

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

To, Chief Resident Engineer, SMP Osmani & Company (Pvt) Ltd Swat Motorway Project

Reference # CED/TFL **34043** (Dr. M Rizwan Riaz) Dated: 22-10-2019

Reference of the request letter # 334/CRE/QAT SMP/2019 Dated: 17-10-2019

Tension Test Report (Page – 1/2)

Date of Test 28-10-2019 Gauge length 2 inches

Description W-Section, End Piece & Vertical Post Strip Tensile and Bend Test

| Sr. No. | Designation | Size of Strip | X Section Area | Yield load | Breaking Load | Yield Stress | Ultimate Stress | Elongation | . Elongation | Remarks |
|---------|---------------|---------------|--------------------|-------------|------------------|-----------------------|-----------------------|------------|--------------|---------|
| | | (cm) | (cm ²) | (kg) | (kg) | (kg/cm ²) | (kg/cm ²) | (in) | % | |
| 1 | W C - 4! | 2.53x0.28 | 0.71 | 2300 | 3000 | 3246.75 | 4234.90 | 0.50 | 25.00 | |
| 2 | W-Section | 2.54x0.28 | 0.71 | 2300 | 2900 | 3233.97 | 4077.62 | 0.60 | 30.00 | |
| 3 | E ID' | 2.53x0.28 | 0.71 | 2300 | 3000 | 3246.75 | 4234.90 | 0.60 | 30.00 | |
| 4 | End Piece | 2.54x0.28 | 0.71 | 2500 | 3100 | 3515.19 | 4358.83 | 0.70 | 35.00 | |
| 5 | T7 (1 1 D (| 2.56x0.70 | 1.79 | 5800 | 8300 | 3236.61 | 4631.70 | 0.80 | 40.00 | |
| 6 | Vertical Post | 2.55x0.70 | 1.79 | 5800 | 8300 | 3249.30 | 4649.86 | 0.80 | 40.00 | |
| | | Only Six S | amples fo | r Tensile a | nd Three | Samples fo | r Bend Test | I | | |
| | | | | Don | d Tost | | | | | |

Bend Test

Strip Taken from W-Section Bend Test Through 180° is Satisfactory

Strip Taken from End Piece Bend Test Through 180° is Satisfactory

Strip Taken from Vertical Post 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
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To, Chief Resident Engineer, SMP Osmani & Company (Pvt) Ltd Swat Motorway Project

Reference # CED/TFL **34043** (Dr. M Rizwan Riaz) Dated: 22-10-2019 Reference of the request letter # 334/CRE/QAT SMP/2019 Dated: 17-10-2019

Weight &Size Test Report (Page – 2/2)

Date of Test 28-10-2019

Description W-Section, End Piece & Vertical Post Weight and Size Test

| Sr. No. | Designation | Weight | Length | Weight per Unit Length | Thickness | Remark |
|------------|---------------|----------|-----------|---------------------------|-----------|--------|
| | | (g) | (mm) | (kg/m) | (mm) | |
| 1 | W-Section | 3214 | 307.00 | 10.47 | 2.80 | |
| 2 | End Piece | 1197 | 106.10 | 11.22 | 2.80 | |
| | Vertical Post | 916 | 79.40 | 11.54 | 7.00 | |
| - | - | - | - | - | - | |
| - | - | - | - | - | - | |
| - | - | - | - | - | - | |
| - | - | - | - | - | - | |
| - | - | - | - | - | - | |
| - | - | - | - | - | - | |
| | | Only The | ee Sample | es for Tes | t | |
| | | | | | | |

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, Chief Resident Engineer, SMP Osmani & Company (Pvt) Ltd Swat Motorway Project

Reference # CED/TFL **34044** (Dr. M Rizwan Riaz)

Reference of the request letter # 335/CRE/QAT SMP/2019

Dated: 22-10-2019

Dated: 17-10-2019

Tension Test Report (Page - 1/1)

Date of Test 28-10-2019 Gauge length 2 inches

Description Fence Clamp Strip Tensile Test

| Sr. No. | Designation | (mm) Size of Strip | X Section Area | gy Yield load | Breaking Example 10 | (MPa) Yield Stress | Ultimate Stress | (ui) Elongation | % Elongation | Remarks |
|---------|-------------|-----------------------|----------------|---------------|----------------------|--------------------|-----------------|-----------------|--------------|---------|
| 1 | Fence Clamp | 12.70x4.40 | 55.88 | 2200 | 3200 | 386.22 | 561.78 | 0.40 | 20.00 | |
| - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | • | 1 | - | - | - | - | |
| | | | Only | One Samp | le for Ten | sile Test | | | 1 | |
| | | | | Ben | d 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,
Resident Engineer
Amad Anwar Pvt Ltd
Construction of Buness Hub on Commercial Broadway Phase-VIII
(DHA)(M/s Kingcrete Builders)(M/s LONTRIN (Pvt) Ltd)

Reference # CED/TFL **34052** (Dr. M Rizwan Riaz) Dated: 22-10-2019 Reference of the request letter # 410/10/Business Hub/ Ph. VIII/M & F Dated: 21-10-2019

Tension Test Report (Page -1/1)

Date of Test 28-10-2019 Gauge length 2 inches

Description Pipe Steel Strip Tensile Test

| Sr. No. | Designation | Size of Strip | X Section Area | Yield load | Breaking Load | Yield Stress | Ultimate Stress | Elongation | % Elongation | Remarks |
|---------|-------------|---------------|--------------------|------------|------------------|--------------|--------------------|------------|--------------|---------|
| | (inch) | (mm) | (mm ²) | (kg) | (kg) | (MPa) | (MPa) | (in) | % | |
| 1 | 1.5 | 28.50x3.20 | 91.20 | 3800 | 5200 | 408.75 | 559.34 | 0.40 | 20.00 | |
| 2 | 1.5 | 28.50x3.20 | 91.20 | 3600 | 4700 | 387.24 | 505.56 | 0.40 | 20.00 | |
| 3 | 2.5 | 28.60x4.60 | 131.56 | 5600 | 7200 | 417.57 | 536.88 | 0.50 | 25.00 | |
| 4 | 2.5 | 28.60x4.60 | 131.56 | 5900 | 7600 | 439.94 | 566.71 | 0.50 | 25.00 | |
| 5 | 3.0 | 28.50x5.10 | 145.35 | 7300 | 8400 | 492.69 | 566.93 | 0.50 | 25.00 | |
| 6 | 3.0 | 28.50x5.10 | 145.35 | 6900 | 8500 | 465.70 | 573.68 | 0.50 | 25.00 | |
| | | Ī | Only | Six Sampl | es for Ten | sile Test | | | | |
| | | | | Ben | d 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, M/S CGGC Suki Kinari Project in Pakistan 874 MW Suki Kinari Hydro Power Project

Reference # CED/TFL **34053** (Dr. M Rizwan Riaz) Dated: 23-10-2019 Reference of the request letter # Nil Dated: 02-10-2019

Tension Test Report (Page - 1/1)

Date of Test 28-10-2019 Gauge length 2 inches

Description Copper Water-Stop Strip Tensile Test as per ASTM B-152

| Sr. No. | Designation | (mm) Size of Strip | X Section Area Area | (kg) | (gay) Breaking Load | Xield Stress | Ultimate Stress | (ii) Elongation | % Elongation | Remarks |
|---------|-------------------|--------------------|---------------------|-----------|---------------------|--------------|-----------------|-----------------|--------------|---------|
| 1 | G W G | 25.60x1.20 | 30.72 | | 600 | | 191.60 | 0.50 | 25.00 | |
| 2 | Copper Water-Stop | 25.50x1.20 | 30.60 | | 600 | | 192.35 | 0.50 | 25.00 | |
| - | - | - | 1 | - | - | - | - | • | - | |
| - | • | - | 1 | - | - | - | - | • | - | |
| • | • | - | 1 | - | - | - | • | • | - | |
| - | - | - | - | - | - | - | - | - | - | |
| | | On | ly Two Sa | amples fo | or Tensile | Test | | | | |
| | | | | Bend Te | est | | | | | |
| | | | | | | | | | | |

I/C Testing Laboratoires UET Lahore, Pakistan.

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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

Ref: <u>CED/TFL/10/34066</u> Dated: <u>24-10-19</u>

Date of Test: <u>28-10-19</u>

To

Resident Engineer

NESPAK

Construction of Khazana Bypass Bridge over River Panjkora District Lowe Dir

Khane

Subject: - TEST RESULT REPORT FOR BEARING DEVICE (PAD)

Reference to your letter no. 3956/021/NUK/19/186, Dated: 06/10/2019 on the above mentioned subject. One Elastromeric Bearing Rubber Pad (EBRP) has been received by us. The same was tested and results are given below.

Laboratory : TEST FLOOR LAB

Machine : SHIMADZU

Sample No. : 1/1

Dimensions of EBRP : $499.60 \times 501.00 \times 89.95 \text{ mm}$

TEST RESULTS - SHORT DURATION

Load Duration : 5+5 minutes Test Load : 160 TONS

Bulging Pattern : Uniform Buldging.

Laminated Parallelism : Parallel

Cracks : No crack is observed

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 Naqvi anf Siddiquie Regional Blood Center, Allied Hospital, Faisalabad

Reference # CED/TFL **34069** (Dr. M Rizwan Riaz)

Reference of the request letter # RBC/FSD/2019/02

Dated: 25-10-2019

Dated: 23-10-2019

Tension Test Report (Page -1/1)

Date of Test 28-10-2019 Gauge length 8 inches

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

| Sr. No. | | | neter/ ze | | rea 1 ²) | Yield load | Breaking Load | | Stress si) | Ultimat (p | e Stress si) | Elongation | % Elongation | Remarks |
|---------|---|----------------|------------------|---------|-------------------------|------------|------------------|---------|---------------|---------------|-----------------|------------|--------------|---------|
| S | (lbs/ft) | Nominal (#) | Actual (inch) | Nominal | Actual | (kg) | (kg) | Nominal | Actual | Nominal | Actual | (inch) | % E | Ŗ |
| 1 | 0.369 | 3 | 0.372 | 0.11 | 0.108 | 3300 | 5100 | 66200 | 67080 | 102200 | 103700 | 1.00 | 12.5 | |
| 2 | 0.370 | 3 | 0.372 | 0.11 | 0.109 | 3300 | 5100 | 66200 | 66860 | 102200 | 103400 | 1.20 | 15.0 | |
| | | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | Note: only two samples for tensile and one sample for bend test | | | | | | | | | | | | | |
| 110 | D D | 1.00 | DI 1 | 1000: | G .: C | | 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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STRUCTURAL ENGINEERING DIVISION

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

To, M/S Defence Housing Authority.

Lahore Cantt

(Construction of 1-Kanal Villas at DRGCC Club House DHA Ph-6)(M/s Linker Developers)

Reference # CED/TFL **34070** (Dr. M Rizwan Riaz) Dated: 25-10-2019 Reference of the request letter # 408/241/E/Lab/747/1053 Dated: 25-10-2019

Tension Test Report (Page -1/1)

Date of Test 28-10-2019 Gauge length 8 inches

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

| Sr. No. | Weight | | neter/ ze | | rea n²) | Yield load | Breaking Load | | Stress si) | | e Stress si) | Elongation | % Elongation | Remarks |
|---------|---|----------------|---------------|-----------|------------|------------|------------------|---------|---------------|---------|-----------------|------------|--------------|-------------------|
| S | (lbs/ft) | Nominal (#) | Actual (inch) | Nominal | Actual | (kg) | (kg) | Nominal | Actual | Nominal | Actual | (inch) | % E | Ř |
| 1 | 0.366 | 3 | 0.370 | 0.11 | 0.108 | 3200 | 5000 | 64200 | 65490 | 100200 | 102400 | 1.30 | 16.3 | b |
| 2 | 0.391 | 3 | 0.383 | 0.11 | 0.115 | 3500 | 5400 | 70200 | 67070 | 108200 | 103500 | 1.20 | 15.0 | Itteffaq Steel |
| • | - | - | - | - | - | - | - | - | - | - | - | - | - | It |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | Note: only two samples for tensile and one sample for bend test | | | | | | | | | | | | | |
| "2 | D D | 1.75 | | 1000: | g .: c | | Bend T | est est | | | | | | |
| #3 | Bar Ben | d Test | Through | 1 180° is | s Satisfa | ctory | | | | | | | | |

I/C Testing Laboratoires UET Lahore, Pakistan.

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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,
Principal
University of Education
Lower Mall Campus, Lahore

(Construction of Main Gate, Parking Shed etc at University of Education, Lower Mall Campus)

Reference # CED/TFL **34071** (Dr. M Rizwan Riaz) Reference of the request letter # UELMC/2019/1798

Tension Test Report (Page -1/1)

Date of Test 28-10-2019 Gauge length 8 inches

Description Deformed Steel Bar Tensile Test as per ASTM-A615

| ir. No. | Sr. No. | | neter/ ze | | rea 1 ²) | Yield load | Breaking Load | | Stress si) | | e Stress si) | Elongation | % Elongation | Remarks |
|---------|----------|-------------|---------------|---------|-------------------------|------------|------------------|-----------|---------------|---------|-----------------|------------|--------------|---------|
| S | (lbs/ft) | Nominal (#) | Actual (inch) | Nominal | Actual | (kg) | (kg) | Nominal | Actual | Nominal | Actual | (inch) | ₩ E | Re |
| 1 | 0.389 | 3 | 0.382 | 0.11 | 0.114 | 3100 | 4900 | 62200 | 59730 | 98200 | 94500 | 1.20 | 15.0 | |
| 2 | 0.387 | 3 | 0.381 | 0.11 | 0.114 | 3100 | 4900 | 62200 | 60000 | 98200 | 94900 | 1.20 | 15.0 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | | | | Not | e: only t | wo sampl | es for te | nsile test | 1 | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | Bend T | est | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |

I/C Testing Laboratoires UET Lahore, Pakistan.

Dated: 25-10-2019

Dated: 15-10-2019

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

To,

Assistant Director Engg.

Gujranwala Development Authority

Gujranwala

(Construction of Road along Qila Mian Singh Minor Road from Gondlanwala Road to

Samnabad Chungi and to Alam Chowk, Gujranwala (Part-B)

Reference # CED/TFL **34072** (Dr. M Rizwan Riaz)

Reference of the request letter # GDA/ADE/73

Dated: 25-10-2019 Dated: 20-09-2019

Tension Test Report (Page -1/1)

Date of Test 28-10-2019 Gauge length 8 inches

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

| Sr. No. | Weight | Si | neter/ ze ch) | | rea n²) | 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 Actual | | (inch) | ∃% | R |
| 1 | 0.368 | 3/8 | 0.371 | 0.11 | 0.108 | 3600 | 4800 | 72200 | 73340 | 96200 | 97800 | 0.90 | 11.3 | |
| 2 | 0.370 | 3/8 | 0.372 | 0.11 | 0.109 | 3800 | 4900 | 76200 | 76950 | 98200 | 99300 | 0.90 | 11.3 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Note: only two samples for tensile and one sample for bend test | | | | | | | | | | | | | | |
| | | | | | | | Bend T | 'act | | | | | | |
| 3/8 | " Dia Ba | ır Bend | Test Th | nrough | 180° is \$ | Satisfacto | | CSI | | | | | | |

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. 6 Lahore

(Addition/Alteration & Improvement, Works in Office Buildings in Punjab Civil Secretariat

Lahore (S&GAD & Old Health Block)

Reference # CED/TFL **34073** (Dr. M Rizwan Riaz)

Reference of the request letter # 113/Sd-6th

Dated: 25-10-2019

Dated: 21-10-2019

Tension Test Report (Page -1/1)

Date of Test 28-10-2019 Gauge length 8 inches

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

| Sr. No. | Weight | Si | neter/ ize ch) | | rea n²) | 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% | Re |
| 1 | 0.371 | 3/8 | 0.373 | 0.11 | 0.109 | 3100 | 4500 | 62200 | 62660 | 90200 | 91000 | 1.40 | 17.5 | |
| 2 | 0.373 | 3/8 | 0.373 | 0.11 | 0.110 | 3100 | 4600 | 62200 | 62390 | 92200 | 92600 | 1.50 | 18.8 | |
| - | - | 1 | - | 1 | - | - | - | - | - | - | - | - | - | |
| - | - | • | - | • | - | - | - | • | - | - | - | - | • | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | Note: only two samples for tensile test | | | | | | | | 1 | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | 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, M/S Friends & Co Gujranwala

Reference # CED/TFL **34074** (Dr. M Rizwan Riaz)

Reference of the request letter # Nil

Dated: 25-10-2019

Dated: 25-10-2019

Tension Test Report (Page -1/1)

Date of Test 28-10-2019 Gauge length 8 inches

Description Deformed Steel Bar Tensile Test as per ASTM-A615

| Sr. No. | Weight | Diameter/ Size (inch) | Aı (iı | rea n 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) | 3 % | R |
| 1 | 0.371 | 3/8 | 0.373 | 0.11 | 0.109 | 3600 | 4600 | 72200 | 72790 | 92200 | 93000 | 0.80 | 10.0 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | | 1 | | No | te: only o | ne samp | le for ten | sile test | ı | 1 | ı | | |
| | | | | | | | D 15 | | | | | | | |
| | | | | | | | Bend T | 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 Ittefaq Building Solutions Lahore (Cafe Sajwal Sweet)

Reference # CED/TFL **34075** (Dr. M Rizwan Riaz)

Reference of the request letter # IBS/CSS/ST02

Dated: 25-10-2019

Dated: 25-10-2019

Tension Test Report (Page -1/1)

Date of Test 28-10-2019 Gauge length 8 inches

Description Deformed Steel Bar Tensile Test as per ASTM-A615

| Sr. No. | Weight | <u> </u> | ize | Aı (iı | rea n²) | Yield load | Breaking Load | | Stress si) | Ultimat (p | e Stress si) | Elongation | % Elongation | Remarks |
|---------|----------|----------|--------|-----------|------------|------------|------------------|------------|---------------|---------------|-----------------|------------|--------------|---------|
| S | (lbs/ft) | Nominal | Actual | Nominal | Actual | (kg) | (kg) | Nominal | Actual | Nominal | Actual | (inch) | % E | Re |
| 1 | 0.421 | 10 | 10.08 | 0.12 | 0.124 | 4500 | 5500 | 82673 | 80160 | 101044 | 98000 | 1.00 | 12.5 | |
| 2 | 0.418 | 10 | 10.05 | 0.12 | 0.123 | 4000 | 5000 | 73487 | 71720 | 91858 | 89700 | 1.20 | 15.0 | |
| - | - | - | - | • | - | - | - | • | - | - | • | - | - | |
| - | - | - | - | • | - | - | - | • | - | - | • | - | - | |
| - | • | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | | | 1 | | Not | e: only t | wo sampl | es for ter | nsile test | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | 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,
M/S Ittefaq Building Solutions
Lahore
(Construction of Salt Room at PepiCo, Hattar)

Reference # CED/TFL **34076** (Dr. M Rizwan Riaz)

Reference of the request letter # IBS/PH/ST006

Dated: 25-10-2019

Dated: 24-10-2019

Tension Test Report (Page -1/1)

Date of Test 28-10-2019 Gauge length 8 inches

Description Deformed Steel Bar Tensile and Bend 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 | R |
| 1 | 0.374 | 10 | 9.50 | 0.12 | 0.110 | 3300 | 5100 | 60627 | 66200 | 93696 | 102400 | 1.10 | 13.8 | |
| 2 | 0.366 | 10 | 9.40 | 0.12 | 0.108 | 3300 | 5200 | 60627 | 67610 | 95533 | 106600 | 1.10 | 13.8 | |
| - | - | - | - | - | - | • | - | - | - | - | - | - | - | |
| - | - | - | - | • | - | • | - | - | - | - | - | - | • | |
| - | - | - | - | - | - | • | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | Note: only two samples for tensile and one sample for bend test | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | Bend Test | | | | | | | | | | | | | |
| 10r | 10mm Dia Bar Bend Test Through 180° is Satisfactory | | | | | | | | | | | | | |

I/C Testing Laboratoires UET Lahore, Pakistan.

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- 2. The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples

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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, Resident Engineer Al-Imam Enterprises (Pvt) Ltd Construction of Penta Square, Phase-V, D.H.A, Lahore (FF Steel)

Reference # CED/TFL **34078** (Dr. M Rizwan Riaz) Dated: 25-10-2019 Reference of the request letter # Al-Imam/746/PS-1/DHA/LHE/973 Dated: 24-09-2019

Tension Test Report (Page -1/1)

Date of Test 28-10-2019 Gauge length 8 inches

Description Deformed Steel Bar Tensile and Bend 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 | R |
| 1 | 4.230 | 32 | 31.96 | 1.25 | 1.244 | 40200 | 52200 | 70900 | 71260 | 92064 | 92600 | 1.50 | 18.8 | |
| 2 | 4.232 | 32 | 31.97 | 1.25 | 1.244 | 40200 | 52600 | 70900 | 71230 | 92770 | 93200 | 1.60 | 20.0 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | • | |
| - | - | • | - | • | - | • | - | - | - | - | - | - | • | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | Note: only two samples for tensile and one sample for bend test | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | Bend T | est | | | | | | |
| 32r | 32mm Dia 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, M/S Process Dynamics Lahore (Army Fence Project)

Reference # CED/TFL **34079** (Dr. M Rizwan Riaz) Dated: 25-10-2019 Reference of the request letter # Nil Dated: 23-10-2019

Tension Test Report (Page – 1/2)

Date of Test 28-10-2019 Gauge length 2 inches

Description Clamp Strip Tensile Test

| Sr. No. | Designation | Size of Strip | X Section Area | Yield load | Breaking Load | Yield Stress | Ultimate Stress | Elongation | % Elongation | Remarks | | |
|-----------|----------------------------------|---------------|--------------------|------------|------------------|--------------|--------------------|------------|--------------|---------|--|--|
| | | (mm) | (mm ²) | (kg) | (kg) | (MPa) | (MPa) | (in) | | | | |
| 1 | Clamp | 14.40x1.60 | 23.04 | 680 | 1040 | 289.53 | 442.81 | 0.70 | 35.00 | | | |
| - | - | - | - | - | - | - | - | - | - | | | |
| - | - | - | - | - | - | - | - | - | - | | | |
| - | - | - | - | - | - | - | - | - | - | | | |
| - | - | - | - | - | - | - | - | - | - | | | |
| - | - | - | - | - | - | - | - | - | - | | | |
| | Only One Sample for Tensile 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

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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 Process Dynamics Lahore (Army Fence Project)

Reference # CED/TFL **34079** (Dr. M Rizwan Riaz) Dated: 25-10-2019 Reference of the request letter # Nil Dated: 23-10-2019

Weight & Size Test Report (Page – 2/2)

Date of Test 28-10-2019

Gauge length -----

Description Clamp & Bolt Size Test

Dia of Clamp (Internal) = 89.00 mm

Width of Clamp = 24.20 mm

Thickness of Clamp = 1.60 mm

Thickness of Bolt = 10.00 mm

I/C Testing Laboratoires UET Lahore, Pakistan.

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- 2. The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples

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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,
Additional Director Development
DHA Phase-XI (Rahbar
Construction of DHA Girls School at Block-'B' Sector-I, DHA Phase-XI (Rahbar)

Reference # CED/TFL **34081** (Dr. M Rizwan Riaz) Dated: 28-10-2019 Reference of the request letter # 700/3/Girls School/Ph-XI/Projs/3088 Dated: 25-10-2019

Tension Test Report (Page -1/1)

Date of Test 28-10-2019 Gauge length 8 inches

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

| Sr. No. | Weight | Diameter/ Size (inch) | | Area (in ²) | | | | Yield Stress (psi) | | Ultimate Stress (psi) | | Elongation | % Elongation | Remarks |
|---------|---|-----------------------------|--------|-------------------------|--------|------|------|-----------------------|--------|--------------------------|--------|------------|--------------|---------------|
| S | (lbs/ft) | Nominal | Actual | Nominal | Actual | (kg) | (kg) | Nominal | Actual | Nominal | Actual | (inch) | ₩ E | R |
| 1 | 0.372 | 3/8 | 0.373 | 0.11 | 0.109 | 3600 | 5200 | 72200 | 72500 | 104200 | 104800 | 1.10 | 13.8 | 75 |
| 2 | 0.373 | 3/8 | 0.374 | 0.11 | 0.110 | 3100 | 4800 | 62200 | 62330 | 96200 | 96600 | 1.30 | 16.3 | Ittefaq Steel |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | tefaç |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | 11 |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| | Note: only two samples for tensile and one sample for bend test | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | Bend Test | | | | | | | | | | | | | |
| 3/8 | 3/8" Dia 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
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