

Sajid Mahmood

Test Performed By:

Dr. /Engr.

m Irfan Ul Hassan

Manager Construction Projects, 3 & 4, Tipu Block New Garden Town, Allied Bank Head Office, Lahore

Client Reference: HOL/ENGG. C.P./SM/2020/19

Dated: 04-02-2021

SOM Lab Ref: CED/SOM/3786 (Page-2/2)

Dated: 04-02-2021

Test: Tension & Bend Test

Test Specification: ASTM-A 615

Sample Type: Deformed Bar(Naveena 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 | 0.873 | 12 | 11.89 | 113 | 111 | 60.00 | 73.50 | 531 | 541 | 650 | 663 | 30.0 | 200 | 15.0 | |
| 2 | 0.867 | 12 | 11.86 | 113 | 110 | 55.70 | 69.70 | 492 | 505 | 616 | 631 | 27.5 | 200 | 13.8 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

Witnessed By: Zaeem Ahmed, Lab. Incharge

BEND TEST:

| | | |
|------|--|---|
| 12mm | 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

Sajid Mahmood

Test Performed By:

Dr. /Engr.

m Irfan Ul Hassan

Manager Construction Projects, 3 & 4, Tipu Block New Garden Town, Allied Bank Head Office, Lahore

Client Reference: HOL/ENGG. C.P./SM/2021/19

Dated: 04-02-2021

SOM Lab Ref: CED/SOM/3786 (Page-2/2)

Dated: 04-02-2021

Test: Tension & Bend Test

Test Specification: ASTM-A 615

Sample Type: Deformed Bar(Naveena 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 | 0.873 | 12 | 11.89 | 113 | 111 | 60.00 | 73.50 | 531 | 541 | 650 | 663 | 30.0 | 200 | 15.0 | |
| 2 | 0.867 | 12 | 11.86 | 113 | 110 | 55.70 | 69.70 | 492 | 505 | 616 | 631 | 27.5 | 200 | 13.8 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

Witnessed By: Zaeem Ahmed, Lab. Incharge

BEND TEST:

| | | |
|------|--|---|
| 12mm | 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

Dy. Director (Maintenance)
NHA Lahore

Test Performed By:

Dr. /Engr.

Bilal Anwar

Client Reference: DD(M)/NHA/LHR/BC-PN-18-05-05/20/1063

Dated: 17-02-2021

SOM Lab Ref: CED/SOM/3795(Page-1/1)

Dated: 04-02-2021

Test: Tension 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 | 2.244 | 20 | 19.08 | 314 | 286 | 170.70 | 204.70 | 543 | 597 | 652 | 716 | 25.0 | 200 | 12.5 | |
| 2 | 2.242 | 20 | 19.07 | 314 | 286 | 171.20 | 205.20 | 545 | 600 | 653 | 719 | 32.5 | 200 | 16.3 | |
| 3 | 0.990 | 12 | 12.67 | 113 | 126 | 78.20 | 93.20 | 691 | 620 | 824 | 739 | 25.0 | 200 | 12.5 | |
| 4 | 1.014 | 12 | 12.82 | 113 | 129 | 79.50 | 94.50 | 703 | 616 | 836 | 732 | 25.0 | 200 | 12.5 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

BEND TEST:

| | | |
|------|--|---|
| 16mm | 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

Sajid Mahmood

Test Performed By:

Dr. /Engr. S. Asad Ali Gillani

Manager Construction Projects, 3 & 4, Tipu Block New Garden Town, Allied Bank Head Office, Lahore

Client Reference: HOL/ENGG. C.P./SM/2021/19

SOM Lab 3786 (Page-

Ref: 1/2)

Dated: 04-02-2021

Dated: 04-02-2021

Test: Tension Test & Bend Test

Test Specification:

ASTM-A-615

Gauge Length: 8 inch

Sample Type:

Deformed Bar (Naveena 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 | 2.572 | 8 | 0.981 | 0.79 | 0.756 | 25.86 | 33.59 | 72200 | 75450 | 93770 | 97990 | 1.10 | 8.0 | 13.8 | |
| 2 | 2.577 | 8 | 0.982 | 0.79 | 0.757 | 26.91 | 34.27 | 75130 | 78410 | 95680 | 99850 | 1.30 | 8.0 | 16.3 | |
| 3 | 1.667 | 6 | 0.790 | 0.44 | 0.490 | 17.33 | 21.33 | 86860 | 78000 | 106890 | 95980 | 1.20 | 8.0 | 15.0 | |
| 4 | 1.652 | 6 | 0.786 | 0.44 | 0.485 | 16.82 | 20.87 | 84310 | 76490 | 104590 | 94890 | 1.20 | 8.0 | 15.0 | |
| 5 | 1.053 | 5 | 0.627 | 0.31 | 0.309 | 10.93 | 13.48 | 77750 | 78000 | 95880 | 96190 | 1.40 | 8.0 | 17.5 | |
| 6 | 1.052 | 5 | 0.627 | 0.31 | 0.309 | 10.57 | 13.20 | 75210 | 75450 | 93920 | 94220 | 1.10 | 8.0 | 13.8 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

Witnessed By: Zaeem Ahmed Lab Incharge,

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 | |
| # 5 | 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

Sajid Mahmood

Test Performed By:

Dr. /Engr.

S. Asad Ali Gillani

Manager Construction Projects, 3 & 4, Tipu Block New Garden Town, Allied Bank Head Office, Lahore

Client Reference: HOL/ENGG. C.P./SM/2020/19

SOM Lab

3786 (Page-

Ref:

2/2)

Dated: 04-02-2021

Dated:

04-02-2021

Test: Tension Test & Bend Test

Test Specification:

ASTM-A-615

Gauge Length: 8 inch

Sample Type:

Deformed Bar (Naveena 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 | 2.572 | 4 | 0.981 | 0.20 | 0.756 | 25.86 | 33.59 | 285180 | 75450 | 370380 | 97990 | 1.10 | 8.0 | 13.8 | |
| 2 | 2.577 | 8 | 0.982 | 0.79 | 0.757 | 26.91 | 34.27 | 75130 | 78410 | 95680 | 99850 | 1.30 | 8.0 | 16.3 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

Witnessed By:

Zaeem Ahmed Lab Incharge,

BEND TEST:

| | | |
|-----|--|---|
| # 8 | Sample bend through 180 degrees Satisfactorily without any crack | Note:- Only Two Samples Received and Tested |
| # 6 | Sample bend through 180 degrees Satisfactorily without any crack | |
| # 5 | 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

Maj Adnan khalid®

Test Performed By:

Dr. /Engr. S. Asad Ali Gillani

Dy Dir MTL, External Electrification Works U/G Pkg. E2 &E 4, Prism Ph -IX - (M/S NLC)

Client Reference: 408/241/E/Lab/06/237

SOM Lab 3787(Page-

Ref: 1/1)

Dated: 07-01-2021

Dated: 04-02-2021

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 | 1.031 | 5 | 0.621 | 0.31 | 0.303 | 10.81 | 13.02 | 76880 | 78650 | 92610 | 94750 | 1.30 | 8.0 | 16.3 | |
| 2 | 1.029 | 5 | 0.620 | 0.31 | 0.302 | 11.03 | 13.17 | 78470 | 80550 | 93700 | 96180 | 1.00 | 8.0 | 12.5 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |

BEND TEST:

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

Mr Umar Safdar
 Usman Industries 92-B2, Gulberg- 3, Lahore

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

Client Reference: Nil

SOM Lab 3788(Page-

Ref: 1/1)

Dated: 01-02-2021

Dated: 04-02-2021

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 | 0.660 | 4 | 0.497 | 0.20 | 0.194 | 6.19 | 8.77 | 68230 | 70340 | 96670 | 99660 | 1.40 | 8.0 | 17.5 | |
| 2 | 0.661 | 4 | 0.497 | 0.20 | 0.194 | 6.18 | 8.79 | 68120 | 70230 | 96900 | 99890 | 1.30 | 8.0 | 16.3 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |

BEND TEST:

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

Dr. Muhib
Project Direct, HKB, Arena, Ring Road Peshawar

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

Client Reference: nil

SOM Lab 3789(Page-

Ref: 1/1)

Dated: 04-02-2021

Dated: 04-02-2021

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 | 1.464 | 6 | 0.740 | 0.44 | 0.430 | 13.63 | 19.01 | 68320 | 69900 | 95290 | 97510 | 1.60 | 8.0 | 20.0 | |
| 2 | 1.476 | 6 | 0.743 | 0.44 | 0.434 | 14.14 | 19.69 | 70870 | 71850 | 98720 | 100080 | 1.40 | 8.0 | 17.5 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

BEND TEST:

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

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

Muhammad Shabbir
Construction Manager, Opal, Deever Developers Pvt. Ltd. Lahore

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

Client Reference: ZD/ZO/L/021

SOM Lab 3791(Page-

Ref: 1/1)

Dated: 204-02-2021

Dated: 04-02-2021

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 | 2.675 | 8 | 1.000 | 0.79 | 0.786 | 26.37 | 35.42 | 73620 | 74000 | 98890 | 99400 | 1.20 | 8.0 | 15.0 | |
| 2 | 2.649 | 8 | 0.995 | 0.79 | 0.778 | 24.26 | 35.24 | 67730 | 68780 | 98380 | 99900 | 1.40 | 8.0 | 17.5 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

BEND TEST:

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

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

Director **Test Performed By:** Dr. /Engr. S. Asad Ali Gillani
HKB Blanket Industries, (Pvt) Ltd. , Construction of HKB Blanket Industries at FIEDMC Faisalabad

Client Reference: nil

SOM Lab 3790(Page-

Ref: 1/1)

Dated: 04-02-2021

Dated: 04-02-2021

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 | 2.678 | 8 | 1.001 | 0.79 | 0.787 | 22.85 | 34.07 | 63810 | 64050 | 95110 | 95470 | 1.50 | 8.0 | 18.8 | |
| 2 | 2.610 | 8 | 0.988 | 0.79 | 0.767 | 23.47 | 35.65 | 65510 | 67480 | 99520 | 102500 | 1.60 | 8.0 | 20.0 | |
| 3 | 1.534 | 6 | 0.758 | 0.44 | 0.451 | 13.40 | 18.76 | 67190 | 65550 | 94020 | 91720 | 1.00 | 8.0 | 12.5 | |
| 4 | 1.475 | 6 | 0.743 | 0.44 | 0.433 | 13.73 | 19.32 | 68830 | 69940 | 96830 | 98390 | 1.00 | 8.0 | 12.5 | |
| 5 | 0.670 | 4 | 0.501 | 0.20 | 0.197 | 6.47 | 8.43 | 71380 | 72470 | 92960 | 94380 | 1.50 | 8.0 | 18.8 | |
| 6 | 0.677 | 4 | 0.503 | 0.20 | 0.199 | 6.42 | 8.48 | 70820 | 71180 | 93530 | 94000 | 1.30 | 8.0 | 16.3 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |

Witnessed By: Muhammad Raheel, (PM)

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

Engr. Naveed Sadiq
Resident Engineer, Orbit Housing, Lahore

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

Client Reference: Nil

SOM Lab 3792(Page-

Ref: 1/1)

Dated: 27-11-2020

Dated: 04-02-2021

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 | 0.674 | 4 | 0.502 | 0.20 | 0.198 | 7.67 | 9.25 | 84530 | 85390 | 101960 | 102990 | 1.10 | 8.0 | 13.8 | |
| 2 | 0.672 | 4 | 0.501 | 0.20 | 0.197 | 7.29 | 8.94 | 80370 | 81600 | 98580 | 100080 | 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

Khalid Bashir
CEO, Ittefaq Building Solution (Pvt) Ltd (Project Name: Construction of Emporio Head Office, Ph. 7, DHA Lahore)

Test Performed By:

Dr. /Engr.

S. Asas Ali
Gillani

Client Reference: IBS/EHO/ATS-02/ST-01

SOM Lab Ref:

3793 (Page-1/1)

Dated: 02-02-2021

Dated:

04-01-2021

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 | 2.661 | 8 | 0.998 | 0.79 | 0.782 | 24.97 | 34.91 | 69720 | 70440 | 97470 | 98470 | 1.30 | 8.0 | 16.3 | |
| 2 | 2.655 | 8 | 0.997 | 0.79 | 0.780 | 25.28 | 35.34 | 70580 | 71480 | 98660 | 99930 | 1.50 | 8.0 | 18.8 | |
| 3 | 1.471 | 6 | 0.742 | 0.44 | 0.432 | 13.05 | 18.71 | 65400 | 66620 | 93760 | 95500 | 1.30 | 8.0 | 16.3 | |
| 4 | 1.468 | 6 | 0.741 | 0.44 | 0.431 | 12.79 | 18.73 | 64130 | 65470 | 93860 | 95820 | 1.50 | 8.0 | 18.8 | |
| 5 | 0.608 | 4 | 0.477 | 0.20 | 0.179 | 5.71 | 7.85 | 62950 | 70340 | 86560 | 96710 | 1.00 | 8.0 | 12.5 | |
| 6 | 0.606 | 4 | 0.476 | 0.20 | 0.178 | 5.63 | 7.80 | 62050 | 69720 | 85990 | 96620 | 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

Resident Engineer,
NESPAK JOB # 3976, PICIIP, 73-A W, Block Farid Town Sahiwal.

Test Performed By: Dr. /Engr. Nauman Khurram

Client Reference: 3976/11/MT/01/Lot-1/24

SOM Lab 3794(Page-

Ref: 1/1)

Dated: 02-02-2021

Dated: 04-02-2021

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 | 2.669 | 8 | 0.999 | 0.79 | 0.784 | 29.68 | 41.85 | 82870 | 83510 | 116820 | 117710 | 1.00 | 8.0 | 12.5 | |
| 2 | 2.678 | 8 | 1.001 | 0.79 | 0.787 | 24.82 | 34.83 | 69300 | 69560 | 97240 | 97610 | 1.30 | 8.0 | 16.3 | |
| 3 | 1.507 | 6 | 0.751 | 0.44 | 0.443 | 12.92 | 19.18 | 64740 | 64300 | 96160 | 95510 | 1.30 | 8.0 | 16.3 | |
| 4 | 1.498 | 6 | 0.748 | 0.44 | 0.440 | 12.84 | 19.16 | 64380 | 64380 | 96060 | 96060 | 1.00 | 8.0 | 12.5 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |

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