



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
 Zeeruk International (Pvt) Ltd
 Lahore Sialkot Motorway

Reference # CED/TFL **33378** (Dr. Qasim Khan)
 Reference of the request letter # LSM/RE-II/St/19/287

Dated: 14-06-2019
 Dated: 29-05-2019

Tension Test Report (Page – 1/1)

Date of Test 28-06-2019
 Gauge length 2 inches
 Description Galvanized Corrugated Steel Beam & Steel Post Strip Tensile Test

| Sr. No. | Designation | Size of Strip | X Section Area | Yield load | Breaking Load | Yield Stress | Ultimate Stress | Elongation | % Elongation | Remarks |
|---|-----------------------|---------------|----------------|------------|---------------|--------------|-----------------|------------|--------------|---------|
| | | | | | | | | | | |
| 1 | Metal Beam Guard Rail | 2.50x0.290 | 0.73 | 2400 | 3200 | 3310.34 | 4413.79 | 0.60 | 30.00 | |
| 2 | | 2.50x0.290 | 0.73 | 2300 | 3100 | 3172.41 | 4275.86 | 0.60 | 30.00 | |
| 3 | Vertical Steel Post | 2.51x0.720 | 1.81 | 5800 | 8200 | 3209.38 | 4537.41 | 0.80 | 40.00 | |
| 4 | | 2.51x0.720 | 1.81 | 5800 | 8300 | 3209.38 | 4592.74 | 0.80 | 40.00 | |
| - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | |
| Only Four Samples for Tensile Test | | | | | | | | | | |
| Bend Test | | | | | | | | | | |
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I/C Testing Laboratoires
UET Lahore, Pakistan.

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To,
Resident Engineer
RENARDET S.A ((M-4), Package-II)
Construction of Faisalabad - Khanewal (M-4) Project Package-II, Jamani-Shorkot, Section 2B
(Jamal Pipe)(China Railway First Group)

Reference # CED/TFL **33389** (Dr. Qasim Khan)
Reference of the request letter # Nil

Dated: 17-06-2019
Dated: 10-06-2019

Tension Test Report (Page – 1/1)

Date of Test 28-06-2019
Gauge length 2 inches
Description End Section 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 |
|---|-------------|---------------|--------------------|------------|---------------|-----------------------|-----------------------|------------|--------------|---------|
| | ----- | (cm) | (cm ²) | (kg) | (kg) | (kg/cm ²) | (kg/cm ²) | (in) | | |
| 1 | End Section | 2.48x0.275 | 0.68 | 2100 | 2800 | 3079.18 | 4105.57 | 0.50 | 25.00 | |
| 2 | End Section | 2.48x0.275 | 0.68 | 2200 | 2900 | 3225.81 | 4252.20 | 0.50 | 25.00 | |
| - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | |
| Only Two Samples for Tensile and One Sample for Bend Test | | | | | | | | | | |
| Bend Test | | | | | | | | | | |
| Strip Taken from End Section Bend Test Through 180° is Satisfactory | | | | | | | | | | |
| | | | | | | | | | | |
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To,
 Chief Resident Engineer
 Osmani & Co. (Pvt) Ltd
 Swat Motorway Project

Reference # CED/TFL **32436** (Dr. Qasim Khan)
 Reference of the request letter # 293/CRE/QAT/SMP/2019

Dated: 26-06-2019
 Dated: 16-06-2019

Tension Test Report (Page – 1/1)

Date of Test 28-06-2019

Gauge length 2 inches

Description Sign Board Material Strip Tensile Test

| Sr. No. | Designation | | Size of Strip (mm) | X Section Area (mm ²) | Yield load (kg) | Breaking Load (kg) | Yield Stress (MPa) | Ultimate Stress (MPa) | Elongation (in) | % Elongation | Remarks |
|--|---------------|--------------|-----------------------|--------------------------------------|--------------------|-----------------------|-----------------------|--------------------------|--------------------|--------------|---------|
| | ----- | | | | | | | | | | |
| 1 | MS Pipe | 6 | 26.10x5.60 | 146.16 | 5200 | 6700 | 349.01 | 449.69 | 0.60 | 30.00 | |
| 2 | MS Pipe | 12 | 26.10x6.00 | 156.60 | 5600 | 8200 | 350.80 | 513.68 | 0.50 | 25.00 | |
| 3 | GI Pipe | 3 | 23.60x3.00 | 70.80 | 2200 | 2900 | 304.83 | 401.82 | 0.50 | 25.00 | |
| 4 | GI Pipe | 2.5 | 26.00x2.50 | 65.00 | 2300 | 3000 | 347.12 | 452.77 | 0.80 | 40.00 | |
| 5 | Base Plate | 400x400x25mm | 28.10x25.00 | 702.50 | 21300 | 30500 | 297.44 | 425.91 | 1.00 | 50.00 | |
| 6 | Base Plate | 300x300x20mm | 20.30x19.60 | 397.88 | 13700 | 19600 | 337.78 | 483.25 | 0.90 | 45.00 | |
| 7 | Resting Plate | 960x450x10mm | 26.10x9.80 | 255.78 | 8400 | 13600 | 322.17 | 521.60 | 0.60 | 30.00 | |
| 8 | C. Channel | 150x300x5mm | 26.20x4.60 | 120.52 | 4000 | 5600 | 325.59 | 455.82 | 0.60 | 30.00 | |
| 9 | Angle Iron | 65x65x8 | 26.20x8.30 | 217.46 | 7000 | 10900 | 315.78 | 491.72 | 0.65 | 32.50 | |
| 10 | GI Sheet | 1.8mm | 26.20x2.00 | 52.40 | 1900 | 2500 | 355.71 | 468.03 | 0.60 | 30.00 | |
| Only Ten Samples for Tensile Test | | | | | | | | | | | |
| Bend Test | | | | | | | | | | | |
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To,
 Admin Coordinator
 EPS Solutions
 EPS Manufacturing Facility , Feidme M3 Industrial Estate, Faisalabad
 (Bilal Steel)

Reference # CED/TFL **33454** (Dr. Qasim Khan)
 Reference of the request letter # BS/M3K/EPS290/Lab004

Dated: 27-06-2019
 Dated: 27-06-2019

Tension Test Report (Page -1/1)

Date of Test 28-06-2019
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

| Sr. No. | Weight (lbs/ft) | Diameter/ size | | Area (in ²) | | Yield load (kg) | Breaking Load (kg) | Yield Stress (psi) | | Ultimate Stress (psi) | | Elongation (inch) | % Elongation | Remarks |
|--|--------------------|-------------------|------------------|----------------------------|--------|--------------------|--------------------------|-----------------------|--------|--------------------------|--------|----------------------|--------------|---------|
| | | Nominal (#) | Actual (inch) | Nominal | Actual | | | Nominal | Actual | Nominal | Actual | | | |
| 1 | 0.391 | 3 | 0.383 | 0.11 | 0.115 | 3300 | 4500 | 66200 | 63290 | 90200 | 86400 | 1.00 | 12.5 | |
| 2 | 0.403 | 3 | 0.388 | 0.11 | 0.118 | 3300 | 4600 | 66200 | 61400 | 92200 | 85600 | 1.10 | 13.8 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| 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,
 Sub Divisional Officer
 Building Sub Division
 Kasur
 (Const: of Residebces at THQ Hospital Kot Radha Kishan, Kasur)

Reference # CED/TFL **33455** (Dr. Qasim Khan)
 Reference of the request letter # 748

Dated: 27-06-2019
 Dated: 12-06-2019

Tension Test Report (Page -1/1)

Date of Test 28-06-2019
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile Test as per ASTM-A615

| Sr. No. | Weight (lbs/ft) | Diameter/ size | | Area (in ²) | | Yield load (kg) | Breaking Load (kg) | Yield Stress (psi) | | Ultimate Stress (psi) | | Elongation (inch) | % Elongation | Remarks |
|--|--------------------|-------------------|------------------|----------------------------|--------|--------------------|--------------------------|-----------------------|--------|--------------------------|--------|----------------------|--------------|---------|
| | | Nominal (#) | Actual (inch) | Nominal | Actual | | | Nominal | Actual | Nominal | Actual | | | |
| 1 | 0.396 | 3/8 | 0.385 | 0.11 | 0.116 | 3100 | 4400 | 62200 | 58680 | 88200 | 83300 | 1.50 | 18.8 | |
| 2 | 0.396 | 3/8 | 0.385 | 0.11 | 0.116 | 3600 | 5500 | 72200 | 68220 | 110200 | 104300 | 1.30 | 16.3 | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| Note: only two samples for tensile test | | | | | | | | | | | | | | |
| Bend Test | | | | | | | | | | | | | | |
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