# STRUCTURAL ENGINEERING DIVISION

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

To,
Chief Resident Engineer
Project Implement Consultants (PICs)
JIP Consultant Jalalpur Sharif
Construction of Jalalpur Irrigation Canal and Its System

Reference # CED/TFL **37282** (Dr. M Rizwan Riaz) Dated: 01-11-2021
Reference of the request letter # JIPIC/TECH/P-3/CRE/25 Dated: 29-10-2021

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

Date of Test 04-11-2021
Gauge length 8 inches
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

| Sr. No. | Weight | Diameter/ Size | | Area ($in^2$) | | 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) | | |
| 1 | 0.381 | 3 | 0.378 | 0.11 | 0.112 | 3800 | 4700 | 76200 | 74790 | 94200 | 92500 | 1.30 | 16.3 | Mughal Steel |
| 2 | 0.379 | 3 | 0.377 | 0.11 | 0.111 | 3700 | 4700 | 74200 | 73150 | 94200 | 93000 | 1.40 | 17.5 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| **Note: only two samples for tensile and one sample for bend test** | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| Bend Test | | | | | | | | | | | | | | |
| #3 Bar Bend Test Through 180º is Satisfactory | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |

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

Note:
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

# STRUCTURAL ENGINEERING DIVISION

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

To,
Chief Resident Engineer
Project Implement Consultants (PICs)
JIP Consultant Jalalpur Sharif
Construction of Jalalpur Irrigation Canal and Its System

Reference # CED/TFL **37282** (Dr. M Rizwan Riaz) Dated: 01-11-2021
Reference of the request letter # JIPIC/TECH/P-3/CRE/24 Dated: 29-10-2021

## Tension Test Report (Page -2/2)

Date of Test 04-11-2021
Gauge length 8 inches
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

| Sr. No. | Weight | Diameter/ Size | | Area ($in^2$) | | 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) | | |
| 1 | 4.058 | 10 | 1.232 | 1.27 | 1.193 | 29800 | 38200 | 51800 | 55070 | 66300 | 70600 | 1.30 | 16.3 | Kamran Steel |
| 2 | 4.389 | 10 | 1.282 | 1.27 | 1.290 | 24600 | 34600 | 42700 | 42030 | 60100 | 59200 | 1.50 | 18.8 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| **Note: only two samples for tensile and one sample for bend test** | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| Bend Test | | | | | | | | | | | | | | |
| #10 Bar Bend Test Through 180º is Satisfactory | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |

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

Note:
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

# STRUCTURAL ENGINEERING DIVISION

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

To,
Chief Resident Engineer
MM Pajistan (Pvt) Ltd
Kachhi Canal Project – Construction of Main Canal and Distribution System (Earth Work, Structures and Lining of Main Canal & Distributaries) (WMI)

Reference # CED/TFL **37283** (Dr. M Rizwan Riaz) Dated: 01-11-2021
Reference of the request letter # KCP/CRE/KC-6B(4R)/CN/46 Dated: 29-10-2021

## Tension Test Report (Page -1/3)

Date of Test 04-11-2021
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** | **856** | **17700** | **173.64** | **19400** | **190.31** | **199** | **>3.50** | **xx** |
| **2** | **12.70 (1/2")** | **775.0** | **856** | **17700** | **173.64** | **19400** | **190.31** | **199** | **>3.50** | **xx** |
| - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - |
| **Only two samples 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.**

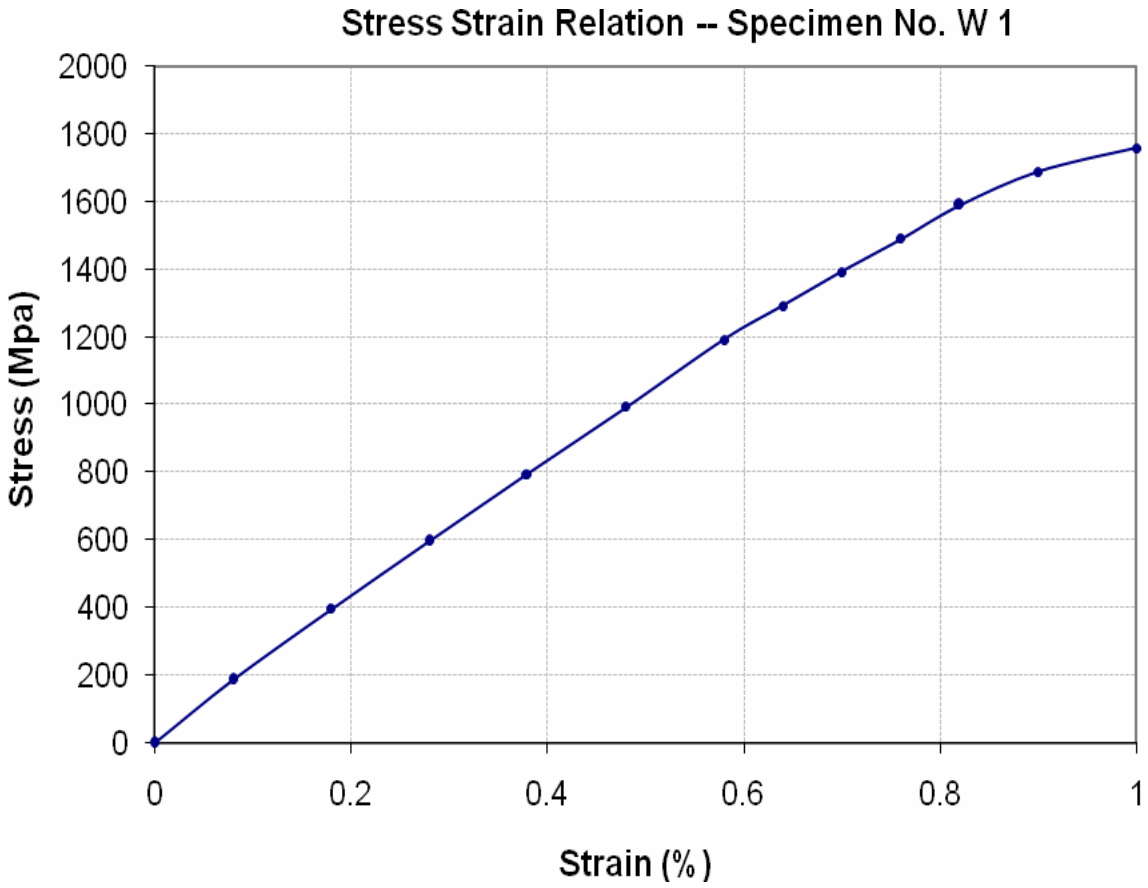
Note:
1- You can See your reports On Internet in the following web site
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
2. The above results pertain to sample /samples supplied to this laboratory.
3- Sealed sample / Unsealed sample / Marked sample/Signed Samples

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

To,
Chief Resident Engineer
MM Pajistan (Pvt) Ltd
Kachhi Canal Project – Construction of Main Canal and Distribution System (Earth Work, Structures and Lining of Main Canal & Distributaries) (WMI)

Reference # CED/TFL **37283** (Dr. M Rizwan Riaz) Dated: 01-11-2021
Reference of the request letter # KCP/CRE/KC-6B(4R)/CN/46 Dated: 29-10-2021

## Graph (Page – 2/3)




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

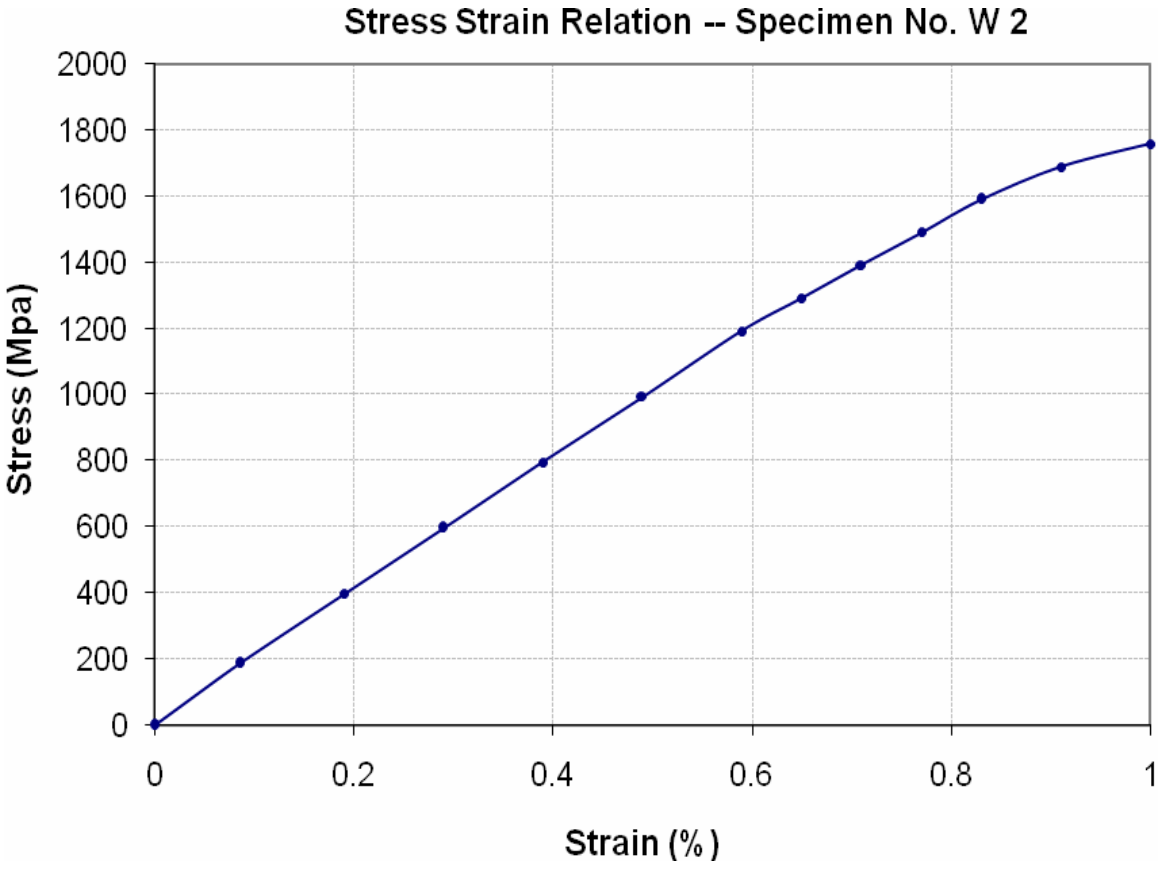
Note:
1- You can See your reports On Internet in the following web site
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
2. The above results pertain to sample /samples supplied to this laboratory.
3- Sealed sample / Unsealed sample / Marked sample/Signed Samples

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

To,
Chief Resident Engineer
MM Pajistan (Pvt) Ltd
Kachhi Canal Project – Construction of Main Canal and Distribution System (Earth Work, Structures and Lining of Main Canal & Distributaries) (WMI)

Reference # CED/TFL **37283** (Dr. M Rizwan Riaz) Dated: 01-11-2021
Reference of the request letter # KCP/CRE/KC-6B(4R)/CN/46 Dated: 29-10-2021

## Graph (Page – 3/3)




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

Note:
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

# STRUCTURAL ENGINEERING DIVISION

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

To,
Project Manager
Pro-Health
Children's Heart Hospital and Research Institute
(Pakistan Childern's Heart Foundation)(Westcon Constructiomn Private Limited)

Reference # CED/TFL **37288** (Dr. M Rizwan Riaz) Dated: 02-11-2021
Reference of the request letter # T211101-L001-UET/LTR Dated: 01-11-2021

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

Date of Test 04-11-2021
Gauge length 8 inches
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

| Sr. No. | Weight | Diameter/ Size | | Area ($in^2$) | | 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) | | |
| 1 | 4.229 | 10 | 1.258 | 1.27 | 1.243 | 39000 | 52800 | 67700 | 69160 | 91700 | 93700 | 1.50 | 18.8 | |
| 2 | 4.273 | 10 | 1.265 | 1.27 | 1.256 | 39000 | 53000 | 67700 | 68450 | 92000 | 93100 | 1.50 | 18.8 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| **Note: only two samples for tensile and one sample for bend test** | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| Bend Test | | | | | | | | | | | | | | |
| #10 Bar Bend Test Through 180º is Satisfactory | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |

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

Note:
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

# STRUCTURAL ENGINEERING DIVISION

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

To,
Assistant Project Director
PMU-SBP, Lahore
Completion of International Squash Complex at Nishtar Park Sports Complex, Lahore

Reference # CED/TFL **37289** (Dr. M Rizwan Riaz) Dated: 02-11-2021
Reference of the request letter # APD/PMU/SBP/LHR/21/163 Dated: 28-10-2021

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

Date of Test 04-11-2021
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 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) | | |
| 1 | 0.374 | 3/8 | 0.374 | 0.11 | 0.110 | 3400 | 4700 | 68200 | 68180 | 94200 | 94300 | 1.20 | 15.0 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| **Note: only one sample for tensile and one sample for bend test** | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| Bend Test | | | | | | | | | | | | | | |
| 3/8" Dia Bar Bend Test Through 180º is Satisfactory | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |

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

Note:
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

# 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 Wahab and Company
Lahore
(Mall of Shahdara, Lahore)

Reference # CED/TFL **37291** (Dr. M Rizwan Riaz) Dated: 02-11-2021
Reference of the request letter # Nil Dated: 02-11-2021

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

Date of Test 04-11-2021
Gauge length 8 inches
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

| Sr. No. | Weight | Diameter/ Size | | Area ($in^2$) | | 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) | | |
| 1 | 0.380 | 3 | 0.377 | 0.11 | 0.112 | 3900 | 5100 | 78200 | 76950 | 102200 | 100700 | 1.00 | 12.5 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| **Note: only one sample for tensile and one sample for bend test** | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| Bend Test | | | | | | | | | | | | | | |
| #3 Bar Bend Test Through 180º is Satisfactory | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |

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

Note:
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

# 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 Majeed Associates (Pvt) Ltd.
Lahore
(Allied Bank Warehouse, Sahiwal)

Reference # CED/TFL **37293** (Dr. M Rizwan Riaz) Dated: 02-11-2021
Reference of the request letter # Nil Dated: 01-11-2021

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

Date of Test 04-11-2021
Gauge length 8 inches
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

| Sr. No. | Weight | Diameter/ Size (mm) | | Area ($in^2$) | | 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) | | |
| 1 | 0.375 | 10 | 9.51 | 0.12 | 0.110 | 4100 | 5400 | 75324 | 82060 | 99207 | 108100 | 0.80 | 10.0 | Afco Steel |
| 2 | 0.375 | 10 | 9.51 | 0.12 | 0.110 | 4000 | 5300 | 73487 | 80080 | 97370 | 106200 | 0.90 | 11.3 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| **Note: only two samples for tensile and one sample for bend test** | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| Bend Test | | | | | | | | | | | | | | |
| 10mm Dia Bar Bend Test Through 180º is Satisfactory | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |

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

Note:
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

# STRUCTURAL ENGINEERING DIVISION

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

To,
Assistant Manager Projects
Infrastructure Development Authority (IDAP), Punjab
Construction of Suites for Hon'ble Judge at GOR-1, Lahore

Reference # CED/TFL **37297** (Dr. M Rizwan Riaz) Dated: 02-11-2021
Reference of the request letter # PD/IDAP/GOR-1/2021/SO/11 Dated: 02-11-2021

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

Date of Test 04-11-2021
Gauge length 8 inches
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

| Sr. No. | Weight | Diameter/ Size | | Area ($in^2$) | | 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) | | |
| 1 | 0.389 | 3 | 0.382 | 0.11 | 0.114 | 3400 | 5100 | 68200 | 65510 | 102200 | 98300 | 1.00 | 12.5 | Siddiqui Steel |
| 2 | 0.383 | 3 | 0.379 | 0.11 | 0.113 | 3100 | 4900 | 62200 | 60660 | 98200 | 95900 | 1.00 | 12.5 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| **Note: only two samples for tensile and one sample for bend test** | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| Bend Test | | | | | | | | | | | | | | |
| #3 Bar Bend Test Through 180º is Satisfactory | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |

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

Note:
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

# STRUCTURAL ENGINEERING DIVISION

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

To,
A / XEN E & M
GE (Air) Rafiqui
"Expansion of Rafiqui Road from Main Guard Room to Tech Guard Room alongwith Strom Water Drain (Site-III) at PAF Base Rafiqui, CA No. CEAF-CZ-16/2021"

Reference # CED/TFL **37298** (Engr. M Rizwan Riaz) Dated: 02-11-2021
Reference of the request letter # 6408/57/E-6 Dated: 28-10-2021

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

Date of Test 04-11-2021
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 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) | | |
| 1 | 0.377 | 3/8 | 0.376 | 0.11 | 0.111 | 3600 | 4800 | 72200 | 71590 | 96200 | 95500 | 1.30 | 16.3 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| **Note: only one sample for tensile and one sample for bend test** | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| Bend Test | | | | | | | | | | | | | | |
| 3/8" Dia Bar Bend Test Through 180º is Satisfactory | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |

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

Note:
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

# STRUCTURAL ENGINEERING DIVISION

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

To,
Chief Engineer
Zaitoon
New Lahore City,
Lahore

Reference # CED/TFL **37312** (Dr. M Rizwan Riaz) Dated: 04-11-2021
Reference of the request letter # NLC/CE/Const/03 Dated: 03-11-2021

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

Date of Test 04-11-2021
Gauge length 8 inches
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

| Sr. No. | Weight | Diameter/ size | | Area ($in^2$) | | 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) | | |
| 1 | 0.386 | 3 | 0.380 | 0.11 | 0.113 | 3400 | 5000 | 68200 | 66090 | 100200 | 97200 | 1.20 | 15.0 | Kamran Steel |
| 2 | 0.371 | 3 | 0.373 | 0.11 | 0.109 | 3400 | 4800 | 68200 | 68730 | 96200 | 97100 | 1.20 | 15.0 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| **Note: only two samples for tensile and one sample for bend test** | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| Bend Test | | | | | | | | | | | | | | |
| #3 Bar Bend Test Through 180º is Satisfactory | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |

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

Note:
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

**STRUCTURAL ENGINEERING DIVISION**
**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**.

Note:

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