

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

To,

Contractor Representative

CCECC - HCS Jv

Expansion of Terminal Building and Allied Facilities at Allama Iqbal International

Air[port (AIIAP), Lahore

Reference # CED/TFL 6108 (Dr.M Kashif)

Dated: 06-12-2024 Reference of the request letter # CCECCHCSJVAIIAP2024-422 Dated: 29-11-2024

**Tension Test Report** (Page -1/2)

Date of Test 10-12-2024 Gauge length 8 inches

Description Plain Steel Dowel Bar Tensile and Bend Test

|            | Description        | <u> </u>       | Plain Steel        | Dowel Bai   | r Tensile and    | d Bend Test  |                    |            |              | ,        |
|------------|--------------------|----------------|--------------------|-------------|------------------|--------------|--------------------|------------|--------------|----------|
| Sr.<br>No. | Diameter /<br>size | Reduced<br>Dia | Reduced            | Yield load  | Breaking<br>Load | Yield Stress | Ultimate<br>Stress | Elongation | % Elongation | Remarks  |
|            | (mm)               | (mm)           | (mm <sup>2</sup> ) | (kg)        | (kg)             | (MPa)        | (MPa)              | (inch)     | I %          | <b>X</b> |
| 1          | 50                 | 36.50          | 1046.35            | 39200       | 72000            | 368          | 675                | 0.80       | 10.00        |          |
| 1          | -                  | -              | -                  | -           | -                | -            | -                  | -          | 1            |          |
| I          | -                  | -              | -                  | ı           | -                | -            | -                  | 1          | ı            |          |
| ı          | -                  | -              | -                  | ı           | -                | -            | -                  | -          | ı            |          |
| -          | -                  | -              | -                  | -           | -                | -            | -                  | -          | -            |          |
| ı          | -                  | -              | -                  | -           | -                | -            | -                  | -          | -            |          |
|            |                    |                | Not                | e: only one | sample for       | tensile tes  | t                  |            |              |          |
| -          | -                  | -              | -                  |             | -                |              |                    |            | -            |          |
|            |                    |                |                    | <u> </u>    | Bend Test        |              |                    |            |              |          |
|            |                    |                |                    |             |                  |              |                    |            |              |          |
|            |                    |                |                    |             |                  |              |                    |            |              |          |
|            |                    |                |                    |             |                  |              |                    |            |              |          |

Witness by M. Asif (M.E NESPAK) and Nazish Imram (CCECC - HCS Jv)

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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- 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,

Contractor Representative CCECC - HCS Jv

Expansion of Terminal Building and Allied Facilities at Allama Iqbal International Air[port (AIIAP), Lahore

Reference # CED/TFL <u>6108 (Dr.M Kashif)</u>

Reference of the request letter # CCECCHCSJVAIIAP2024-422

Dated: 06-12-2024

Dated: 29-11-2024

**Test Report**(Page -2/2)

Date of Test 10-12-2024

Description Plain Steel Dowel Bar Weight & Size Test

| Sr. No. | Weight   | S       | meter/<br>iize<br>nm) | Ar<br>(mi     |        | Remarks |
|---------|----------|---------|-----------------------|---------------|--------|---------|
| S       | (lbs/ft) | Nominal | Actual                | Nominal       | Actual | Re      |
| 1       | 17.782   | 50      | 53.71                 |               | 2265.3 |         |
| -       | 1        | -       | 1                     | -             | -      |         |
| -       | ı        | -       | -                     | -             | -      |         |
| -       | 1        | -       | 1                     | -             | -      |         |
| -       | 1        | -       | 1                     | -             | -      |         |
| _       | -        | -       | -                     | -             | -      |         |
| _       | -        | -       | -                     | -             | -      |         |
| _       | -        | -       | -                     | -             |        |         |
|         |          | Note    | e: only two sa        | amples for to | est    |         |
|         |          |         |                       |               |        |         |

Witness by M. Asif (M.E NESPAK) and Nazish Imram (CCECC - HCS Jv)

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

Highway Sub Division No. 2

Rawalpindi

(Construction of Flyover Khawaja Corporation Chowk to Adyala Road District

Rawalpindi)

Reference # CED/TFL <u>6119 (Dr. M Kashif)</u> Reference of the request letter # 1470/H-2

Dated: 09-12-2024 Dated: 05-12-2024

reference of the request letter # 1470/11-2

**Tension Test Report** (Page -1/1)

Date of Test 10-12-2024 Gauge length 8 inches

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

| Sr. No. | Weight   | Dian<br>Si     | ieter/<br>ze     |          | rea<br>n²) | Yield load | Breaking<br>Load |         | Stress<br>si) |          | te Stress<br>si) | Elongation                            | % Elongation | Remarks |
|---------|----------|----------------|------------------|----------|------------|------------|------------------|---------|---------------|----------|------------------|---------------------------------------|--------------|---------|
|         | (lbs/ft) | Nominal<br>(#) | Actual<br>(inch) | Nominal  | Actual     | (kg)       | (kg)             | Nominal | Actual        | Nominal  | Actual           | (inch)                                | % E          | R       |
| 1       | 0.372    | 3              | 0.373            | 0.11     | 0.109      | 3790       | 4890             | 76000   | 76310         | 98000    | 98500            | 1.10                                  | 13.8         |         |
| 2       | 0.370    | 3              | 0.372            | 0.11     | 0.109      | 3790       | 4890             | 76000   | 76790         | 98000    | 99100            | 1.10                                  | 13.8         |         |
| 3       | 4.225    | 10             | 1.257            | 1.27     | 1.242      | 38000      | 53800            | 66000   | 67450         | 93400    | 95500            | 1.60                                  | 20.0         |         |
| 4       | 4.194    | 10             | 1.253            | 1.27     | 1.233      | 36400      | 52600            | 63200   | 65080         | 91300    | 94100            | 1.60                                  | 20.0         |         |
| -       | -        | -              | -                | -        | -          | -          | -                | -       | -             | -        | -                | -                                     | -            |         |
| -       | -        | -              | -                | -        | -          | -          | -                | -       | -             | -        | -                | -                                     | -            |         |
|         | ·<br>-   |                | No               | te: only | y four s   | amples fo  | or tensile       | and two | samples       | for bend | test             | · · · · · · · · · · · · · · · · · · · |              |         |
|         |          |                |                  |          |            |            | D 17             | ` ,     |               |          |                  |                                       |              |         |
|         |          |                |                  |          |            |            | Bend T           | est     |               |          |                  |                                       |              |         |

#3 Bar Bend Test Through 180° is Satisfactory

#10 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,

Senior Project Manager Infrastructure Development Authority of The Punjab Lahore

Reference # CED/TFL <u>6120, 6121 (Dr. M Kashif)</u>

Reference of the request letter # SPM(NETZERO)/IDAP/2024/20918

Dated: 09-12-2024

Dated: 09-12-2024

**Tension Test Report** (Page -1/1)

Date of Test 10-12-2024 Gauge length 8 inches

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

| Sr. No. | Weight  | Diam<br>Si     |   |           | rea<br>1 <sup>2</sup> ) | Yield load | Breaking<br>Load |         | Stress<br>si) |         | te Stress<br>si) | Elongation | % Elongation | Remarks          |
|---------|---|----------------|---|-----------|-------------------------|------------|------------------|---------|---------------|---------|------------------|------------|--------------|------------------|
| S       | (lbs/ft)  | Nominal<br>(#) | Actual (inch)   | Nominal   | Actual                  | (kg)       | (kg)             | Nominal | Actual        | Nominal | Actual           | (inch)     | % E          | Re               |
| 1       | 0.372   | 3              | 0.373     0.11     0.109       0.373     0.11     0.109 |           |                         | 3280       | 4790             | 65800   | 66190         | 96000   | 96700            | 1.40       | 17.5         | Karachi<br>Steel |
| 2       | 0.372   | 3              | 0.373   | 0.11      | 0.109                   | 3280       | 4790             | 65800   | 66170         | 96000   | 96700            | 1.30       | 16.3         | Kar              |
|         | -   | -              | -   | -         | -                       | -          | -                | -       | -             | -       | -                | -          | -            |                  |
| 1       | •   | ı              | 1   | ı         | -                       | ı          | -                | -       | -             | -       | -                | -          | -            |                  |
| 1       |   | 1              | 1   | -         | -                       | -          | -                | -       | -             | -       | -                | -          | -            |                  |
| -       | -   | -              | -   | -         | -                       | -          | -                | -       | -             | -       | -                | -          | -            |                  |
|         | Note: only two samples for tensile and one sample for bend test |                |   |           |                         |            |                  |         |               |         |                  | 1          |              | ı                |
| 112     | D D   | 100            | D1 1  | 1000:     | g .: c                  |            | Bend T           | est     |               |         |                  |            |              |                  |
| #3      | Bar Ben   | d Test '       | Through   | 1 180° is | s Satisfa               | ctory      |                  |         |               |         |                  |            |              |                  |

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,

Divisional Engineer (Civil)
Engg. Services Maint. & Dev
PAA, AIIAP, Lahpore
(Penlagement of GI Short Profing with PCC Slabs Ac

(Replacement of GI Sheet Roofing with RCC Slabs Additional / Alteration Works in Camb and Water Proofing of All Offices at Ex-RD Block at AIIAP, Lahore.)

Reference # CED/TFL <u>6122 (Dr. M Kashif)</u>

Reference of the request letter # AIIAP/1659-01/059/LACV/IV/877

Dated: 09-12-2024

Dated: 09-12-2024

**Tension Test Report** (Page -1/1)

Date of Test 10-12-2024 Gauge length 8 inches

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

| Sr. No. | Weight  | Si      | neter/<br>ze<br>ch) |         | rea<br>1 <sup>2</sup> ) | Yield load | Breaking<br>Load |         | Stress<br>si) |         | e Stress<br>si) | Elongation | % Elongation | Remarks  |
|---------|---|---------|---------------------|---------|-------------------------|------------|------------------|---------|---------------|---------|-----------------|------------|--------------|----------|
|         | (lbs/ft)  | Nominal | Actual              | Nominal | Actual                  | (kg)       | (kg)             | Nominal | Actual        | Nominal | Actual          | (inch)     | <b>H</b> %   | R        |
| 1       | 0.368   | 3/8     | 0.371               | 0.11    | 0.108                   | 3690       | 4810             | 74000   | 75230         | 96400   | 98100           | 1.10       | 13.8         | teel     |
| -       | 1   | 1       | -                   | -       | -                       | 1          | -                | -       | -             | -       | -               | -          | -            | FF Steel |
| -       | -   | 1       | -                   | -       | -                       | -          | -                | -       | -             | -       | -               | -          | -            |          |
| -       | -   | 1       | -                   | -       | -                       | 1          | -                | -       | -             | -       | -               | -          | -            |          |
| -       | -   | 1       | -                   | -       | -                       | 1          | -                | -       | -             | -       | -               | -          | -            |          |
| -       | -   | -       | -                   | -       | -                       | -          | -                | -       | -             | -       | -               | -          | -            |          |
|         | Note: only two samples for tensile and one sample for bend test |         |                     |         |                         |            |                  |         |               |         | ı               | T          |              |          |
|         |   |         |                     |         |                         |            |                  |         |               |         |                 |            |              |          |
|         |   |         |                     |         |                         |            | Bend             | Γest    |               |         |                 |            |              |          |

3/8" 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,

Project Manager, HIGH-Q

Construction of HIGH-Q Tower at CBD, Lahore.

Reference # CED/TFL <u>6123 (Dr. M Kashif)</u>
Reference of the request letter # QC/HQ/CIVIL/003

**Tension Test Report** (Page -1/1)

Date of Test 10-12-2024 Gauge length 8 inches

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

| Sr. No. | Weight  | Si      | neter/<br>ze<br>m) |         | rea<br>1 <sup>2</sup> ) | Yield load | Breaking<br>Load |         | Stress<br>si) |         | te Stress<br>si) | Elongation | % Elongation | Remarks |
|---------|---|---------|--------------------|---------|-------------------------|------------|------------------|---------|---------------|---------|------------------|------------|--------------|---------|
| S       | (lbs/ft)  | Nominal | Actual             | Nominal | Actual                  | (kg)       | (kg)             | Nominal | Actual        | Nominal | Actual           | (inch)     | % E          | R       |
| 1       | 0.363   | 10      | 9.36               | 0.12    | 0.107                   | 3620       | 5520             | 66505   | 74740         | 101412  | 114000           | 1.10       | 13.8         |         |
| 2       | 0.361   | 10      | 9.34               | 0.12    | 0.106                   | 3540       | 5450             | 65036   | 73490         | 100126  | 113200           | 1.00       | 12.5         |         |
| 1       | -   | -       | -                  | -       | -                       | -          | -                | -       | -             | -       | -                | -          | -            |         |
| 1       | -   | -       | -                  | -       | -                       | -          | -                | -       | -             | -       | -                | -          | -            |         |
| -       | -   | -       | -                  | -       | -                       | -          | -                | -       | -             | -       | -                | -          | -            |         |
| -       | -   | -       | -                  | -       | -                       | -          | -                | -       | -             | -       | -                | -          | -            |         |
|         | Note: only two samples for tensile and one sample for bend test |         |                    |         |                         |            |                  |         |               |         |                  |            |              |         |
|         |   |         |                    |         |                         |            | Bend T           | est est |               |         |                  |            |              |         |
| 10r     | nm Bar  | Bend T  | est Thro           | ough 18 | 0° is Sa                | tisfactory | ,<br>            |         |               |         |                  |            |              |         |

I/C Testing Laboratoires UET Lahore, Pakistan.

Dated: 09-12-2024

Dated: 09-12-2024

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

To,

Material Engineer Banu Mukhtar Contracting (Pvt) Ltd Burj – 1 by Ajwa Builders

Reference # CED/TFL <u>6124 (Dr. M Kashif)</u>
Reference of the request letter # DOC/AJWA/149

**Tension Test Report** (Page -1/1)

Date of Test 10-12-2024 Gauge length 8 inches

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

| Sr. No. | Weight  |                | neter/<br>ze  |         | rea<br>n²) | Yield load | Breaking<br>Load |         | Stress<br>si) | Ultimat<br>(p | e Stress<br>si) | Elongation | % Elongation | Remarks |
|---------|---|----------------|---------------|---------|------------|------------|------------------|---------|---------------|---------------|-----------------|------------|--------------|---------|
| S       | (lbs/ft)  | Nominal<br>(#) | Actual (inch) | Nominal | Actual     | (kg)       | (kg)             | Nominal | Actual        | Nominal       | Actual          | (inch)     | % E          | Ŗ       |
| 1       | 0.361   | 3              | 0.367         | 0.11    | 0.106      | 3890       | 5120             | 78000   | 80850         | 102600        | 106500          | 1.20       | 15.0         |         |
| 2       | 0.366   | 3              | 0.370         | 0.11    | 0.108      | 3890       | 5170             | 78000   | 79630         | 103600        | 105900          | 1.10       | 13.8         |         |
| 1       | -   | -              | -             | -       | -          | -          | _                | -       | -             | _             | -               | -          | -            |         |
| 1       | -   | -              | -             | -       | -          | -          | _                | -       | -             | _             | -               | -          | -            |         |
| -       | -   | -              | -             | -       | -          | -          | _                | -       | -             | _             | -               | -          | -            |         |
|         | -   | -              | -             | -       | -          | -          | -                | -       | -             | -             | -               | -          | -            |         |
|         | Note: only two samples for tensile and one sample for bend test |                |               |         |            |            |                  |         |               |               |                 |            |              | 1       |
|         |   |                |               |         |            |            | Bend T           | est     |               |               |                 |            |              |         |
| #3      | Bar Ben   | d Test         | Through       | 180° is | s Satisfa  | ctory      |                  |         |               |               |                 |            |              |         |

I/C Testing Laboratoires UET Lahore, Pakistan.

Dated: 09-12-2024

Dated: 09-12-2024

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

To,

Project Manager University of Management and Technology Lahore. Exhibition Building (Riz Builders)

Reference # CED/TFL <u>6125 (Dr. M Kashif)</u>
Reference of the request letter # EXB-1/76

Dated: 09-12-2024

Dated: 05-12-2024

**Tension Test Report** (Page -1/1)

Date of Test 10-12-2024 Gauge length 8 inches

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

| Sr. No. | Weight  | Si       | neter/<br>ize<br>um) |         | rea<br>1 <sup>2</sup> ) | Yield load | Breaking<br>Load |         | Stress<br>si) |         | te Stress<br>si) | Elongation | % Elongation | Remarks        |
|---------|---|----------|----------------------|---------|-------------------------|------------|------------------|---------|---------------|---------|------------------|------------|--------------|----------------|
| S       | (lbs/ft)  | Nominal  | Actual               | Nominal | Actual                  | (kg)       | (kg)             | Nominal | Actual        | Nominal | Actual           | (inch)     | % E          | Re             |
| 1       | 0.371   | 3        | 0.373                | 0.11    | 0.109                   | 3670       | 5350             | 73600   | 74080         | 107200  | 108000           | 1.00       | 12.5         | za<br>el       |
| 2       | 0.371   | 3        | 0.373                | 0.11    | 0.109                   | 3620       | 5300             | 72600   | 73210         | 106200  | 107200           | 1.40       | 17.5         | Hunza<br>Steel |
| -       | -   | -        | -                    | -       | -                       | -          | _                | -       | -             | -       | -                | -          | -            |                |
|         | -   | -        | -                    | -       | -                       | -          | _                | -       | -             | -       | -                | -          | -            |                |
| 1       | -   | -        | -                    | -       | -                       | -          | _                | -       | -             | -       | -                | -          | -            |                |
| -       | -   | -        | -                    | -       | -                       | -          | _                | -       | -             | -       | -                | -          | -            |                |
|         | Note: only two samples for tensile and one sample for bend test |          |                      |         |                         |            |                  |         |               |         |                  |            |              |                |
| #3      | Rar Ran   | d Test ' | Through              | 1800 ;  | Satisfa                 | uctory     | Bend T           | est     |               |         |                  |            |              |                |
| #3      | Bar Ben   | d Test   | Through              | 180° is | s Satisfa               | ctory      |                  |         |               |         |                  |            |              |                |

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,

AE B&R CMES (PAF) Sargodha (Establishment of Cattle Farm and Horse Breeding Facilities at PAF Chander.)

Reference # CED/TFL <u>6126 (Dr. M Kashif)</u> Reference of the request letter # 6000-HB/39/E6

**Tension Test Report** (Page -1/1)

Date of Test 10-12-2024 Gauge length 8 inches

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

| Sr. No. | Weight   | Si      | neter/<br>ze<br>ch) |          | rea<br>n²) | Yield load | Breaking<br>Load |         | Stress<br>si) |           | e Stress<br>si) | Elongation | % Elongation | Remarks |
|---------|----------|---------|---------------------|----------|------------|------------|------------------|---------|---------------|-----------|-----------------|------------|--------------|---------|
| S       | (lbs/ft) | Nominal | Actual              | Nominal  | Actual     | (kg)       | (kg)             | Nominal | Actual        | Nominal   | Actual          | (inch)     | % E          | Re      |
| 1       | 0.374    | 3       | 0.374               | 0.11     | 0.110      | 4080       | 4790             | 81800   | 81720         | 96000     | 96000           | 0.80       | 10.0         |         |
| 2       | 0.375    | 3       | 0.375               | 0.11     | 0.110      | 4080       | 5450             | 81800   | 81550         | 109200    | 109000          | 0.80       | 10.0         |         |
| -       | -        | -       | -                   | -        | -          | 1          | -                | -       | -             | -         | -               | -          | 1            |         |
| 1       | -        | -       | -                   | -        | -          | -          | -                | -       | -             | -         | -               | -          | -            |         |
| 1       | -        | -       | -                   | -        | -          | -          | -                | -       | -             | -         | -               | -          | -            |         |
| -       | -        | -       | -                   | -        | -          | -          | -                | -       | -             | -         | -               | -          | -            |         |
|         |          |         | No                  | ote: onl | y two s    | amples fo  | or tensile       | and one | sample f      | or bend t | est             | 1          |              |         |
| 2/0     | " Die Be | ur Dand | Tost Tl             | rough    | 1900 is 9  | Satisfacto | Bend T           | est     |               |           |                 |            |              |         |
| 3/8     | Dia Ba   | ır Bena | rest ir             | irougn   | 180° 18 3  | Satisfacto | огу              |         |               |           |                 |            |              |         |

I/C Testing Laboratoires UET Lahore, Pakistan.

Dated: 09-12-2024

Dated: 05-12-2024

- 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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### STRUCTURAL ENGINEERING DIVISION

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

To,

Project Coordinator M/S Bestway Cement Ltd Bestway Tower Project.

Reference # CED/TFL <u>6127 (Dr. M Kashif)</u> Reference of the request letter # ST/BT/04

**Tension Test Report** (Page – 1/1)

Date of Test 10-12-2024 Gauge length 600 mm

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

| Sr. No. | Nominal<br>Diameter | Nominal<br>Weight | Measured<br>weight | Yield st<br>clause |        | Breal<br>strength<br>(6.2 | clause | % Elongation | Remarks/ Coil No. |
|---------|---------------------|-------------------|--------------------|--------------------|--------|---------------------------|--------|--------------|-------------------|
|         | (mm)                | (kg/km)           | (kg/km)            | (kg)               | (kN)   | (kg)                      | (kN)   | %            | Rema              |
| 1       | 12.70<br>(1/2")     | 780.0             | 784.0              | 17700              | 173.64 | 19500                     | 191.30 | >3.50        | xx                |
| -       | -                   | -                 | -                  | -                  | -      | -                         | -      | 1            | -                 |
| -       | -                   | -                 | -                  | -                  | -      | -                         | -      | -            | -                 |
| -       | -                   | -                 | -                  | -                  | -      | -                         | -      | -            | -                 |
| -       | -                   | -                 | -                  | -                  | -      | -                         | -      | -            | -                 |
| -       | -                   | -                 | -                  | -                  | -      | -                         | -      | -            | -                 |

Only one sample for Test

I/C Testing Laboratoires UET Lahore, Pakistan.

Dated: 10-12-2024

Dated: 09-12-2024

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

To,

Manager Procurement Gharibwal Cement Limited. Lahore

Reference # CED/TFL <u>6128 (Dr. M Kashif)</u>

Reference of the request letter # GCL/Purchase/UET/TEST/010

Dated: 10-12-2024

Dated: 10-12-2024

**Tension Test Report** (Page -1/1)

Date of Test 10-12-2024 Gauge length 8 inches

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

| Sr. No. | Weight   | Si      | neter/<br>ize<br>um) |         | rea<br>1 <sup>2</sup> ) | Yield load | Breaking<br>Load |         | Stress<br>si) |           | e Stress<br>si) | Elongation | % Elongation | Remarks |
|---------|----------|---------|----------------------|---------|-------------------------|------------|------------------|---------|---------------|-----------|-----------------|------------|--------------|---------|
| S       | (lbs/ft) | Nominal | Actual               | Nominal | Actual                  | (kg)       | (kg)             | Nominal | Actual        | Nominal   | Actual          | (inch)     | % E          | Re      |
| 1       | 4.240    | 32      | 32.00                | 1.25    | 1.246                   | 37200      | 57400            | 65609   | 65780         | 101235    | 101500          | 1.40       | 17.5         |         |
| 2       | 4.267    | 32      | 32.10                | 1.25    | 1.254                   | 38200      | 59400            | 67373   | 67130         | 104763    | 104400          | 1.20       | 15.0         |         |
| -       | -        | -       | -                    | -       | -                       | -          | -                | -       | -             | -         | -               | -          | -            |         |
| -       | -        | -       | -                    | -       | -                       | -          | -                | -       | -             | -         | -               | -          | -            |         |
| -       | -        | -       | -                    | -       | -                       | -          | -                | -       | -             | -         | -               | -          | -            |         |
| -       | -        | -       | -                    | -       | -                       | -          | -                | -       | -             | -         | -               | -          | -            |         |
|         |          |         | N                    | ote: on | ly two s                | amples f   | or tensile       | and one | sample f      | or bend t | test            |            |              |         |
| 22.     | Die      | Dan Da  | ad Tast              | Tl      | 1. 1000 :               | a Catiaf   | Bend T           | est     |               |           |                 |            |              |         |
| 321     | nm Dia   | Bar Bei | nd Lest              | Ihroug  | n 180° 1                | s Satisfac | ctory            |         |               |           |                 |            |              |         |

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

To,

Additional Director (Maintence)
Defence Housing Authority, Gujranwala
"External Electrification Sys (UG) Sector 1A Extension DHA Gwa."

Reference # CED/TFL <u>6132 (Dr. M Kashif)</u>

Reference of the request letter # 318/13/Maint/UG Elec 1A Extn

Dated: 10-12-2024

Dated: 09-12-2024

**Tension Test Report** (Page -1/1)

Date of Test 10-12-2024 Gauge length 8 inches

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

| Sr. No. | Weight  | Si      | neter/<br>ze<br>m) |         | rea<br>1 <sup>2</sup> ) | Yield load | Breaking<br>Load |         | Stress<br>si) |         | e Stress<br>si) | Elongation | % Elongation | Remarks           |
|---------|---|---------|--------------------|---------|-------------------------|------------|------------------|---------|---------------|---------|-----------------|------------|--------------|-------------------|
|         | (lbs/ft)  | Nominal | Actual             | Nominal | Actual                  | (kg)       | (kg)             | Nominal | Actual        | Nominal | Actual          | (inch)     | % E          | Ŗ                 |
| 1       | 0.368   | 10      | 9.43               | 0.12    | 0.108                   | 3430       | 4790             | 63015   | 69830         | 88000   | 97600           | 1.20       | 15.0         | hoo<br>el         |
| 2       | 0.364   | 10      | 9.37               | 0.12    | 0.107                   | 3470       | 4790             | 63750   | 71500         | 88000   | 98700           | 1.40       | 17.5         | Sheikhoo<br>Steel |
| -       | -   | -       | -                  | -       | -                       | -          | -                | -       | -             | -       | -               | -          | -            |                   |
| -       | -   | -       | -                  | -       | -                       | -          | -                | -       | -             | -       | -               | -          | -            |                   |
| -       | -   | -       | -                  | -       | -                       | -          | -                | -       | -             | -       | -               | -          | -            |                   |
| -       | -   | -       | -                  | -       | -                       | -          | -                | -       | -             | -       | -               | -          | -            |                   |
|         | Note: only two samples for tensile and one sample for bend test |         |                    |         |                         |            |                  |         |               |         | 1               |            |              |                   |
|         |   |         |                    |         |                         |            |                  |         |               |         |                 |            |              |                   |
|         |   |         |                    |         |                         |            | Bend             | Γest    |               |         |                 |            |              |                   |
| 10ı     | nm Dia  | Bar Bei | nd Test            | Throug  | h 180° i                | s Satisfac | ctory            |         |               |         |                 |            |              |                   |

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,

Khurram Shahzad Ali Trade Centre, Lahore

Reference # CED/TFL 6134 (Dr. M Kashif) Dated: 10-12-2024 Reference of the request letter # Nil Dated: 10-12-2024

**Tension Test Report** (Page -1/1)

Date of Test 10-12-2024 Gauge length 8 inches

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

| Sr. No. | Weight  | Diameter/<br>Size |               | Area<br>(in²) |           | Yield load | Breaking<br>Load | Yield Stress<br>(psi) |        | Ultimate Stress<br>(psi) |        | Elongation | % Elongation | Remarks |
|---------|---|-------------------|---------------|---------------|-----------|------------|------------------|-----------------------|--------|--------------------------|--------|------------|--------------|---------|
|         | (lbs/ft)  | Nominal<br>(#)    | Actual (inch) | Nominal       | Actual    | (kg)       | (kg)             | Nominal               | Actual | Nominal                  | Actual | (inch)     | <b>3%</b>    | Re      |
| 1       | 0.374   | 3                 | 0.374         | 0.11          | 0.110     | 4080       | 4640             | 81800                 | 81800  | 93000                    | 93100  | 1.00       | 12.5         |         |
| 2       | 0.370   | 3                 | 0.372         | 0.11          | 0.109     | 3980       | 4590             | 79800                 | 80670  | 92000                    | 93100  | 0.90       | 11.3         |         |
| -       | -   | -                 | -             | -             | -         | -          | -                | -                     | -      | -                        | -      | -          | -            |         |
| -       | -   | -                 | -             | -             | -         | -          | -                | -                     | -      | -                        | -      | -          | -            |         |
| -       | -   | -                 | -             | -             | -         | -          | -                | -                     | -      | -                        | -      | -          | -            |         |
| -       | -   | -                 | -             | -             | -         | -          | -                | -                     | -      | -                        | -      | -          | -            |         |
|         | Note: only two samples for tensile and one sample for bend test |                   |               |               |           |            |                  |                       |        |                          |        |            |              |         |
|         |   |                   |               |               |           |            | Bend T           | est                   |        |                          |        |            |              |         |
| #3      | Bar Ben   | d Test 7          | Through       | 180° is       | s Satisfa | ctory      |                  |                       |        |                          |        |            |              |         |

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