

Test Floor Laboratory Department of Civil Engineering University of Engineering and Technology Lahore, 54890 Pakistan. Ph: 92-42-99029202

To,

M/S Modern Wire & Cable Industries Pvt. Ltd. Lahore

Reference # CED/TFL **5133** (Dr. M Rizwan Riaz)

Reference of the request letter # Nil

Dated: 22-05-2024

Dated: 22-05-2024

Tension Test Report (Page -1/2)

Date of Test 31-05-2024 Gauge length 600 mm

Description Steel Strand Tensile Test as per ASTM A-416-94a

| Sr. No. | Nominal Diameter | Nominal Weight | Measured weight | | trength e (6.3) | stre | nking ngth e (6.2) | Young's Modulus of Elasticity "E" | % Elongation | Remarks / Coil No. |
|---------|---------------------|-------------------|--------------------|-------|--------------------|-------|--------------------------|--|--------------|--------------------|
| | (mm) | (kg/km) | (kg/km) | (kg) | (kN) | (kg) | (kN) | GPa | % | Rema |
| 1 | 15.24 (0.6") | 1102.0 | 1119.0 | 24500 | 240.35 | 27400 | 268.79 | 198 | >3.50 | XX |
| - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | |

Only one sample for Test

Note:

- 1. Modulus of Elasticity is based on nominal steel area of the steel strand vide clause 13.3 of ASTM A416a
- 2. Load versus percentage strain graphs are attached

I/C Testing Laboratoires UET Lahore, Pakistan.

- 1- You can See your reports On Internet in the following web site http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
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Test Floor Laboratory Department of Civil Engineering University of Engineering and Technology Lahore, 54890 Pakistan. Ph: 92-42-99029202

To,

M/S Modern Wire & Cable Industries Pvt. Ltd. Lahore

Reference # CED/TFL <u>5133 (Dr. M Rizwan Riaz)</u> Reference of the request letter # Nil

Graph (Page – 2/2)

Stress Strain Relation -- Specimen No. W 1 2000 1800 1600 Stress (MPa) 1400 1200 1000 800 600 400 200 0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 8.0 0.9 0 Strain (%)

I/C Testing Laboratoires UET Lahore, Pakistan.

Dated: 22-05-2024

Dated: 22-05-2024

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Test Floor Laboratory Department of Civil Engineering University of Engineering and Technology Lahore, 54890 Pakistan. Ph: 92-42-99029202

To,

M/S AA Corporation

Reference # CED/TFL <u>5149 (Dr. M Rizwan Riaz)</u>

Reference of the request letter # Nil

Dated: 27-05-2024

Tension Test Report (Page -1/3)

Date of Test 31-05-2023 Gauge length 8 inches

Description Plain Steel Bar Tensile Test

| Sr. No. | Weight | | neter/ ize | | rea m²) | Yield load | Breaking Load | Yield Stress (MPa) | Ultimate Stress (MPa) | Elongation | % Elongation | Remarks |
|---------|--------|--------------|---------------|---------|------------|------------|---------------|-----------------------|--------------------------|------------|--------------|---------|
| | (kg/m) | Nominal (mm) | Actual (mm) | Nominal | Actual | (kg) | (kg) | Actual | Actual | (inch) | 0% | 1 |
| 1 | 5.518 | 30 | 29.92 | | 702.9 | 34800 | 42800 | 486 | 597 | 0.70 | 8.8 | |
| - | - | - | - | - | - | - | - | - | - | - | - | |
| - | • | - | - | - | - | - | - | - | ı | - | - | |
| | | - | - | - | - | - | - | - | - | - | - | |
| | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | |
| | | | | N | ote: only | one samp | ole for ten | sile test | | | I | |
| | | | | | | D 1.5 | Γ | | | | | |
| | | | | | | Bend | ı est | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

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Test Floor Laboratory Department of Civil Engineering University of Engineering and Technology Lahore, 54890 Pakistan. Ph: 92-42-99029202

To,

M/S AA Corporation

Reference # CED/TFL **5149** (Dr. M Rizwan Riaz)

Reference of the request letter # Nil

Dated: 27-05-2024

Dated: 27-05-2024

Tension Test Report (Page -2/3)

Date of Test 31-05-2023 Gauge length 8 inches

Description Plain Steel Bar Tensile Test

| Sr. No. | Diameter / size | Reduced Dia | Reduced Area | Yield load | Breaking Load | Yield Stress | Ultimate Stress | Elongation | % Elongation | Remarks |
|------------|--------------------|----------------|--------------------|-------------|------------------|--------------|--------------------|------------|--------------|---------|
| | (mm) | (mm) | (mm ²) | (kg) | (kg) | (MPa) | (MPa) | (inch) | % | |
| 1 | 45 | 29.80 | 697.46 | 43000 | 46000 | 605 | 647 | 0.70 | 8.75 | |
| - | - | - | - | ı | - | - | - | - | ı | |
| - | - | - | - | - | - | - | - | - | ı | |
| - | - | - | - | - | - | - | - | - | ı | |
| - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | |
| | | | Not | e: only one | sample for | tensile tes | t | | | |
| - | - | - | - | _ | - | | | | - | |
| | | | | E | Bend Test | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

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Test Floor Laboratory Department of Civil Engineering University of Engineering and Technology Lahore, 54890 Pakistan. Ph: 92-42-99029202

To,

M/S AA Corporation

Reference # CED/TFL **5149** (Dr. M Rizwan Riaz)

Reference of the request letter # Nil

Dated: 27-05-2024

Dated: 27-05-2024

Tension Test Report (Page -3/3)

Date of Test 31-05-2023 Gauge length 8 inches

Description Plain Steel Bar Tensile Test

| Sr. No. | Diameter / | Reduced Dia | Reduced Area | (gay) Yield load | Breaking Load | (wad) Yield Stress | Ultimate Stress | (the Elongation | % Elongation | Remarks |
|------------|------------|-------------|--------------|------------------|---------------|--------------------|-----------------|-----------------|--------------|---------|
| | | | | (8) | | (2.22 w) | | () | | |
| 1 | 76 | 30.00 | 706.86 | | 28000 | | 389 | | | |
| - | - | - | - | - | - | - | - | - | ı | |
| - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | |
| _ | - | - | - | - | - | - | - | - | - | |
| | | | Not | e: only one | sample for | tensile tes | t | | | |
| - | - | - | - | | - | | | | - | |
| | | | | F | Bend Test | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | _ |
| | | | | | | | | | | |

I/C Testing Laboratoires UET Lahore, Pakistan.

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Test Floor Laboratory Department of Civil Engineering University of Engineering and Technology Lahore, 54890 Pakistan. Ph: 92-42-99029202

To,

HQ 495 Engr Group Gulberg-III C/O Sigcen Lahore FWO

Reference # CED/TFL <u>5150 (Dr. M Rizwan Riaz)</u>

Reference of the request letter # PC920/Testing/Hunza Steel/Ord

Dated: 27-05-2024

Dated: 27-05-2024

Tension Test Report (Page -1/2)

Date of Test 31-05-2024 Gauge length 8 inches

Description Steel Bar Tensile and Bend Test as per ASTM-A615

| Sr. No. | Weight | Si | neter/ ze m) | | rea 1 ²) | Yield load | Breaking Load | | Stress si) | | e Stress si) | Elongation | % Elongation | Remarks |
|---------|----------|---------|--------------------|----------|-------------------------|------------|------------------|---------|---------------|----------|-----------------|------------|--------------|-------------|
| S | (lbs/ft) | Nominal | Actual | Nominal | Actual | (kg) | (kg) | Nominal | Actual | Nominal | Actual | (inch) | % E | Re |
| 1 | 0.406 | 10 | 9.90 | 0.12 | 0.119 | 3400 | 5200 | 62464 | 62810 | 95533 | 96100 | 1.40 | 17.5 | |
| 2 | 0.406 | 10 | 9.91 | 0.12 | 0.119 | 3500 | 5200 | 64301 | 64590 | 95533 | 96000 | 1.30 | 16.3 | Hunza Steel |
| 3 | 4.228 | 32 | 31.95 | 1.25 | 1.243 | 39200 | 52800 | 69136 | 69520 | 93122 | 93700 | 1.50 | 18.8 | Iunza |
| 4 | 4.221 | 32 | 31.93 | 1.25 | 1.241 | 39200 | 52800 | 69136 | 69640 | 93122 | 93800 | 1.60 | 20.0 | 1 |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | | No | te: only | four s | amples f | or tensile | and two | samples | for bend | test | | ı | |
| | | | | | | | Bend T | agt | | | | | | |
| 10. | mm Dia | Don Dos | ad Tost | Throug | h 1000; | s Satisfac | | esi | | | | | | |

10mm Dia Bar Bend Test Through 180° is Satisfactory

32mm Dia Bar Bend Test Through 180° is Satisfactory

I/C Testing Laboratoires UET Lahore, Pakistan.

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Test Floor Laboratory Department of Civil Engineering University of Engineering and Technology Lahore, 54890 Pakistan. Ph: 92-42-99029202

To,

HQ 495 Engr Group Gulberg-III C/O Sigcen Lahore FWO

Reference # CED/TFL 5150 (Dr. M Rizwan Riaz)

Reference of the request letter # PC920/Testing/Hunza Steel/Ord

Dated: 27-05-2024

Dated: 27-05-2024

Tension Test Report (Page -2/2)

Date of Test 31-05-2024 Gauge length 8 inches

Description Steel Bar Tensile and Bend Test as per ASTM-A615

| Sr. No. | Weight | | neter/ ze | | rea 1 ²) | Yield load | Breaking Load | | Stress si) | | te Stress si) | Elongation | % Elongation | Remarks |
|---------|----------|---|---------------|------------|-------------------------|------------|------------------|---------|---------------|---------|------------------|------------|--------------|----------------|
| S | (lbs/ft) | Nominal (#) | Actual (inch) | 1.56 1.543 | | (kg) | (kg) | Nominal | Actual | Nominal | Actual | (inch) | 3 % | Re |
| 1 | 5.248 | 11 | 1.401 | 1.56 | 1.56 1.543 | | 64200 | 61600 | 62300 | 90800 | 91800 | 1.60 | 20.0 | Hunza Steel |
| 2 | 5.249 | 11 | 1.402 | 1.56 | 1.543 | 43800 | 64400 | 61900 | 62570 | 91000 | 92000 | 1.60 | 20.0 | Hu |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | Note: only two samples for tensile and one sample for bend test | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | _ | Bend T | est | | | | | | |
| #11 | Bar Be | nd Test | Throug | gh 180° | is Satist | factory | | | | | | | | |

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Test Floor Laboratory Department of Civil Engineering University of Engineering and Technology Lahore, 54890 Pakistan. Ph: 92-42-99029202

To,

Garrison Engineer (Army)-I Gujranwala Cantt. (CA No. CEA/CZ-84/2024 – Const of 1 x 200 Men Mosque, HQ 1 ALRG at Gwa)

Reference # CED/TFL <u>5158 (Dr. M Rizwan Riaz)</u> Reference of the request letter # 6180-2797/09/E-6

Tension Test Report (Page -1/1)

Date of Test 31-05-2024 Gauge length 8 inches

Description Steel Bar Tensile and Bend Test as per ASTM-A615

| Sr. No. | Weight | Si | neter/ ze ch) | Aı (iı | rea 1 ²) | Yield load | Breaking Load | | Stress si) | Ultimat (p | | Elongation | % Elongation | Remarks |
|---------|----------|--|---------------------|-----------|-------------------------|------------|------------------|---------|---------------|---------------|--------|------------|--------------|---------------|
| S | (lbs/ft) | Nominal | Actual | Nominal | Actual | (kg) | (kg) | Nominal | Actual | Nominal | Actual | (inch) | E % | Re |
| 1 | 0.373 | 3/8 | | | | 3500 | 5600 | 70200 | 70280 | 112300 | 112500 | 0.90 | 11.3 | z el |
| - | - | - | 0.374 0.11 0.11 | | | - | - | - | - | - | - | - | - | Aziz Steel |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | Note: only one sample for tensile and one sample for bend test | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | Bend T | `est | | | | | | |
| 3/8 | " Dia Ba | ır Bend | Test Th | nrough | 180° is \$ | Satisfacto | ry | | | | | | | |

I/C Testing Laboratoires UET Lahore, Pakistan.

Dated: 30-05-2024

Dated: 29-05-2024

- 1- You can See your reports On Internet in the following web site http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
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Test Floor Laboratory Department of Civil Engineering University of Engineering and Technology Lahore, 54890 Pakistan. Ph: 92-42-99029202

To,

Garrison Engineer (Army)-I Gujranwala Cantt. (Const of Additional OPD Block for CMH at Gwa Cantt)

Reference # CED/TFL <u>5159 (Dr. M Rizwan Riaz)</u>
Reference of the request letter # 2013-987/41/E-2

Dated: 30-05-2024

Dated: 27-05-2024

Tension Test Report (Page -1/1)

Date of Test 31-05-2024 Gauge length 8 inches

Description Steel Bar Tensile and Bend Test as per ASTM-A615

| Sr. No. | Weight | Si | neter/ ze ch) | | rea 1 ²) | Yield load | Breaking Load | | Stress si) | | te Stress si) | Elongation | % Elongation | Remarks |
|---------|----------|--|---------------------|-------------------|-------------------------|------------|------------------|---------|---------------|---------|------------------|------------|--------------|---------------|
| S | (lbs/ft) | Nominal | Actual | Nominal | Actual | (kg) | (kg) | Nominal | Actual | Nominal | Actual | (inch) | E % | Re |
| 1 | 0.377 | 3/8 | 0.376 | | | 3500 | 5500 | 70200 | 69550 | 110200 | 109300 | 0.90 | 11.3 | z = |
| - | - | - | - | 76 0.11 0.111 | | - | - | - | - | - | - | - | - | Aziz Steel |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | Note: only one sample for tensile and one sample for bend test | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | Bend T | est | | | | | | |
| 3/8 | " Dia Ba | ır Bend | Test Th | nrough | 180° is \$ | Satisfacto | ry | | | | | | | |

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Test Floor Laboratory Department of Civil Engineering University of Engineering and Technology Lahore, 54890 Pakistan, Ph: 92-42-99029202

To,

Executive Engineer (HQ) Augaf Punjab, Lahore (Construction of Market at Waqf Land Attached to Shrine Hazrat Shah Kamal (R.A) Lahore)

Reference # CED/TFL **5160** (Dr. M Rizwan Riaz) Dated: 30-05-2024 Reference of the request letter # II-LZ-DP(932)A/2023 Dated: 16-05-2024

Tension Test Report (Page -1/1)

31-05-2024 Date of Test Gauge length 8 inches

Description Steel Bar Tensile and Bend Test as per ASTM-A615

| Sr. No. | Weight | Si | neter/ ize ch) | Aı (iı | rea 1 ²) | Yield load | Breaking Load | | Stress si) | Ultimat (p | e Stress si) | Elongation | % Elongation | Remarks |
|---------|----------|---------|----------------------|-----------|-------------------------|------------|------------------|---------|---------------|---------------|-----------------|------------|--------------|---------|
| 81 | (lbs/ft) | Nominal | Actual | Nominal | Actual | (kg) | (kg) | Nominal | Actual | Nominal | Actual | (inch) | % E | R |
| 1 | 0.371 | 3/8 | 0.373 | 0.11 | 0.109 | 3100 | 4900 | 62200 | 62630 | 98200 | 99000 | 1.00 | 12.5 | |
| - | - | - | - | | | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | | N | ote: on | ly one s | sample fo | r tensile | and one | sample f | or bend t | est | | | |
| 3/8 | " Dia Ba | ar Bend | Test Tł | rough | 180° is S | Satisfacto | Bend T | est | | | | | | |

I/C Testing Laboratoires **UET Lahore, Pakistan.**

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Test Floor Laboratory Department of Civil Engineering University of Engineering and Technology Lahore, 54890 Pakistan. Ph: 92-42-99029202

To,

Resident Engineer Enviro Consult (Smc-Pvt) Ltd. "Rehabilitation and Improvement of Drainge Channels of Faisalabad City."

Reference # CED/TFL 5162 (Dr. M Rizwan Riaz)

Reference of the request letter # ENVIRO/342/2024/12

Dated: 30-05-2024

Dated: 21-05-2024

Tension Test Report (Page -1/1)

Date of Test 31-05-2024 Gauge length 8 inches

Description Steel Bar Tensile and Bend Test as per ASTM-A615

| Weight | Si | neter/ ze ch) | Ar (ir | rea 1 ²) | Yield load | Breaking Load | | Stress si) | Ultimat (p | e Stress si) | Elongation | longation | Remarks |
|----------|----------------------|--|-----------|-------------------------|------------|------------------|---------------------|-----------------------|---|---|------------|---|---|
| (lbs/ft) | Nominal | Actual | Nominal | Actual | (kg) | (kg) | Nominal | Actual | Nominal | Actual | (inch) | % E | Re |
| 4.254 | 1.25 | 1.262 | 1.27 | 1.251 | 34600 | 58200 | 60100 | 60990 | 101100 | 102600 | 1.30 | 16.3 | riz eel |
| 4.229 | 1.25 | 1.258 | 1.27 | 1.243 | 34600 | 57600 | 60100 | 61350 | 100000 | 102200 | 1.30 | 16.3 | Aziz Steel |
| - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | No | ote: onl | ly two s | amples f | or tensile | and one | sample f | or bend t | test | | | |
| | | | | | | | | | | | | | |
| | | | | | | | est | | | | | | |
| 5" Dia E | Bar Ben | d Test T | hrough | 180° is | Satisfact | ory | | | | | | | |
| | (tJ/sqI) 4.254 4.229 | (tJ/sql) RenimoN 4.254 1.25 4.229 1.25 | (l) | (t) | (1) | (kg) 4.254 | ## (kg) (kg) 4.254 | ## (kg) (kg) (kg) 1 | ## (kg) (kg) ## ## ## ## ## ## ## | (±) 1 max (kg) 1 max (kg) <td>### Part</td> <td>(kg) (kg) (kg) (kg) (kg) (kg) (kg) (kg)</td> <td> A.254 1.25 1.262 1.27 1.251 34600 58200 60100 60990 101100 102600 1.30 16.3 4.229 1.25 1.258 1.27 1.243 34600 57600 60100 61350 100000 102200 1.30 16.3 </td> | ### Part | (kg) (kg) (kg) (kg) (kg) (kg) (kg) (kg) | A.254 1.25 1.262 1.27 1.251 34600 58200 60100 60990 101100 102600 1.30 16.3 4.229 1.25 1.258 1.27 1.243 34600 57600 60100 61350 100000 102200 1.30 16.3 |

I/C Testing Laboratoires UET Lahore, Pakistan.

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Test Floor Laboratory Department of Civil Engineering University of Engineering and Technology Lahore, 54890 Pakistan. Ph: 92-42-99029202

To,

Sub Divisional Officer Buildings Sub Division No. 1 Multan (Construction of Parking Plaza at District Headquarter Multan)

Reference # CED/TFL <u>5164 (Dr. M Rizwan Riaz)</u>

Reference of the request letter # 3875/1ST

Dated: 24-05-2024

Tension Test Report (Page -1/1)

Date of Test 31-05-2024 Gauge length 8 inches

Description Steel Bar Tensile and Bend Test as per ASTM-A615

| Sr. No. | Weight | Si | neter/ ize ch) | | rea 1 ²) | Yield load | Breaking Load | | Stress si) | | te Stress si) | Elongation | % Elongation | Remarks |
|---------|----------|---|----------------------|----------------|-------------------------|------------|------------------|-------------|---------------|---------|------------------|------------|--------------|---------|
| S | (lbs/ft) | Nominal | Actual | Nominal Actual | | (kg) | (kg) | Nominal | Actual | Nominal | Actual | (inch) | 3 % | R |
| 1 | 0.359 | 3/8 | 0.367 | 0.11 | 0.11 0.106 | | 4900 | 60200 | 62590 | 98200 | 102300 | 1.20 | 15.0 | |
| 2 | 0.359 | 3/8 | 0.367 | 0.11 | 0.106 | 3200 | 4900 | 64200 | 66760 | 98200 | 102300 | 1.40 | 17.5 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | Note: only two samples for tensile and one sample for bend test | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | Bend T | <u>'est</u> | | | | | | |
| 3/8 | " Dia Ba | ar Bend | Test Th | nrough | 180° is S | Satisfacto | ry | | | | | | | |

I/C Testing Laboratoires UET Lahore, Pakistan.

- 1- You can See your reports On Internet in the following web site http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
- 2. The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



Test Floor Laboratory Department of Civil Engineering University of Engineering and Technology Lahore, 54890 Pakistan. Ph: 92-42-99029202

To,

Director Projects Sheikhoo Sugar Mills (Steel Division) Sheikhoo Steel Anwar Abad Kot Addu, Muzaffargarh

Reference # CED/TFL <u>5165 (Dr. M Rizwan Riaz)</u>

Reference of the request letter # Nil

Dated: 30-05-2024

Dated: 26-05-2024

Tension Test Report (Page -1/4)

Date of Test 31-05-2024
Gauge length 8 inches

Description Deformed Steel Bar Tensile Test as per ASTM-A615

| Sr. No. | Weight | Diam Si | neter/ ze | Ar (ir | rea 1 ²) | Yield load | Breaking Load | | Stress si) | | e Stress si) | Elongation | % Elongation | Remarks |
|---------|----------|----------------|------------------|-----------|-------------------------|------------|------------------|------------|---------------|---------|-----------------|------------|--------------|---------|
| | (lbs/ft) | Nominal (#) | Actual (inch) | Nominal | Actual | (kg) | (kg) | Nominal | Actual | Nominal | Actual | (inch) | % E | Re |
| 1 | 0.374 | 3 | 0.374 | 0.11 | 0.110 | 3500 | 4900 | 70200 | 70210 | 98200 | 98300 | 1.10 | 13.8 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | | | | Not | te: only o | ne samp | le for ten | sile test | · | ı | | | |
| | | | | | | | D 1 T | 4 | | | | | | |
| | | | | | | | Bend T | est | | | | | | |

I/C Testing Laboratoires UET Lahore, Pakistan.

- 1- You can See your reports On Internet in the following web site http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
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Test Floor Laboratory Department of Civil Engineering University of Engineering and Technology Lahore, 54890 Pakistan. Ph: 92-42-99029202

To,

Director Projects Sheikhoo Sugar Mills (Steel Division) Sheikhoo Steel Anwar Abad Kot Addu, Muzaffargarh

Reference # CED/TFL <u>5165 (Dr. M Rizwan Riaz)</u>

Reference of the request letter # Nil

Dated: 30-05-2024

Dated: 26-05-2024

Tension Test Report (Page -2/4)

Date of Test 31-05-2024
Gauge length 8 inches

Description Deformed Steel Bar Tensile Test as per ASTM-A615

| Sr. No. | Weight | Diameter/ Size (mm) | | Area (in²) | | Yield load | Breaking Load | Yield Stress (psi) | | Ultimate Stress (psi) | | Elongation | % Elongation | Remarks |
|---------|-----------|---------------------------|--------|---------------|--------|------------|------------------|-----------------------|-----------|--------------------------|--------|------------|--------------|---------|
| S | (lbs/ft) | Nominal | Actual | Nominal | Actual | (kg) | (kg) | Nominal | Actual | Nominal | Actual | (inch) | % E | Re |
| 1 | 0.414 | 10 | 10.00 | 0.12 | 0.122 | 3700 | 5300 | 67975 | 66940 | 97370 | 95900 | 1.40 | 17.5 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | · | | | | Not | te: only o | ne samp | le for ten | sile test | T | ı | | | |
| | | | | | | | | | | | | | | |
| | Bend Test | | | | | | | | | | | | | |

I/C Testing Laboratoires UET Lahore, Pakistan.

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Test Floor Laboratory Department of Civil Engineering University of Engineering and Technology Lahore, 54890 Pakistan. Ph: 92-42-99029202

To,

Director Projects Sheikhoo Sugar Mills (Steel Division) Sheikhoo Steel Anwar Abad Kot Addu, Muzaffargarh

Reference # CED/TFL <u>5165 (Dr. M Rizwan Riaz)</u>

Reference of the request letter # Nil

Dated: 30-05-2024

Dated: 29-05-2024

Tension Test Report (Page -3/4)

Date of Test 31-05-2024
Gauge length 8 inches

Description Deformed Steel Bar Tensile Test as per ASTM-A615

| Sr. No. | Weight | Diameter/ Size | | Area (in²) | | Yield load | Breaking Load | Yield Stress (psi) | | Ultimate Stress (psi) | | Elongation | % Elongation | Remarks |
|---------|----------|-------------------|------------------|---------------|--------|------------|------------------|-----------------------|-----------|--------------------------|--------|------------|--------------|---------|
| | (lbs/ft) | Nominal (#) | Actual (inch) | Nominal | Actual | (kg) | (kg) | Nominal | Actual | Nominal | Actual | (inch) | % E | R |
| 1 | 0.375 | 3 | 0.374 | 0.11 | 0.110 | 3600 | 4800 | 72200 | 72050 | 96200 | 96100 | 1.00 | 12.5 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | | | | Not | te: only o | ne samp | le for ten | sile test | | | | | |
| | | | | | | | | | | | | | | |
| | | Bend Test | | | | | | | | | | | | |

I/C Testing Laboratoires UET Lahore, Pakistan.

- 1- You can See your reports On Internet in the following web site http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
- 2. The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



Test Floor Laboratory Department of Civil Engineering University of Engineering and Technology Lahore, 54890 Pakistan. Ph: 92-42-99029202

To,

Director Projects Sheikhoo Sugar Mills (Steel Division) Sheikhoo Steel Anwar Abad Kot Addu, Muzaffargarh

Reference # CED/TFL <u>5165 (Dr. M Rizwan Riaz)</u>

Reference of the request letter # Nil

Dated: 30-05-2024

Dated: 29-05-2024

Tension Test Report (Page -4/4)

Date of Test 31-05-2024 Gauge length 8 inches

Description Deformed Steel Bar Tensile Test as per ASTM-A615

| Sr. No. | Weight | Diameter/ Size (mm) | | Area (in²) | | Yield load | Breaking Load | Yield Stress (psi) | | Ultimate Stress (psi) | | Elongation | % Elongation | Remarks |
|---------|----------|---------------------------|--------|---------------|--------|------------|------------------|-----------------------|-----------|--------------------------|--------|------------|--------------|---------|
| | (lbs/ft) | Nominal | Actual | Nominal | Actual | (kg) | (kg) | Nominal | Actual | Nominal | Actual | (inch) | % E | R |
| 1 | 4.206 | 32 | 31.87 | 1.25 | 1.236 | 38200 | 53000 | 67373 | 68100 | 93475 | 94500 | 1.50 | 18.8 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | 1 | - | 1 | - | 1 | - | - | - | - | - | - | 1 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | | 1 | | Not | te: only o | ne samp | le for ten | sile test | | | 1 | | |
| | | | | | | | | | | | | | | |
| | | | | | | | Bend T | est | | | | | | |

I/C Testing Laboratoires UET Lahore, Pakistan.

- 1- You can See your reports On Internet in the following web site http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
- 2. The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



Test Floor Laboratory Department of Civil Engineering University of Engineering and Technology Lahore, 54890 Pakistan. Ph: 92-42-99029202

To,

General Manager (Construction)
Potential Engineers (Pvt.) Ltd.
Civil Construction Works for Nor-4387-2022(R) - 500/132 kV Substation Allama Iqbal Industrial City / M-3 Faisalabad.

Reference # CED/TFL 5166 (Dr. M Rizwan Riaz)

Reference of the request letter # PE/NOR-4387/2022/255

Dated: 30-05-2024

Dated: 30-05-2024

Tension Test Report (Page -1/1)

Date of Test 31-05-2024 Gauge length 8 inches

Description Steel Bar Tensile and Bend Test as per ASTM-A615

| Sr. No. | Weight | | | Area (in²) | | Yield load | Breaking Load | Yield Stress (psi) | | Ultimate Stress (psi) | | Elongation | % Elongation | Remarks |
|-----------|---|----------------|---------------|---------------|---------|------------|------------------|-----------------------|--------|--------------------------|--------|------------|--------------|---------|
| S | (lbs/ft) | Nominal (#) | Actual (inch) | Nominal | Actual | (kg) | (kg) | Nominal | Actual | Nominal | Actual | (inch) | % E | Re |
| 1 | 0.401 | 3 | 0.387 | 0.11 | 0.118 | 3490 | 4860 | 70000 | 65260 | 97400 | 90900 | 1.10 | 13.8 | |
| 2 | 0.397 | 3 | 0.385 | 0.11 | 0.117 | 3430 | 4840 | 68800 | 64850 | 97000 | 91600 | 1.20 | 15.0 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | Note: only two samples for tensile and one sample for bend test | | | | | | | | | | | | | |
| Bend Test | | | | | | | | | | | | | | |
| #3 | Bar Ben | d Test 7 | Through | 1800 i | Satisfa | ctory | Bend I | est | | | | | | |

#3 Bar Bend Test Through 180° is Satisfactory

Witness by Ibrar Ahmed (NESPAK)

I/C Testing Laboratoires UET Lahore, Pakistan.

- 1- You can See your reports On Internet in the following web site http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
- 2. The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



Test Floor Laboratory Department of Civil Engineering University of Engineering and Technology Lahore, 54890 Pakistan. Ph: 92-42-99029202

To,

Project Incharge M. Aslam Khan & Associates Construction of Shelter Associates House no.47-A in Nisar Colony Cant. Lahore.

Reference # CED/TFL **5167** (Dr. M Rizwan Riaz)

Reference of the request letter # PMO/LET/STEST/27/5/24/20081

Dated: 30-05-2024

Dated: 27-05-2024

Tension Test Report (Page -1/1)

Date of Test 31-05-2024 Gauge length 8 inches

Description Steel Bar Tensile and Bend Test as per ASTM-A615

| Sr. No. | Weight | Diameter/ Size | | Area (in²) | | Yield load | Breaking Load | Yield Stress (psi) | | Ultimate Stres (psi) | | Elongation | % Elongation | Remarks |
|---------|---|-------------------|---------------|---------------|----------|------------|------------------|-----------------------|----------|-------------------------|--------|------------|--------------|---------|
| S | (lbs/ft) | Nominal (#) | Actual (inch) | Nominal | Actual | (kg) | (kg) | Nominal | Actual | Nominal | Actual | (inch) | % E | R |
| 1 | 0.367 | 3 | 0.371 | 0.11 | 0.108 | 2900 | 4800 | 58200 | 59200 | 96200 | 98000 | 1.10 | 13.8 | |
| 2 | 0.364 | 3 | 0.369 | 0.11 | 0.107 | 3000 | 4800 | 60200 | 61800 | 96200 | 98900 | 1.10 | 13.8 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | | N | ote: on | ly two s | amples f | or tensile | and one | sample f | or bend t | test | | | |
| | Bend Test | | | | | | | | | | | | | |
| #3 | #3 Bar Bend Test Through 180° is Satisfactory | | | | | | | | | | | | | |

I/C Testing Laboratoires UET Lahore, Pakistan.

- 1- You can See your reports On Internet in the following web site http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
- 2. The above results pertain to sample /samples supplied to this laboratory.
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Test Floor Laboratory Department of Civil Engineering University of Engineering and Technology Lahore, 54890 Pakistan. Ph: 92-42-99029202

To,

Sub Divisional Officer G.C 2nd Sub Division GSC LESCO, Lahore

(Construction of 132kV D/C T/Line with in/out from EME-PU & WAPDA Town Bund Road Circuits feed for 132kV Etihad Town Grid Station with Double in/out Arrangement at Ethihad Town Housing Scheme Raiwind Road Lahore.)

Reference # CED/TFL 5168 (Dr. M Rizwan Riaz)

Reference of the request letter # 3474-76

Tension Test Report (Page -1/1)

Date of Test 31-05-2024 Gauge length 8 inches

Description Steel Bar Tensile and Bend Test as per ASTM-A615

| Sr. No. | Weight | Diameter/ Size (mm) | | Size (in ² | | Area (in²) Reaking Preaking (psi) (psi) | | | te Stress si) | Elongation | Elongation | Remarks | | |
|------------|-----------|---------------------------|--------|-----------------------|--------|---|----------|-----------|------------------|------------|------------|---------|------|---|
| <i>S</i> 2 | (lbs/ft) | Nominal | Actual | Nominal | Actual | (kg) | (kg) | Nominal | Actual | Nominal | Actual | (inch) | % E | R |
| 1 | 0.366 | 10 | 9.41 | 0.12 | 0.108 | 3000 | 4900 | 55115 | 61380 | 90021 | 100300 | 0.90 | 11.3 | |
| 2 | 0.381 | 10 | 9.59 | 0.12 | 0.112 | 3600 | 5300 | 66138 | 70860 | 97370 | 104400 | 1.30 | 16.3 | |
| - | - | 1 | - | - | - | ı | - | - | - | - | - | - | - | |
| - | - | ı | - | - | - | ı | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | | | | Not | e: only t | wo sampl | es for te | nsile test | | 1 | 1 | | |
| | | | | | | | | | | | | | | |
| | Bend Test | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |

I/C Testing Laboratoires UET Lahore, Pakistan.

Dated: 30-05-2024

Dated: 14-05-2024

- 1- You can See your reports On Internet in the following web site http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
- 2. The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



Test Floor Laboratory Department of Civil Engineering University of Engineering and Technology Lahore, 54890 Pakistan. Ph: 92-42-99029202

To,

M/S Alliance Engineers & Contractors

Lahore

(Construction of The HIVE Commercial Building at 107-108 OPF, Raiwind Road, Lahore.)

Reference # CED/TFL **5169** (Dr. M Rizwan Riaz)
Reference of the request letter # 0029000520250002

Tension Test Report (Page -1/1)

Date of Test 31-05-2024 Gauge length 8 inches

Description Steel Bar Tensile and Bend Test as per ASTM-A615

| Sr. No. | Weight | Diameter/ Size (inch) | | Area (in²) | | Yield load | Breaking Load | Yield Stress (psi) | | Ultimate Stress (psi) | | Elongation | % Elongation | Remarks |
|---------|---|-----------------------------|--------|---------------|----------|------------|------------------|-----------------------|----------|--------------------------|--------|------------|--------------|---------|
| | (lbs/ft) | Nominal | Actual | Nominal | Actual | (kg) | (kg) | Nominal | Actual | Nominal | Actual | (inch) | 3 % | R |
| 1 | 0.362 | 3/8 | 0.368 | 0.11 | 0.106 | 3000 | 4900 | 60200 | 62190 | 98200 | 101600 | 1.00 | 12.5 | |
| 2 | 0.367 | 3/8 | 0.370 | 0.11 | 0.108 | 2900 | 4900 | 58200 | 59320 | 98200 | 100300 | 1.30 | 16.3 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | | N | ote: on | ly two s | amples f | or tensile | and one | sample f | for bend | test | | | |
| | | | | | | | | | | | | | | |
| | Bend Test | | | | | | | | | | | | | |
| 3/8 | 3/8" Dia Bar Bend Test Through 180° is Satisfactory | | | | | | | | | | | | | |

I/C Testing Laboratoires UET Lahore, Pakistan.

Dated: 30-05-2024

Dated: 29-05-2024

- 1- You can See your reports On Internet in the following web site http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
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Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

I/C Testing Laboratoires UET Lahore, Pakistan.

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