# 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 CPEC-Package-3
NESPAK
China Pakistan Economic Corridor (CPEC), Western Route Hakla (on M1) –Yarak (D.I. Khan) Motorway, Package-3(Tarap to Kot Belian)(M/s New Taha Associate Factory)

Reference # CED/TFL **35566** (Dr. Ali Ahmed) Dated: 27-10-2020
Reference of the request letter # CPEC/NESPAK/CS/RE/PKG3/20/1682 Dated: 20-10-2020

## Tension Test Report (Page – 1/1)

Date of Test 04-11-2020
Gauge length 2 inches
Description W-Metal Beam, Metal Post & Metal Spacer Steel Post Strip Tensile Test as per AASHTOO M-180, M-183

| 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-Metal Beam | 2.34x0.30 | 0.70 | 3700 | 5000 | 5271 | 7123 | 0.30 | 15.00 | |
| 2 | | 2.34x0.30 | 0.70 | 3600 | 5200 | 5128 | 7407 | 0.30 | 15.00 | |
| 3 | Metal Post | 2.33x0.61 | 1.42 | 5000 | 6700 | 3518 | 4714 | 0.70 | 35.00 | |
| 4 | | 2.33x0.61 | 1.42 | 4900 | 6700 | 3448 | 4714 | 0.70 | 35.00 | |
| 5 | Metal Spacer | 2.33x0.51 | 1.19 | 4400 | 5700 | 3703 | 4797 | 0.60 | 30.00 | |
| 6 | | 2.33x0.51 | 1.19 | 4400 | 5700 | 3703 | 4797 | 0.60 | 30.00 | |
| - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | |
| Only Six Samples for Tensile Test | | | | | | | | | | |
| | | | | | | | | | | |
| Bend Test | | | | | | | | | | |
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**I/C Testing Laboratoires**
**UET Lahore, Pakistan.**

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**Pakistan. Ph: 92-42-99029202**


To,
M/S ASFO
Lahore

Reference # CED/TFL **35569** (Dr. Ali Ahmed) Dated: 28-10-2020
Reference of the request letter # Nil Dated: 28-10-2020

## Tension Test Report (Page – 1/1)

Date of Test 04-11-2020
Gauge length 2 inches
Description Angle 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 | Angle | 23.20x6.20 | 143.84 | 5200 | 8700 | 354.64 | 593.35 | 0.45 | 22.50 | |
| 2 | | 23.20x6.20 | 143.84 | 5200 | 8700 | 354.64 | 593.35 | 0.50 | 25.00 | |
| - | - | - | - | - | - | - | - | - | - | |
| - | | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | |
| - | | - | - | - | - | - | - | - | - | |
| **Only Two Samples for Tensile and One Sample for Bend Test** | | | | | | | | | | |
| | | | | | | | | | | |
| **Bend Test** | | | | | | | | | | |
| Strip Taken from Angle Bend Test Through 180º is Satisfactory | | | | | | | | | | |
| | | | | | | | | | | |
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**Pakistan. Ph: 92-42-99029202**

To,
Assistant Executive Engineer
CCD, PAK. PWD. Gujranwala
(Enhancement & Expansion of Building Infrastructure of NHMP Training College Sheikhupura, Phase-I (SH: Establishment of Trainees Hostel))

Reference # CED/TFL **35586** (Dr. Ali Ahmed) Dated: 03-11-2020
Reference of the request letter # AEE-II/CCD/GA/Work/NHMP/P-I/Lab/02Dated: 29-10-2020

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

Date of Test 04-11-2020
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 | 0.375 | 3 | 0.375 | 0.11 | 0.110 | 3400 | 4700 | 68200 | 68010 | 94200 | 94100 | 1.30 | 16.3 | FF Steel |
| 2 | 0.379 | 3 | 0.377 | 0.11 | 0.112 | 3400 | 4900 | 68200 | 67190 | 98200 | 96900 | 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 | | | | | | | | | | | | | | |
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To,
M/S Unirazz Services
Valencia Town, Lahore
(Civil Works for Covering of Openings in PM-1 Building Packages Convertors Limited)

Reference # CED/TFL **35587** (Dr. Ali Ahmed) Dated: 03-11-2020
Reference of the request letter # USPL/PMALL/2892-93 Dated: 02-11-2020

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

Date of Test 04-11-2020
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 | 0.412 | 3 | 0.393 | 0.11 | 0.121 | 3100 | 4600 | 62200 | 56430 | 92200 | 83800 | 1.60 | 20.0 | |
| 2 | 0.412 | 3 | 0.393 | 0.11 | 0.121 | 3100 | 4600 | 62200 | 56390 | 92200 | 83700 | 1.50 | 18.8 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| **Note: only two samples for tensile and one sample for bend test** | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| Bend Test | | | | | | | | | | | | | | |
| #3 Bar Bend Test Through 180º is Satisfactory | | | | | | | | | | | | | | |
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**University of Engineering and Technology Lahore, 54890**
**Pakistan. Ph: 92-42-99029202**

To,
Project Engineer
NETRACON Technologies (Pvt) Ltd
Design, Manufacture, Supply, Installation, Testing and Commission of Plant for 500 / 220 / 132 kV Faisalabad West Substation
Reference # CED/TFL **35589** (Dr. Ali Ahmed) Dated: 03-11-2020
Reference of the request letter # NTT-HO/FSDW-GS/031 Dated: 03-11-2020

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

Date of Test 04-11-2020
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 | 0.378 | 3 | 0.376 | 0.11 | 0.111 | 3300 | 5200 | 66200 | 65490 | 104200 | 103200 | 1.20 | 15.0 | Kamran Steel |
| 2 | 0.375 | 3 | 0.375 | 0.11 | 0.110 | 3300 | 5200 | 66200 | 66030 | 104200 | 104100 | 1.30 | 16.3 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| **Note: only two samples for tensile and two samples for bend test** | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| Bend Test | | | | | | | | | | | | | | |
| #3 Bar Bend Test Through 180º is Satisfactory | | | | | | | | | | | | | | |
| #3 Bar Bend Test Through 180º is Satisfactory | | | | | | | | | | | | | | |
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Witness by Sohaib Ali (Sub Engr. NESPAK)

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To,
K2 Adventure
Lahore

Reference # CED/TFL **35590** (Dr. Ali Ahmed) Dated: 04-11-2020
Reference of the request letter # Nil Dated: 04-11-2020

## Tension Test Report (Page – 1/1)

Date of Test 04-11-2020
Description Steel Wire Rope Tensile Test

| Sr. No. | Nominal Diameter | Measured weight | Breaking Load | Remarks / Coil No. |
|---|---|---|---|---|
| | (mm) | (kg/km) | (kg) | |
| **1** | **14** | **803.18** | **10800** | |
| - | - | - | - | |
| - | - | - | - | |
| - | - | - | - | |
| - | - | - | - | |
| **Only one sample for Test** | | | | |
| | | | | |

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To,
Director Development
Punjab Employees Social Security Institution
3/A, Gulberg-V, Lahore
(Construction of Wards at MNCH, Kot Lakhpat, Lahore)

Reference # CED/TFL **35591** (Dr. Ali Ahmed) Dated: 03-11-2020
Reference of the request letter # SS.DC( )/777 Dated: 03-11-2020

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

Date of Test 04-11-2020
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 | 0.370 | 3/8 | 0.372 | 0.11 | 0.109 | 3900 | 4900 | 78200 | 78980 | 98200 | 99300 | 0.90 | 11.3 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| **Note: only one sample for tensile and one sample for bend test** | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| Bend Test | | | | | | | | | | | | | | |
| 3/8" Dia Bar Bend Test Through 180º is Satisfactory | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
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