Client Reference: Nil

SOM Lab

Ref: 3698 (Page-1/1)

Dated: 22-02-2024

Dated: 22-02-2024

Test: Tension Test & Bend Test

Test Specification: ASTM-A-615

Gauge Length: 8 inch

Sample Type: Deformed Bar

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 | 2.676 | 8 | 1.000 | 0.79 | 0.786 | 24.59 | 36.92 | 68640 | 68990 | 103080 | 103600 | 1.60 | 8.0 | 20.0 | |
| 2 | 2.646 | 8 | 0.995 | 0.79 | 0.778 | 26.46 | 35.07 | 73880 | 75020 | 97900 | 99410 | 1.60 | 8.0 | 20.0 | |
| 3 | 1.528 | 6 | 0.756 | 0.44 | 0.449 | 15.62 | 20.15 | 78280 | 76710 | 101020 | 98990 | 1.50 | 8.0 | 18.8 | |
| 4 | 1.534 | 6 | 0.758 | 0.44 | 0.451 | 15.11 | 20.00 | 75720 | 73880 | 100250 | 97800 | 1.40 | 8.0 | 17.5 | |
| 5 | 0.667 | 4 | 0.500 | 0.20 | 0.196 | 6.70 | 8.92 | 73850 | 75360 | 98360 | 100370 | 1.10 | 8.0 | 13.8 | |
| 6 | 0.668 | 4 | 0.500 | 0.20 | 0.196 | 6.57 | 8.69 | 72510 | 73990 | 95770 | 97730 | 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