



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
 Dar Engineering
 Punjab Agriculture Food and Durg Authority's Science Enclave (PAFDA)

Reference # CED/TFL **36467** (Dr. Waseem Abbass)

Dated: 25-05-2021

Reference of the request letter # DB-78/DAR/RE/ME/2021/13

Dated: 24-05-2021

Tension Test Report (Page – 1/1)

Date of Test 01-06-2021

Gauge length 2 inches

Description MS I Beam Steel Strip Tensile Test as per ASTM A36

| Sr. No. | Designation | | Size of Strip | X Section Area | Yield load | Breaking Load | Yield Stress | Ultimate Stress | Elongation | % Elongation | Remarks |
|--|-------------|------|---------------|----------------|------------|---------------|--------------|-----------------|------------|--------------|---------|
| | (inch) | (mm) | | | | | | | | | |
| 1 | MS I Beam | 8x4 | 26.10x7.10 | 185.31 | 7100 | 11100 | 375.86 | 587.62 | 0.50 | 25.00 | |
| 2 | | | 26.30x7.10 | 186.73 | 7200 | 11100 | 378.26 | 583.15 | 0.50 | 25.00 | |
| - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | |
| Only Two Samples for Tensile Test | | | | | | | | | | | |
| Bend Test | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

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

Ref: CED/TFL/05/36472

Dated: 27-05-2021

Dated of Test: 01-06-2021

To

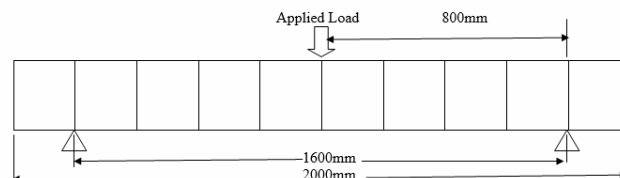
**M/S Alfazal Engineering Pakistan Lahore,
(NTDC 500kV Grid Station Faisalabad) (WAPDA, NESPAK, GE Power Division
Pakistan)**

Subject: LADDER CABLE TRAY FOR LOAD TEST (Page -1/3)

Reference to your letter No. ALF-21-05-0052, dated: 25.05.2021, on the subject cited above. One Ladder Cable Tray (Size: L=2000mm, W=500mm) for load as received by us test has been tested and the results are tabulated below:

| Load | | Deflection | Remarks |
|------|-------|------------|----------------------|
| (kN) | (kg) | (mm) | |
| 0 | 0 | 0.00 | |
| 0.5 | 51.0 | 0.51 | |
| 1 | 101.9 | 0.89 | |
| 1.5 | 152.9 | 1.14 | |
| 2 | 203.9 | 1.40 | |
| 2.5 | 254.8 | 1.70 | |
| 3 | 305.8 | 1.98 | |
| 8.15 | 830.8 | | Ultimate load |

Witness by Wasif Ali (Sr. Engr. NESPAK)



Loading Arrangement

**I/C Testing Laboratories
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

Ref: CED/TFL/05/36472

Dated: 27-05-2021

Dated of Test: 01-06-2021

To

M/S Alfazal Engineering Pakistan Lahore

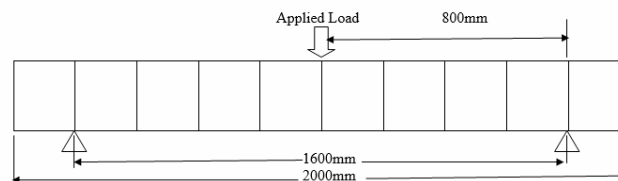
(NTDC 500kV Grid Station Faisalabad)(WAPDA, NESPAK, GE Power Division Pakistan)

Subject: LADDER CABLE TRAY FOR LOAD TEST (Page -2/3)

Reference to your letter No. ALF-21-05-0052, dated 25.05.2021 on the subject cited above. One Ladder Cable Tray (Size: L=2000mm, W=600mm) for load as received by us test has been tested and the results are tabulated below:

| Load | | Deflection | Remarks |
|------|-------|------------|----------------------|
| (kN) | (kg) | (mm) | |
| 0 | 0 | 0.00 | |
| 0.5 | 51.0 | 0.43 | |
| 1 | 101.9 | 0.99 | |
| 1.5 | 152.9 | 1.55 | |
| 2 | 203.9 | 1.98 | |
| 2.5 | 254.8 | 2.44 | |
| 3 | 305.8 | 2.92 | |
| 7.9 | 805.3 | | Ultimate load |

Witness by Wasif Ali (Sr. Engr. NESPAK)



Loading Arrangement

I/C Testing Laboratories
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

Ref: CED/TFL/05/36472

Dated: 27-05-2021

Dated of Test: 01-06-2021

To

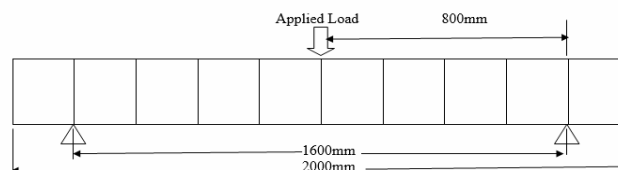
M/S Alfazal Engineering Pakistan Lahore
(NTDC 500kV Grid Station Faisalabad) (WAPDA, NESPAK, GE Power Division
Pakistan)

Subject: PERFORATED CABLE TRAY FOR LOAD TEST (Page -3/3)

Reference to your letter No. ALF-21-05-0052, dated 25.05.2021 on the subject cited above. One Perforated Cable Tray (Size: L=2000mm, W=150mm) for load as received by us test has been tested and the results are tabulated below:

| Load | | Deflection | Remarks |
|------|-------|------------|----------------------|
| (kN) | (kg) | (mm) | |
| 0 | 0 | 0.00 | |
| 0.5 | 51.0 | 0.18 | |
| 1 | 101.9 | 0.41 | |
| 1.5 | 152.9 | 0.58 | |
| 2 | 203.9 | 0.76 | |
| 2.5 | 254.8 | 0.91 | |
| 3 | 305.8 | 0.99 | |
| 3.5 | 356.8 | 1.07 | |
| 4 | 407.7 | 1.14 | |
| 5 | 509.7 | 1.19 | |
| 7.65 | 779.8 | | Ultimate load |

Witness by Wasif Ali (Sr. Engr. NESPAK)



Loading Arrangement

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,
 Manager
 NAM Associates
 MCB Bank, Town Ship

Reference # CED/TFL **36476** (Dr. Waseem Abbass)
 Reference of the request letter # NAM-424/23

Dated: 31-05-2021
 Dated: 28-05-2021

Tension Test Report (Page -1/1)

Date of Test 01-06-2021
 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 | 0.412 | 3 | 0.393 | 0.11 | 0.121 | 4500 | 5700 | 90200 | 81870 | 114300 | 103700 | 0.90 | 11.3 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Note: only one sample for tensile and one sample for bend test | | | | | | | | | | | | | | |
| Bend Test | | | | | | | | | | | | | | |
| #3 Bar Bend Test Through 180° 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,
Manager Construction
Petro Pakistan Pvt. Ltd
Construction of Oil Terminal Sherghar Road Habib abad Tehsil Renala Khurd District Okara

Reference # CED/TFL **36567** (Dr. M Rizwan Riaz)
Reference of the request letter # Nil

Dated: 14-06-2021
Dated: 14-06-2021

Tension Test Report (Page – 1/4)

Date of Test 18-06-2021
Gauge length 2 inches
Description Steel Plate Steel 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 |
|--|-------------|---------------|--------------------|------------|---------------|--------------|-----------------|------------|--------------|---------|
| | (mm) | (mm) | (mm ²) | (kg) | (kg) | (MPa) | (MPa) | (in) | | |
| 1 | 10 | 23.80x10.00 | 238.00 | 9900 | 11300 | 408.06 | 465.77 | 0.70 | 35.00 | |
| 2 | | 23.80x10.00 | 238.00 | 9900 | 11300 | 408.06 | 465.77 | 0.75 | 37.50 | |
| - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | |
| Only Two Samples for Tensile and One Sample for Bend Test | | | | | | | | | | |
| Bend Test | | | | | | | | | | |
| Strip Taken from Steel Plate (10mm) Bend Test Through 180° 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,
Manager Construction
Petro Pakistan Pvt. Ltd
Construction of Oil Terminal Sherghar Road Habib abad Tehsil Renala Khurd District Okara

Reference # CED/TFL **36567** (Dr. M Rizwan Riaz)
Reference of the request letter # Nil

Dated: 14-06-2021
Dated: 14-06-2021

Weight & Size Test Report (Page – 2/4)

Date of Test 18-06-2021
Description Steel Plate Weight and Size Test

| Sr. No. | Designation | Weight | Length | Width (b) | Weight per Unit Area | Thickness | Remark |
|---------------------------------|-------------|--------|--------|-----------|----------------------|-----------|--------|
| | (mm) | (g) | (cm) | (mm) | (kg/m ²) | (mm) | |
| 1 | 10 | 609 | 30.00 | 25.75 | 78.83 | 10.00 | |
| - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | |
| Only One Sample for Test | | | | | | | |
| | | | | | | | |

I/C Testing Laboratories
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,
Manager Construction
Petro Pakistan Pvt. Ltd
Construction of Oil Terminal Sherghar Road Habib abad Tehsil Renala Khurd District Okara

Reference # CED/TFL **36567** (Dr. M Rizwan Riaz)
Reference of the request letter # Nil

Dated: 14-06-2021
Dated: 14-06-2021

Tension Test Report (Page – 3/4)

Date of Test 18-06-2021
Gauge length 2 inches
Description Steel Plate Steel 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 |
|---|-------------|---------------|--------------------|------------|---------------|--------------|-----------------|------------|--------------|---------|
| | (mm) | (mm) | (mm ²) | (kg) | (kg) | (MPa) | (MPa) | (in) | | |
| 1 | 8 | 23.80x8.60 | 204.68 | 9600 | 12400 | 460.11 | 594.31 | 0.60 | 30.00 | |
| 2 | | 23.75x8.60 | 204.25 | 9700 | 12500 | 465.88 | 600.37 | 0.55 | 27.50 | |
| - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | |
| Only Two Samples for Tensile and One Sample for Bend Test | | | | | | | | | | |
| Bend Test | | | | | | | | | | |
| Strip Taken from Steel Plate (8mm) Bend Test Through 180° 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,
Manager Construction
Petro Pakistan Pvt. Ltd
Construction of Oil Terminal Sherghar Road Habib abad Tehsil Renala Khurd District Okara

Reference # CED/TFL **36567** (Dr. M Rizwan Riaz)
Reference of the request letter # Nil

Dated: 14-06-2021
Dated: 14-06-2021

Weight & Size Test Report (Page – 4/4)

Date of Test 18-06-2021
Description Steel Plate Weight and Size Test

| Sr. No. | Designation | Weight | Length | Width (b) | Weight per Unit Area | Thickness | Remark |
|---------------------------------|-------------|--------|--------|-----------|----------------------|-----------|--------|
| | (mm) | (g) | (cm) | (mm) | (kg/m ²) | (mm) | |
| 1 | 8 | 530 | 30.00 | 25.80 | 68.48 | 8.50 | |
| - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | |
| Only One Sample for Test | | | | | | | |
| | | | | | | | |

I/C Testing Laboratories
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
U.C.C. (Pvt) Ltd.
Warehouse WFP Project

Reference # CED/TFL **36478** (Dr. Waseem Abbass)
Reference of the request letter # Nil

Dated: 31-05-2021
Dated: 31-05-2021

Tension Test Report (Page – 1/2)

Date of Test 01-06-2021
Gauge length 2 inches
Description Z Purlins Sheet 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 |
|---|-------------|---------------|--------------------|------------|---------------|--------------|-----------------|------------|--------------|---------|
| | (mm) | (mm) | (mm ²) | (kg) | (kg) | (MPa) | (MPa) | (in) | | |
| 1 | 2 | 22.75x2.00 | 45.50 | 1300 | 1600 | 280.29 | 344.97 | 0.60 | 30.00 | |
| 2 | | 22.80x2.00 | 45.60 | 1300 | 1600 | 279.67 | 344.21 | 0.60 | 30.00 | |
| 3 | | 22.80x2.00 | 45.60 | 1300 | 1600 | 279.67 | 344.21 | 0.60 | 30.00 | |
| - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | |
| Only Three Samples for Tensile and One Sample for Bend Test | | | | | | | | | | |
| Bend Test | | | | | | | | | | |
| Strip Taken from Z Purlins Sheet (2mm) Bend Test Through 180° is Satisfactory | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

I/C Testing Laboratories
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
U.C.C. (Pvt) Ltd.
Warehouse WFP Project

Reference # CED/TFL **36478** (Dr. Waseem Abbass)
Reference of the request letter # Nil

Dated: 31-05-2021
Dated: 31-05-2021

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

Date of Test 01-06-2021
Description Z Purlins Sheet Weight and Size Test

| Sr. No. | Designation | Weight | Length | Width (b) | Weight per Unit Area | Thickness | Remark |
|---------------------------------|-------------|--------|--------|-----------|----------------------|-----------|--------|
| | (mm) | (g) | (cm) | (mm) | (kg/m ²) | (mm) | |
| 1 | 2 | 312 | 45.80 | 43.40 | 15.70 | 2.00 | |
| - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | |
| Only One Sample for Test | | | | | | | |
| | | | | | | | |

I/C Testing Laboratories
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,
 Construction Manager (Opal)
 Deevar Developers (Pvt)Ltd.
 (Construction of Zameen Opal, Plot no.16, Sector-A, Land Breeze Housing Society, Raiwind Road Lahore.

Reference # CED/TFL **36480** (Dr. M Rizwan Riaz)
 Reference of the request letter # ZD/ZO/L/027

Dated: 31-05-2021
 Dated: 31-05-2021

Tension Test Report (Page -1/1)

Date of Test 01-06-2021
 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 | 0.375 | 3 | 0.374 | 0.11 | 0.110 | 3000 | 4700 | 60200 | 60040 | 94200 | 94100 | 1.50 | 18.8 | |
| 2 | 0.373 | 3 | 0.374 | 0.11 | 0.110 | 3000 | 4700 | 60200 | 60240 | 94200 | 94400 | 1.50 | 18.8 | |
| 3 | 4.182 | 10 | 1.251 | 1.27 | 1.229 | 35600 | 56000 | 61800 | 63840 | 97200 | 100500 | 1.50 | 18.8 | |
| 4 | 4.174 | 10 | 1.250 | 1.27 | 1.227 | 36000 | 56000 | 62500 | 64680 | 97200 | 100700 | 1.40 | 17.5 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Note: only four samples for tensile and two samples for bend test | | | | | | | | | | | | | | |
| Bend Test | | | | | | | | | | | | | | |
| #3 Bar Bend Test Through 180° is Satisfactory | | | | | | | | | | | | | | |
| #10 Bar Bend Test Through 180° 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,
 CEO
 The Royal Contractor
 GHSS Wadala sandhuan Sialkot

Reference # CED/TFL **36481** (Dr. Waseem Abbass)

Dated: 31-05-2021

Reference of the request letter # PMIU-SKT-002431-MAY-2021

Dated: 31-05-2021

Tension Test Report (Page -1/1)

Date of Test 01-06-2021

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 | 0.379 | 3 | 0.377 | 0.11 | 0.111 | 4200 | 5100 | 84200 | 83080 | 102200 | 100900 | 0.90 | 11.3 | Amreli Steel | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| Note: only one sample for tensile test | | | | | | | | | | | | | | | |
| Bend Test | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

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,
Sub Divisional Officer
Highway Sub Division
Bahawalpur
(Dualization of Road from Uch Sharif to Ahmedpur East Length; 27.25 km District Bahawalpur
Construction of Bridge over Absia Canal Lallu Wali Mori (Pile Foundation)

Reference # CED/TFL **36482** (Dr. M Rizwan Riaz)
Reference of the request letter # 829

Dated: 31-05-2021
Dated: 25-05-2021

Tension Test Report (Page – 1/2)

Date of Test 01-06-2021
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 | 781.0 | 17600 | 172.66 | 19800 | 194.24 | 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

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

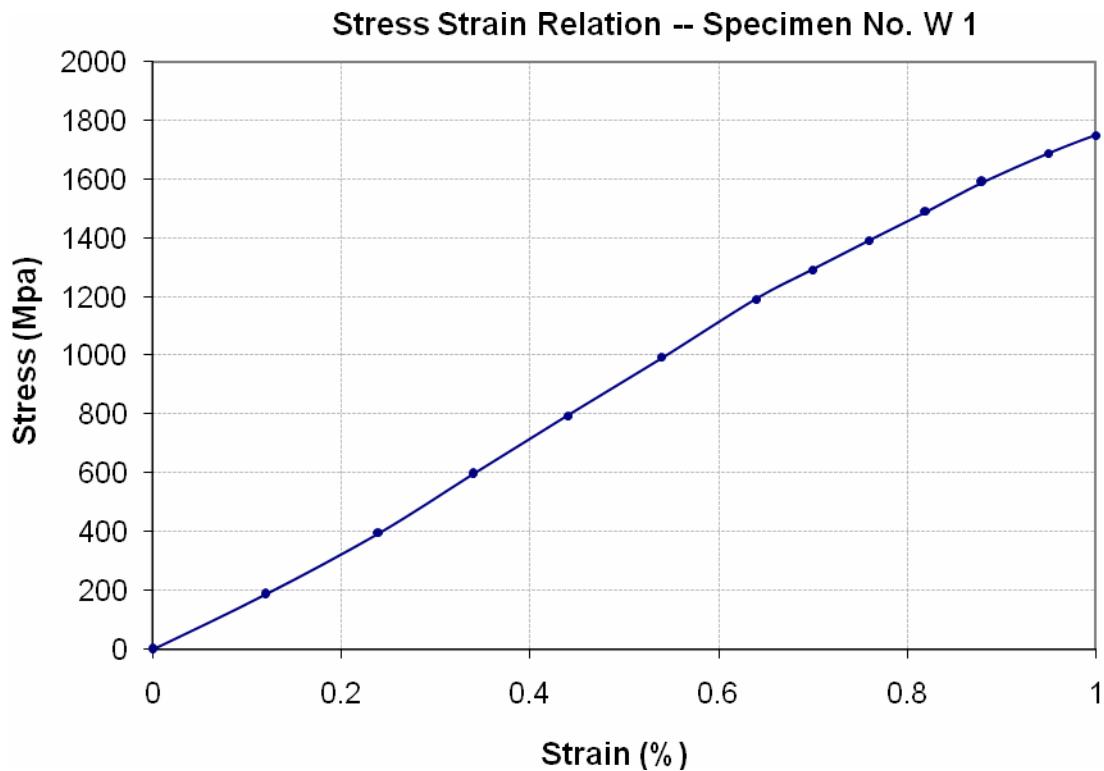
To,
Sub Divisional Officer
Highway Sub Division
Bahawalpur
(Dualization of Road from Uch Sharif to Ahmedpur East Length; 27.25 km District Bahawalpur
Construction of Bridge over Absia Canal Lallu Wali Mori (Pile Foundation)

Reference # CED/TFL **36482** (Dr. M Rizwan Riaz)
Reference of the request letter # 829

Dated: 31-05-2021

Dated: 25-05-2021

Graph (Page – 2/2)



I/C Testing Laboratories
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,
 Resident Engineer
 Pillar & Sons
 Rumanza Golf & Country Club, DHA Multan

Reference # CED/TFL **36484** (Dr. M Rizwan Riaz)
 Reference of the request letter # P&S/OTH/GEN/00025

Dated: 01-06-2021
 Dated: 29-05-2021

Tension Test Report (Page -1/1)

Date of Test 01-06-2021
 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 | 0.382 | 3 | 0.378 | 0.11 | 0.112 | 3500 | 5000 | 70200 | 68660 | 100200 | 98100 | 1.40 | 17.5 | |
| 2 | 0.382 | 3 | 0.378 | 0.11 | 0.112 | 3500 | 5000 | 70200 | 68680 | 100200 | 98200 | 1.50 | 18.8 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Note: only two samples for tensile and one sample for bend test | | | | | | | | | | | | | | |
| Bend Test | | | | | | | | | | | | | | |
| #3 Bar Bend Test Through 180° 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,
 CE/Engineer's Representative
 NESPAK
 Infrastructure Development of Federal Govt Employees Housing Scheme, Green Enclase 1,
 Barakhahu Islamabad

Reference # CED/TFL **36486** (Dr. Safer Abbass)
 Reference of the request letter # 3690/321/104/OU/11(a)/45

Dated: 01-06-2021
 Dated: 31-05-2021

Tension Test Report (Page -1/2)

Date of Test 01-06-2021
 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 | 3100 | 4550 | 62200 | 54910 | 91200 | 80600 | 1.50 | 18.8 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Note: only one sample for tensile and one sample for bend test | | | | | | | | | | | | | | |
| Bend Test | | | | | | | | | | | | | | |
| #3 Bar Bend Test Through 180° 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,
CE/Engineer's Representative
NESPAK
Infrastructure Development of Federal Govt Employees Housing Scheme, Green Enclase 1,
Barahkahu Islamabad

Reference # CED/TFL **36486** (Dr. Safer Abbass)
Reference of the request letter # 3690/321/104/OU/11(a)/46

Dated: 01-06-2021
Dated: 31-05-2021

Tension Test Report (Page – 2/2)

Date of Test 01-06-2021
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) | | % Elongation | Remarks |
|---------|------------------|----------------|-----------------|-----------------------------|--------|--------------------------------|--------|--------------|---------|
| | (mm) | (kg/km) | (kg/km) | (kg) | (kN) | (kg) | (kN) | | |
| 1 | 12.70 (1/2") | 775.0 | 797.0 | 18700 | 183.45 | 20000 | 196.20 | >3.50 | xx |
| 2 | 12.70 (1/2") | 775.0 | 794.0 | 18700 | 183.45 | 20000 | 196.20 | >3.50 | xx |
| 3 | 12.70 (1/2") | 775.0 | 798.0 | 17300 | 169.71 | 19700 | 193.26 | >3.50 | xx |
| - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - |

Only three samples for Test

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 Laboratories
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