



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 Al Rehmat Enterprises Pvt Ltd
Quetta Cantt

Reference # CED/TFL **33838** (Dr. Usman Akmal)
Reference of the request letter # Nil

Dated: 17-09-2019

Dated: 16-09-2019

Tension Test Report (Page – 1/1)

Date of Test 19-09-2019

Gauge length 640 mm

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

| Sr. No. | Nominal Diameter | Nominal Weight | Measured weight | Yield strength clause (6.3) | | Breaking strength clause (6.2) | | % Elongation | Remarks / Coil No. |
|--------------------------|------------------|----------------|-----------------|-----------------------------|-------|--------------------------------|-------|--------------|--------------------|
| | (mm) | (kg/km) | (kg/km) | (kg) | (kN) | (kg) | (kN) | | |
| 1 | 9.53 (3/8") | 432.0 | 402.0 | 8600 | 84.37 | 9900 | 97.12 | >3.50 | xx |
| - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - |
| Only one sample for Test | | | | | | | | | |

I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

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http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
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- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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 Unique Wire
Lahore

Reference # CED/TFL **33839** (Dr. Usman Akmal)
Reference of the request letter # Nil

Dated: 17-09-2019

Dated: 16-09-2019

Tension Test Report (Page – 1/1)

Date of Test 19-09-2019

Gauge length 640 mm

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

| Sr. No. | Nominal Diameter | Nominal Weight | Measured weight | Yield strength clause (6.3) | | Breaking strength clause (6.2) | | % Elongation | Remarks / Coil No. |
|---------------------------------|------------------|----------------|-----------------|-----------------------------|-------|--------------------------------|--------|--------------|--------------------|
| | (mm) | (kg/km) | (kg/km) | (kg) | (kN) | (kg) | (kN) | | |
| 1 | 9.53 (3/8") | 432.0 | 453.0 | 8400 | 82.40 | 10650 | 104.48 | >3.50 | xx |
| - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - |
| Only one sample for Test | | | | | | | | | |

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Test Floor Laboratory
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To,
Sub Divisional Officer
Buildings Sub Division No. 15
Lahore
(Construction of New Administration Block in the Premises of Lahore High Court Lahore)

Reference # CED/TFL **33849** (Dr. Usman Akmal)
Reference of the request letter # 2578

Dated: 18-09-2019
Dated: 16-09-2019

Tension Test Report (Page – 1/2)

Date of Test 19-09-2019
Gauge length 640 mm
Description Steel Strand Tensile Test as per ASTM A-416-94a

| Sr. No. | Nominal Diameter | Nominal Weight | Measured weight | Yield strength clause (6.3) | | Breaking strength clause (6.2) | | Young's Modulus of Elasticity "E" | % Elongation | Remarks / Coil No. |
|---------------------------------|------------------|----------------|-----------------|-----------------------------|--------|--------------------------------|--------|-----------------------------------|--------------|--------------------|
| | (mm) | (kg/km) | (kg/km) | (kg) | (kN) | (kg) | (kN) | GPa | | |
| 1 | 12.70 (1/2") | 775.0 | 780.0 | 16700 | 163.83 | 18500 | 181.49 | 199 | >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

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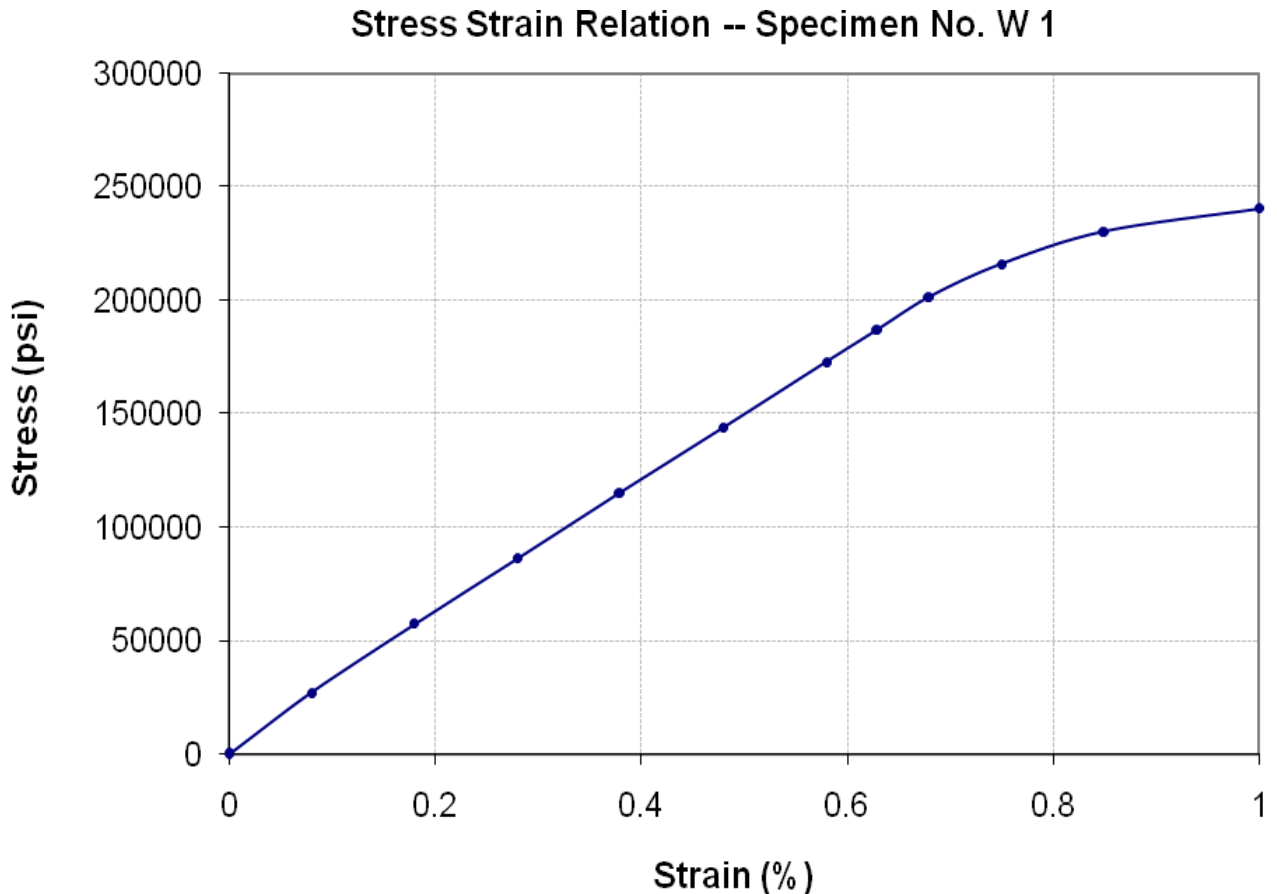
STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
Sub Divisional Officer
Buildings Sub Division No. 15
Lahore
(Construction of New Administration Block in the Premises of Lahore High Court Lahore)

Reference # CED/TFL **33849** (Dr. Usman Akmal)
Reference of the request letter # 2578

Dated: 18-09-2019
Dated: 16-09-2019

Graph (Page – 2/2)



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STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
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To,
 Sr. Engineer (Civil), SWP
 Pakistan Atomic Energy Commission
 D.G. Khan
 (M/s Malik Habib & Brothers, Mianwali)

Reference # CED/TFL **33850** (Dr. Usman Akmal)
 Reference of the request letter # SWP/W(2347)/2019

Dated: 18-09-2019
 Dated: 17-09-2019

Tension Test Report (Page -1/1)

Date of Test 18-09-2019
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

| Sr. No. | Weight (lbs/ft) | Diameter/ Size | | Area (in ²) | | Yield load (kg) | Breaking Load (kg) | Yield Stress (psi) | | Ultimate Stress (psi) | | Elongation (inch) | % Elongation | Remarks |
|--|--------------------|-------------------|------------------|----------------------------|--------|--------------------|--------------------------|-----------------------|--------|--------------------------|--------|----------------------|--------------|---------|
| | | Nominal (#) | Actual (inch) | Nominal | Actual | | | Nominal | Actual | Nominal | Actual | | | |
| 1 | 0.366 | 3 | 0.370 | 0.11 | 0.108 | 3470 | 5050 | 69600 | 71090 | 101200 | 103500 | 1.10 | 13.8 | |
| 2 | 0.369 | 3 | 0.371 | 0.11 | 0.108 | 3570 | 4990 | 71600 | 72630 | 100000 | 101600 | 1.20 | 15.0 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Note: only two samples for tensile and one sample for bend test | | | | | | | | | | | | | | |
| Bend Test | | | | | | | | | | | | | | |
| #3 Bar Bend Test Through 180° is Satisfactory | | | | | | | | | | | | | | |
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I/C Testing Laboratoires
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Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
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To,
 Assistant Engineer
 Innovation Center & Innovation Park
 U.E.T. Lahore (Narowal Campus)
 (NLC)(Kisan)

Reference # CED/TFL **33851** (Dr. Usman Akmal)
 Reference of the request letter # Univ/NRL/ICIP/PD/491

Dated: 18-09-2019
 Dated: 17-09-2019

Tension Test Report (Page -1/1)

Date of Test 19-09-2019
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

| Sr. No. | Weight (lbs/ft) | Diameter/ Size | | Area (in ²) | | Yield load (kg) | Breaking Load (kg) | Yield Stress (psi) | | Ultimate Stress (psi) | | Elongation (inch) | % Elongation | Remarks |
|--|--------------------|-------------------|------------------|----------------------------|--------|--------------------|--------------------------|-----------------------|--------|--------------------------|--------|----------------------|--------------|---------|
| | | Nominal (#) | Actual (inch) | Nominal | Actual | | | Nominal | Actual | Nominal | Actual | | | |
| 1 | 0.423 | 3 | 0.398 | 0.11 | 0.124 | 4640 | 5420 | 93000 | 82300 | 108600 | 96200 | 0.90 | 11.3 | |
| 2 | 0.418 | 3 | 0.396 | 0.11 | 0.123 | 4200 | 5150 | 84200 | 75350 | 103200 | 92400 | 0.90 | 11.3 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Note: only two samples for tensile and one sample for bend test | | | | | | | | | | | | | | |
| Bend Test | | | | | | | | | | | | | | |
| #3 Bar Bend Test Through 180° is Satisfactory | | | | | | | | | | | | | | |
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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,
 Assistant Engineer
 SMK Properties (Pvt) Ltd
 Construction of the Dynamic International (Pvt) Ltd. Sundar Industrial Estate, Lahore

Reference # CED/TFL **33852** (Dr. Usman Akmal)
 Reference of the request letter # Nil

Dated: 18-09-2019
 Dated: 18-09-2019

Tension Test Report (Page -1/1)

Date of Test 19-09-2019
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile Test as per ASTM-A615

| Sr. No. | Weight (lbs/ft) | Diameter/ Size | | Area (in ²) | | Yield load (kg) | Breaking Load (kg) | Yield Stress (psi) | | Ultimate Stress (psi) | | Elongation (inch) | % Elongation | Remarks |
|--|--------------------|-------------------|------------------|----------------------------|--------|--------------------|--------------------------|-----------------------|--------|--------------------------|--------|----------------------|--------------|---------|
| | | Nominal (#) | Actual (inch) | Nominal | Actual | | | Nominal | Actual | Nominal | Actual | | | |
| 1 | 0.361 | 3 | 0.368 | 0.11 | 0.106 | 4640 | 5470 | 93000 | 96270 | 109600 | 113500 | 0.90 | 11.3 | |
| 2 | 0.357 | 3 | 0.366 | 0.11 | 0.105 | 3770 | 4810 | 75600 | 79130 | 96400 | 101000 | 1.00 | 12.5 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Note: only two samples for tensile test | | | | | | | | | | | | | | |
| Bend Test | | | | | | | | | | | | | | |
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Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
M/S Ghani Cermics Limited
Lahore

Reference # CED/TFL **33853** (Dr. Usman Akmal)
Reference of the request letter # Nil

Dated: 18-09-2019
Dated: 18-09-2019

Tension Test Report (Page -1/1)

Date of Test 19-09-2019
Gauge length 8 inches
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

| Sr. No. | Weight (lbs/ft) | Diameter/ size | | Area (in ²) | | Yield load (kg) | Breaking Load (kg) | Yield Stress (psi) | | Ultimate Stress (psi) | | Elongation (inch) | % Elongation | Remarks |
|---|--------------------|-------------------|------------------|----------------------------|--------|--------------------|--------------------------|-----------------------|--------|--------------------------|--------|----------------------|--------------|---------|
| | | Nominal (#) | Actual (inch) | Nominal | Actual | | | Nominal | Actual | Nominal | Actual | | | |
| 1 | 0.365 | 3 | 0.370 | 0.11 | 0.107 | 3470 | 5120 | 69600 | 71310 | 102600 | 105300 | 1.30 | 16.3 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Note: only one sample for tensile and one sample for bend test | | | | | | | | | | | | | | |
| Bend Test | | | | | | | | | | | | | | |
| #3 Bar Bend Test Through 180° is Satisfactory | | | | | | | | | | | | | | |
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Pakistan. Ph: 92-42-99029202

To,
 G.M. (Planning & Admin)
 Kraftcon (Pvt) Ltd
 Waste Water Treatment Plant 2019 at Sapphire Finishing Mills Limited, Raiwind

Reference # CED/TFL **33858** (Dr. Usman Akmal)
 Reference of the request letter # kpl/19/266

Dated: 18-09-2019
 Dated: 18-09-2019

Tension Test Report (Page -1/1)

Date of Test 19-09-2019
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

| Sr. No. | Weight (lbs/ft) | Diameter/ Size (mm) | | Area (in ²) | | Yield load (kg) | Breaking Load (kg) | Yield Stress (psi) | | Ultimate Stress (psi) | | Elongation (inch) | % Elongation | Remarks |
|---|--------------------|---------------------------|--------|----------------------------|--------|--------------------|--------------------------|-----------------------|--------|--------------------------|--------|----------------------|--------------|---------|
| | | Nominal | Actual | Nominal | Actual | | | Nominal | Actual | Nominal | Actual | | | |
| 1 | 0.406 | 10 | 9.90 | 0.12 | 0.119 | 4590 | 5830 | 84326 | 84740 | 107107 | 107700 | 1.30 | 16.3 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Note: only one sample for tensile and one sample for bend test | | | | | | | | | | | | | | |
| Bend Test | | | | | | | | | | | | | | |
| 10mm Dia Bar Bend Test Through 180° is Satisfactory | | | | | | | | | | | | | | |
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Test Floor Laboratory
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To,
 CEO
 M/S Ittefaq Building Solutions Pvt Ltd
 Salt Room at PepsiCo Hattar Industrial Estate, Haripur

Reference # CED/TFL **33860** (Dr. Usman Akmal)
 Reference of the request letter # IBS/PSR/ST01

Dated: 19-09-2019
 Dated: 18-09-2019

Tension Test Report (Page -1/1)

Date of Test 19-09-2019
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

| Sr. No. | Weight (lbs/ft) | Diameter/ size | | Area (in ²) | | Yield load (kg) | Breaking Load (kg) | Yield Stress (psi) | | Ultimate Stress (psi) | | Elongation (inch) | % Elongation | Remarks |
|--|--------------------|-------------------|------------------|----------------------------|--------|--------------------|--------------------------|-----------------------|--------|--------------------------|--------|----------------------|--------------|---------|
| | | Nominal (#) | Actual (inch) | Nominal | Actual | | | Nominal | Actual | Nominal | Actual | | | |
| 1 | 0.391 | 3 | 0.383 | 0.11 | 0.115 | 3520 | 5500 | 70600 | 67490 | 110200 | 105500 | 1.00 | 12.5 | |
| 2 | 0.382 | 3 | 0.378 | 0.11 | 0.112 | 3470 | 5350 | 69600 | 68040 | 107200 | 104900 | 0.90 | 11.3 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Note: only two samples for tensile and one sample for bend test | | | | | | | | | | | | | | |
| Bend Test | | | | | | | | | | | | | | |
| #3 Bar Bend Test Through 180° is Satisfactory | | | | | | | | | | | | | | |
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