



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
 BWRDSP Consultants
 Project Design, Construction Supervision and Implementation Support for Balochistan Water Resources Development Sector Project (BWRDSP)
 (Construction of Ahmadzai (PIS & FIS) Subproject (NCB-08), Zhob River Basin)

Reference # CED/TFL **36600** (Dr. Qasim Khan)
 Reference of the request letter # 4075/061/ARB/01/267

Dated: 18-06-2020
 Dated: 11-06-2020

Tension Test Report (Page – 1/2)

Date of Test 28-06-2021
 Gauge length 8 inches
 Description G.I Wire Tensile Test

| Sr. No. | Weight (Kg/m) | Diameter/ size | | Area (mm ²) | | Yield load (kg) | Breaking Load (kg) | Yield Stress (MPa) | Ultimate Stress (MPa) | Elongation (inch) | % Elongation | Remarks |
|--|------------------|-------------------|----------------|----------------------------|--------|--------------------|--------------------------|--------------------------|-----------------------------|----------------------|--------------|---------|
| | | Nominal (SWG) | Actual (mm) | Nominal | Actual | | | | | | | |
| 1 | 0.107 | ----- | 4.16 | ----- | 13.6 | ----- | 480 | ----- | 346 | 0.90 | 11.3 | |
| 2 | 0.107 | ----- | 4.17 | ----- | 13.6 | ----- | 480 | ----- | 346 | 0.90 | 11.3 | |
| - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | |
| Note: only two samples for tensile test | | | | | | | | | | | | |
| Bend Test | | | | | | | | | | | | |
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I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

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Project Design, Construction Supervision and Implementation Support for Balochistan Water Resources Development Sector Project (BWRDSP)
(Construction of Ahmadzai (PIS & FIS) Subproject (NCB-08), Zhob River Basin)

Reference # CED/TFL **36600** (Dr. Qasim Khan)
Reference of the request letter # 4075/061/ARB/01/267

Dated: 18-06-2020
Dated: 11-06-2020

Size Test Report (Page – 2/2)
Date of Test 28-06-2021
Description G.I Wire Thickness Test

| Sr. No. | Designation | Measured Diameter | Remark |
|---------------------------------|-------------|-------------------|--------|
| | | | |
| 1 | GI Wire | 4.10 | |
| - | - | - | |
| - | - | - | |
| - | - | - | |
| - | - | - | |
| - | - | - | |
| - | - | - | |
| - | - | - | |
| Only One Sample for Test | | | |

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To,
 COO/ Director
 Excel Services & Engineering (Pvt) Limited
 Fatima Sugar Mills Limited Building, Kot Addu
 (RC Roof Slab)

Reference # CED/TFL **36625** (Dr. Qasim Khan)
 Reference of the request letter # ESE-234-03

Dated: 25-06-2021
 Dated: 22-06-2021

Tension Test Report (Page -1/1)

Date of Test 28-06-2021
 Gauge length 2 inches
 Description Tor Steel Bar Tensile Test as per BS-4461

| Sr. No. | Weight (lbs/ft) | Diameter/ Size (inch) | | 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 | 0.421 | 3/8 | 0.397 | 0.11 | 0.124 | 2980 | 4400 | 59800 | 53130 | 88200 | 78500 | 0.60 | 30.0 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Note: only one sample for tensile test | | | | | | | | | | | | | | |
| Bend Test | | | | | | | | | | | | | | |
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Ref: CED/TFL/06/36626

Dated: 23-06-2021

Dated of Test: 28-06-2021

To
Manager Monitoring & Coordination
Shajar Roads Limited
Dualization of Sheikhpura- Gujranwala Road

Subject: **TESTING OF R.C.C. PIPE [ASTM-C76 - 08a]**

Reference to your letter No. MMC/SHJR/SGRP/81, dated 22.06.2021 on the subject cited above. One R.C.C. Pipe as received by us has been tested. The results are tabulated as under.

| Sr. No | Nominal Size | Total Length | Loaded Length | External Diameter | Internal Diameter | Wall Thickness | Proof load | Ultimate Load | Proof Stress | Ultimate Stress |
|--------|--------------|--------------|---------------|-------------------|-------------------|----------------|------------|---------------|------------------------|------------------------|
| | (inch) | (foot) | (foot) | (foot) | (foot) | (inch) | (kg) | (kg) | Pound/Linear foot/foot | Pound/Linear foot/foot |
| 1 | 36 (910mm) | 7.97 | 7.62 | 3.66 | 2.98 | 4.08 | 33090 | 45710 | 3211 | 4435 |

Witness by Rana Tariq (NESPAK) & Abdul Rashid (M.E SHAJAR)

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To,
 Resident Engineer
 Osmani & Company
 Infrastructure Development Works of Commercial Zone-A for M-3 Industrial City, M-3
 Motorway (Contract No. FIC-034 : M/s Sh. Iqbal Akhtar)
 Infrastructure Development Works of Phase-II (Including Construction of UG, OH Tank,
 Watwer Supply and Sewerage System) at M-3 Industrial City near Sahiwala Interchange, M3
 Motorway (Contract No. FIC-040 : M/s Sh. Iqbal Akhtar)
 Reference # CED/TFL **36631** (Dr. Qasim Khan) Dated: 23-06-2021
 Reference of the request letter # CRE/M3IC/FIC-040/Lab/1159 Dated: 04-05-2021

Tension Test Report (Page -1/1)

Date of Test 28-06-2021
 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 | 0.371 | 3 | 0.372 | 0.11 | 0.109 | 3100 | 4700 | 62200 | 62740 | 94200 | 95200 | 1.50 | 18.8 | Ittchad Steel |
| 2 | 0.371 | 3 | 0.373 | 0.11 | 0.109 | 3000 | 4700 | 60200 | 60610 | 94200 | 95000 | 1.40 | 17.5 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| 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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To,
 Resident Engineer
 Osmani & Company
 Infrastructure Development Works of Commercial Zone-B for M-3 Industrial City, M-3
 Motorway, Faisalabad
 Reference # CED/TFL **36632** (Dr. Qasim Khan) Dated: 23-06-2021
 Reference of the request letter # CRE/M3IC/FIC-032/Lab/207 Dated: 23-06-2021

Tension Test Report (Page -1/1)

Date of Test 28-06-2021
 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 | 0.369 | 3 | 0.371 | 0.11 | 0.108 | 3000 | 4400 | 60200 | 61030 | 88200 | 89600 | 1.40 | 17.5 | Ittehad Steel |
| 2 | 0.367 | 3 | 0.370 | 0.11 | 0.108 | 2900 | 4400 | 58200 | 59320 | 88200 | 90000 | 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 | | | | | | | | | | | | | | |
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To,
 Resident Engineer
 Allied Engineering Consultants (Pvt) Ltd
 Establishment of Mother & Child Block in Sir Ganga Ram Hospital Lahore (Group No. 1)

Reference # CED/TFL **36634** (Dr. Qasim Khan)
 Reference of the request letter # AEC/MBC/2021/65

Dated: 24-06-2021
 Dated: 21-06-2021

Tension Test Report (Page -1/1)

Date of Test 28-06-2021
 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 | 0.385 | 3 | 0.379 | 0.11 | 0.113 | 3500 | 5000 | 70200 | 68250 | 100200 | 97500 | 1.40 | 17.5 | |
| 2 | 0.375 | 3 | 0.375 | 0.11 | 0.110 | 3200 | 4800 | 64200 | 63950 | 96200 | 96000 | 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 | | | | | | | | | | | | | | |
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To,
 Civil Engineer
 Sadaqat Limited
 Weaving Unit Khurrianwala, Faisalabad

Reference # CED/TFL **36635** (Dr. Qasim Khan)
 Reference of the request letter # Civil-C-3

Dated: 24-06-2021
 Dated: 23-06-2021

Tension Test Report (Page -1/1)

Date of Test 28-06-2021
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile Test as per ASTM-A615

| Sr. No. | Weight (lbs/ft) | Diameter/ Size (inch) | | 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 | 0.385 | 3 | 0.379 | 0.11 | 0.113 | 3000 | 3800 | 60200 | 58470 | 76200 | 74100 | 1.60 | 20.0 | New |
| 2 | 0.351 | 3 | 0.363 | 0.11 | 0.103 | 3200 | 4900 | 64200 | 68280 | 98200 | 104600 | 1.10 | 13.8 | Old |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Note: only two samples for tensile test | | | | | | | | | | | | | | |
| Bend Test | | | | | | | | | | | | | | |
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To,
 CEO
 Latif Rafique Constructions
 Jammia Masjid Construction Project DGL

Reference # CED/TFL **36638** (Dr. Qasim Khan)
 Reference of the request letter # Nil

Dated: 24-06-2021
 Dated: 24-06-2021

Tension Test Report (Page -1/1)

Date of Test 28-06-2021
 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 | 0.385 | 3 | 0.380 | 0.11 | 0.113 | 4000 | 4900 | 80200 | 77830 | 98200 | 95400 | 0.90 | 11.3 | |
| 2 | 0.386 | 3 | 0.380 | 0.11 | 0.114 | 3900 | 4800 | 78200 | 75730 | 96200 | 93200 | 1.00 | 12.5 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| 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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To,
 Faizan Shoukat
 Model Bazar Head Office
 18 D-2 Johar Town, Lahore
 (Establishment of Model Bazar Pakpattan)

Reference # CED/TFL **36641** (Dr. Qasim Khan)
 Reference of the request letter # Nil

Dated: 25-06-2021
 Dated: 25-06-2021

Tension Test Report (Page -1/1)

Date of Test 28-06-2021
 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 | 0.378 | 3 | 0.376 | 0.11 | 0.111 | 3900 | 4600 | 78200 | 77370 | 92200 | 91300 | 1.40 | 17.5 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| 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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To,
 XEN
 GE (Air) Lahore
 Rehabilitation of Information and Selection Centre at PAF Base Lahore CEAFCZ-34/2021

Reference # CED/TFL **36643** (Dr. Qasim Khan) Dated: 25-06-2021
 Reference of the request letter # 6888/20/E6 Dated: 24-06-2021

Tension Test Report (Page -1/1)

Date of Test 28-06-2021
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

| Sr. No. | Weight (lbs/ft) | Diameter/ Size (inch) | | 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 | 0.374 | 3/8 | 0.374 | 0.11 | 0.110 | 3200 | 4200 | 64200 | 64220 | 84200 | 84300 | 1.00 | 12.5 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Note: only one sample for tensile test | | | | | | | | | | | | | | |
| Bend Test | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
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To,
 Project Engineer
 SMC
 2038- Carrefour (M) at Hyper Box at Gujranwala

Reference # CED/TFL **36644** (Dr. Qasim Khan)
 Reference of the request letter # 2038/BOX/009/2021

Dated: 25-06-2021
 Dated: 25-06-2021

Tension Test Report (Page -1/1)

Date of Test 28-06-2021
 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 | 0.374 | 3 | 0.374 | 0.11 | 0.110 | 3300 | 4900 | 66200 | 66110 | 98200 | 98200 | 1.30 | 16.3 | Ittefaq Steel |
| 2 | 0.376 | 3 | 0.375 | 0.11 | 0.111 | 3300 | 5000 | 66200 | 65730 | 100200 | 99600 | 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
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 Defence Housing Authority.
Lahore Cantt
(Infra Structure Work Sector – Q DHA Ph-IX Rahbar) – (M/s DHA C)

Reference # CED/TFL **36645** (Dr. Qasim Khan)
Reference of the request letter # 408/241/E/Lab/96/11/Br 01

Dated: 25-06-2021
Dated: 25-06-2021

Tension Test Report (Page -1/1)

Date of Test 28-03-2021
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 | 4.245 | 10 | 1.260 | 1.27 | 1.248 | 37800 | 54200 | 65600 | 66770 | 94100 | 95800 | 1.50 | 18.8 | Kamran Steel |
| 2 | 4.225 | 10 | 1.257 | 1.27 | 1.242 | 32200 | 41600 | 55900 | 57160 | 72200 | 73900 | 1.40 | 17.5 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Note: only two samples for tensile and one sample for bend test | | | | | | | | | | | | | | |
| Bend Test | | | | | | | | | | | | | | |
| #10 Bar Bend Test Through 180° is Satisfactory | | | | | | | | | | | | | | |
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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 CM Engineering (Pvt) Ltd
Lahore
(CMPAK Project Site ID : 53147, 52471, 50686, 51126, 51328, 51800, 52295, 52871, 53145)

Reference # CED/TFL **36647** (Dr. Qasim Khan)
Reference of the request letter # CME/Steel/CMPAK/304

Dated: 25-06-2021
Dated: 18-06-2021

Tension Test Report (Page -1/1)

Date of Test 28-06-2021
Gauge length 8 inches
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

| Sr. No. | Weight (lbs/ft) | Diameter/ Size (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 | 0.378 | 10 | 9.55 | 0.12 | 0.111 | 3200 | 4700 | 58789 | 63520 | 86347 | 93300 | 1.40 | 17.5 | |
| 2 | 0.377 | 10 | 9.54 | 0.12 | 0.111 | 3200 | 4700 | 58789 | 63600 | 86347 | 93500 | 1.50 | 18.8 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |

Note: only two samples for tensile and one sample for bend test

Bend Test

10mm Dia 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
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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
 Orbit Housing
 The Spring Apartment Homes, Lahore

Reference # CED/TFL **36650** (Dr. Qasim Khan)
 Reference of the request letter # Nil

Dated: 28-06-2021
 Dated: 28-06-2021

Tension Test Report (Page -1/1)

Date of Test 28-06-2021
 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 | 0.372 | 3 | 0.373 | 0.11 | 0.109 | 3400 | 5100 | 68200 | 68540 | 102200 | 102800 | 1.00 | 12.5 | |
| 2 | 0.379 | 3 | 0.377 | 0.11 | 0.111 | 3600 | 5400 | 72200 | 71190 | 108200 | 106800 | 1.00 | 12.5 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| 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.

Note:

- 1- You can See your reports On Internet in the following web site
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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 NESPAK
 Lahore
 Construction of Flyover and AT-Grade Improvement AT Shahkaam Chowk Lahore (SJ Steel)

Reference # CED/TFL **36652** (Dr. Qasim Khan)
 Reference of the request letter # 4047/13/05/AZL/11

Dated: 28-06-2021
 Dated: 24-06-2021

Tension Test Report (Page -1/3)

Date of Test 28-06-2021
 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 | 0.372 | 3 | 0.373 | 0.11 | 0.109 | 3100 | 4800 | 62200 | 62530 | 96200 | 96900 | 1.40 | 17.5 | |
| 2 | 0.372 | 3 | 0.373 | 0.11 | 0.109 | 3000 | 4700 | 60200 | 60550 | 94200 | 94900 | 1.20 | 15.0 | |
| 3 | 4.267 | 10 | 1.264 | 1.27 | 1.254 | 37800 | 52800 | 65600 | 66420 | 91700 | 92800 | 1.50 | 18.8 | |
| 4 | 4.205 | 10 | 1.255 | 1.27 | 1.236 | 37400 | 52800 | 65000 | 66690 | 91700 | 94200 | 1.40 | 17.5 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Note: only four samples for tensile and two sample 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
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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 NESPAK
 Lahore
 Construction of Flyover and AT-Grade Improvement AT Shahkaam Chowk Lahore (FF Steel)

Reference # CED/TFL **36652** (Dr. Qasim Khan)
 Reference of the request letter # 4047/13/05/AZL/10

Dated: 28-06-2021
 Dated: 23-06-2021

Tension Test Report (Page -2/3)

Date of Test 28-06-2021
 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 | 0.419 | 3 | 0.396 | 0.11 | 0.123 | 4100 | 5700 | 82200 | 73400 | 114300 | 102100 | 1.00 | 12.5 | |
| 2 | 0.419 | 3 | 0.396 | 0.11 | 0.123 | 4000 | 5700 | 80200 | 71630 | 114300 | 102100 | 1.00 | 12.5 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| 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.

Note:

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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 NESPAK
 Lahore
 Construction of Flyover and AT-Grade Improvement AT Shahkaam Chowk Lahore (Mughal Steel)

Reference # CED/TFL **36652** (Dr. Qasim Khan)
 Reference of the request letter # 4047/13/05/AZL/12

Dated: 28-06-2021
 Dated: 24-06-2021

Tension Test Report (Page -3/3)

Date of Test 28-06-2021
 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 | 0.393 | 3 | 0.384 | 0.11 | 0.116 | 4000 | 5100 | 80200 | 76310 | 102200 | 97300 | 1.00 | 12.5 | |
| 2 | 0.393 | 3 | 0.384 | 0.11 | 0.116 | 4000 | 5000 | 80200 | 76300 | 100200 | 95400 | 1.00 | 12.5 | |
| 3 | 4.313 | 10 | 1.270 | 1.27 | 1.268 | 43400 | 56200 | 75400 | 75460 | 97600 | 97800 | 1.60 | 20.0 | |
| 4 | 4.302 | 10 | 1.269 | 1.27 | 1.264 | 43600 | 54000 | 75700 | 76010 | 93800 | 94200 | 1.50 | 18.8 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Note: only four samples for tensile and two sample 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:

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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,
 National Heritage Constructors
 Faisalabad
 Subject: PD-EHV-08-2021 (Prime Steel)

Reference # CED/TFL **36652** (Dr. Qasim Khan)
 Reference of the request letter # NHC/W-141/9535-37

Dated: 28-06-2021
 Dated: 24-06-2021

Tension Test Report (Page -1/1)

Date of Test 28-06-2021
 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 | 0.372 | 3 | 0.373 | 0.11 | 0.109 | 3160 | 4400 | 63400 | 63660 | 88200 | 88700 | 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 | | | | | | | | | | | | | | |
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I/C Testing Laboratoires
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Note:

- 1- You can See your reports On Internet in the following web site
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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: CED/TFL/06/36660
Dated of Test: 28-06-2021

Dated: 28-06-2021

To,
Resident Engineer
AZ Engineering Associates
Dualization of Road from GT Road (Samma) to Gujrat Diga Road I/C Gujrat Flyover Length = 31 kms
in District Gujrat (Group-IV-B Construction of Bridge over Bhimber Nullah along with Approaches)

Subject: - CALIBRATION OF PRESSURE GAUGE (MARK: TFL/06/36660) (Page -1/2)

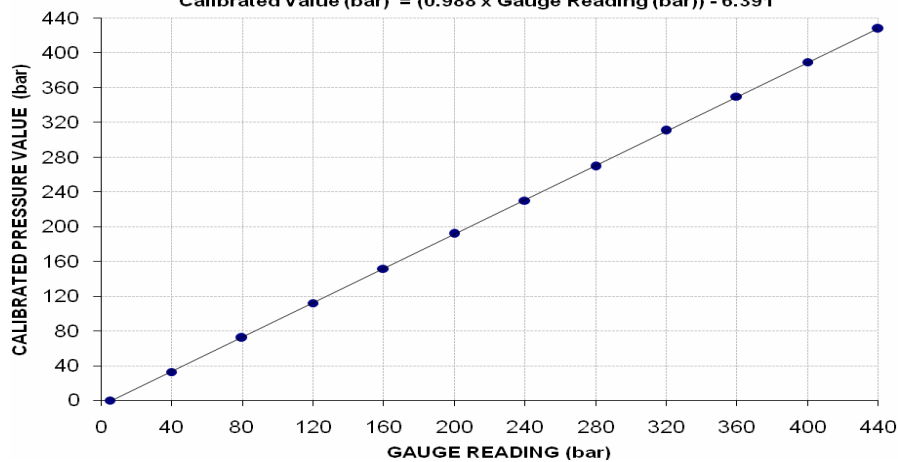
Reference to your Letter No. RE AZA/GT-148, Dated: 22/06/2021 on the subject cited above. One Pressure Gauge No. AES-310 as received by us has been calibrated. The results are tabulated as under:

Total Range : Zero - 1000 (bar)
Calibrated Range : Zero - 440 (bar)

| | | | | | | | | | | | | |
|------------------------------|---|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Pressure Gauge Reading (bar) | 5 | 40 | 80 | 120 | 160 | 200 | 240 | 280 | 320 | 360 | 400 | 440 |
| Calibrated Load (kg) | 0 | 6600 | 14500 | 22600 | 30600 | 38700 | 46500 | 54400 | 62700 | 70600 | 78700 | 86400 |
| Calibrated Pressure (bar) | 0 | 32.69 | 71.82 | 111.94 | 151.56 | 191.68 | 230.32 | 269.44 | 310.56 | 349.68 | 389.80 | 427.94 |

The Ram Are use for Calibration = 198 cm²

Calibration Curve for Pressure Gauge No. AES-310
Calibrated Value (bar) = (0.988 × Gauge Reading (bar)) - 6.391



I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

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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: CED/TFL/06/36660
Dated of Test: 28-06-2021

Dated: 28-06-2021

To,
Resident Engineer
AZ Engineering Associates
Dualization of Road from GT Road (Samma) to Gujrat Diga Road I/C Gujrat Flyover Length = 31 kms
in District Gujrat (Group-IV-B Construction of Bridge over Bhimber Nullah along with Approaches)

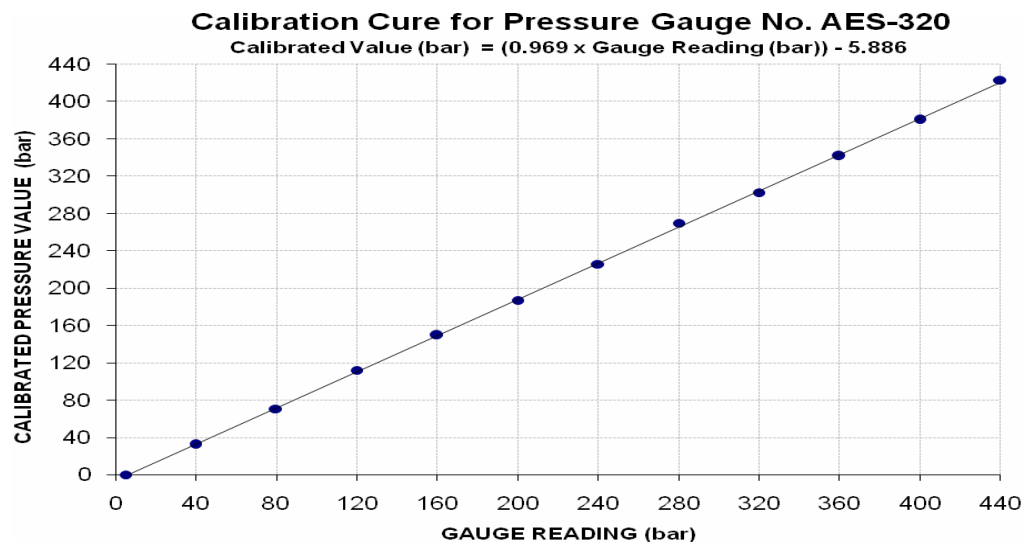
Subject: - CALIBRATION OF PRESSURE GAUGE (MARK: TFL/06/36660) (Page -2/2)

Reference to your Letter No. RE AZA/GT-148, Dated: 22/06/2021 on the subject cited above. One Pressure Gauge No. AES-320 as received by us has been calibrated. The results are tabulated as under:

Total Range : Zero - 1000 (bar)
Calibrated Range : Zero - 440 (bar)

| Pressure Gauge Reading (bar) | 5 | 40 | 80 | 120 | 160 | 200 | 240 | 280 | 320 | 360 | 400 | 440 |
|------------------------------|---|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Calibrated Load (kg) | 0 | 6500 | 14200 | 22600 | 30200 | 37700 | 45600 | 54500 | 61100 | 69000 | 76800 | 85400 |
| Calibrated Pressure (bar) | 0 | 32.19 | 70.33 | 111.94 | 149.58 | 186.73 | 225.86 | 269.94 | 302.63 | 341.76 | 380.39 | 422.99 |

The Ram Are use for Calibration = 198 cm^2



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