



**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 – Zeeruk (Jv)  
 China Pakistan Economic Corridor (CPEC) Western Route Hakla (no M1) to D.I.Khan  
 Motorway – Rehmani Khel to Kot Balian – Package-2

Reference # CED/TFL **33544** (Dr. Waseem Abbas) Dated: 12-07-2019  
 Reference of the request letter # RE/NESPAK/P-2C/CPEC-WR/385 Dated: 22-06-2019

**Tension Test Report** (Page – 1/2)

Date of Test 30-07-2019  
 Gauge length 2 inches  
 Description Bearing Pad Steel Plate Steel Strip Tensile Test

Sr. No.	Designation	Size of Strip	X Section Area	Yield load	Breaking Load	Yield Stress	Ultimate Stress	Elongation	% Elongation	Remarks
1	Bearing Pad Steel Plate	18.00x4.00	72.00	2500	3500	340.63	476.88	0.55	27.50	
.	.	.	.	.	.	.	.	.	.	
.	.	.	.	.	.	.	.	.	.	
.	.	.	.	.	.	.	.	.	.	
.	.	.	.	.	.	.	.	.	.	
.	.	.	.	.	.	.	.	.	.	
<b>Only One Sample for Tensile Test</b>										
<b>Bend Test</b>										

**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](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/07/33544

Dated: 12-07-19

**To**  
**Resident Engineer**  
**NESPAK – Zeeruk (Jv)**  
**China Pakistan Economic Corridor (CPEC) Western Route Hakla (no M1) to D.I.Khan**  
**Motorway – Rehmani Khel to Kot Balian – Package-2**

**Subject: - TEST RESULT REPORT FOR BEARING DEVICE (PAD) (SIZE TEST) (Page**  
**# 2/2)**

Reference to your letter no. RE/NESPAK/P-2C/CPEC-WR/385, Dated: 22/06/2019 on the above mentioned subject. One Elastomeric Bearing Rubber Pad (EBRP) has been received by us. The same was tested and results are given below.

**Test Results**

<b>No. of Steel Plate</b>	<b>:</b>	<b>5</b>
<b>Thickness of Steel Plate</b>	<b>:</b>	<b>3.90 mm (Average)</b>
<b>Thickness of Rubber between Steel Plates</b>	<b>:</b>	<b>Non Uniform</b> <b>(Max : 10.40 mm)</b> <b>(Min : 9.20 mm)</b>
<b>Cover of Rubber to top steel plate</b>	<b>:</b>	<b>4.90 mm</b>
<b>Cover of Rubber to bottom steel plate</b>	<b>:</b>	<b>4.50 mm</b>

**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](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  
 Osmani & Company (Pvt) Ltd  
 Swat Motorway Project

Reference # CED/TFL **33611** (Dr. Waseem Abbas)  
 Reference of the request letter # 316/CRE/QAT/SMP/2019

Dated: 22-07-2019  
 Dated: 19-07-2019

**Tension Test Report** (Page – 1/1)

Date of Test 30-07-2019  
 Gauge length 2 inches  
 Description GI Sheet Strip Tensile Test

Sr. No.	Designation	Size of Strip	X Section Area	Yield load	Breaking Load	Yield Stress	Ultimate Stress	Elongation	% Elongation	Remarks
1	GI Sheet	13.70x1.90	26.03	700	1000	263.81	376.87	0.60	30.00	
2	GI Sheet	14.00x1.90	26.60	680	1000	250.78	368.80	0.55	27.50	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
<b>Only Two Samples for Tensile Test</b>										
<b>Bend Test</b>										

**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](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,  
 Engineer's Representative  
 NESPAK  
 Construction of Pakistan Kidney & Liver Institute and Research Center, Lahore Hospital  
 Package C-I, Phase – I

Reference # CED/TFL **33627** (Dr. Waseem Abbas) Dated: 24-07-2019  
 Reference of the request letter # 3836/13/AA/10/C-1-MEP-FF-MTR-49 Dated: 16-07-2019

**Tension Test Report** (Page – 1/2)

Date of Test 30-07-2019  
 Gauge length 2 inches  
 Description MS Seamless Pipe Steel Strip Tensile Test

Sr. No.	Designation	Size of Strip	X Section Area	Yield load	Breaking Load	Yield Stress	Ultimate Stress	Elongation	% Elongation	Remarks
	(inch)	(mm)	(mm <sup>2</sup> )	(kg)	(kg)	(MPa)	(MPa)	(in)		
1	1-1/2	26.40x3.10	81.84	3800	4700	455.50	563.38	0.40	20.00	
2	1-1/2	26.40x3.10	81.84	3600	4400	431.52	527.42	0.40	20.00	
3	3	26.30x5.30	139.39	6300	8400	443.38	591.18	0.40	20.00	
4	3	26.30x5.40	142.02	6900	8600	476.62	594.04	0.40	20.00	
5	4	26.40x5.50	145.20	6200	7300	418.88	493.20	0.40	20.00	
6	4	26.40x5.60	147.84	6300	7300	418.04	484.40	0.40	20.00	
-	-	-	-	-	-	-	-	-	-	
<b>Only Six Samples for Tensile Test</b>										
<b>Bend Test</b>										

**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](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,  
Engineer's Representative  
NESPAK  
Construction of Pakistan Kidney & Liver Institute and Research Center, Lahore Hospital  
Package C-I, Phase – I

Reference # CED/TFL **33627** (Dr. Waseem Abbas)

Dated: 24-07-2019

Reference of the request letter # 3836/13/AA/10/C-1-MEP-FF-MTR-49

Dated: 16-07-2019

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

Date of Test 30-07-2019

Gauge length -----

Description MS Seamless Pipe Weight and Size Test

Sr. No.	Designation	Weight	Length	Weight per Unit Length	External Diameter	Internal Diameter	Thickness	Remark
	(inch)	(g)	(cm)	(kg/m)	(mm)	(mm)	(mm)	
1	1	768	30.20	2.54	33.40	26.40	3.50	
2	1-1/2	1063	30.20	3.52	48.80	42.40	3.20	
3	2	1499	30.10	4.98	60.40	53.60	3.40	
4	2- 1/2	2668	30.20	8.83	72.60	61.40	5.60	
5	3	3330	30.30	10.99	89.40	78.20	5.60	
6	4	4678	29.80	15.70	110.43	98.23	6.10	
7	6	8100	29.40	27.55	160.84	146.84	7.00	
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	

**Only Six 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](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/07/33632

Dated: 25-07-19

**To**  
**Resident Engineer**  
**ABM Engineers**  
**Nizampur-Khohat Road**

**Subject: - TEST RESULT REPORT FOR BEARING DEVICE (PAD)**

Reference to your letter no. ABM/RE/NKR/19/501, Dated: 23/07/2019 on the above mentioned subject. One Elastomeric Bearing Rubber Pad (EBRP) has been received by us. The same was tested and results are given below.

**Test Results**

<b>No. of Steel Plate</b>	<b>:</b>	<b>4</b>
<b>Thickness of Steel Plate</b>	<b>:</b>	<b>2.45 mm (Average)</b>
<b>Thickness of Rubber between Steel Plates</b>	<b>:</b>	<b>Non Uniform</b> <b>(Max : 10.10 mm)</b> <b>(Min : 5.10 mm)</b>
<b>Cover of Rubber to top steel plate</b>	<b>:</b>	<b>11.60 mm</b>
<b>Cover of Rubber to bottom steel plate</b>	<b>:</b>	<b>8.70 mm</b>

**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](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, Package-1  
 NESPAK  
 Construction/ Improvement & Rehabilitation of at Grade Works along Lahore Orange Line  
 Metro Train Corridor Construction Package-1 Widdening of Bridge at Sukh Nehar G.T Road,  
 Lahore  
 Reference # CED/TFL **33637** (Dr. Waseem Abbas) Dated: 26-07-2019  
 Reference of the request letter # 4042/13/FAM/steel-071 Dated: 22-07-2019

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

Date of Test 29-07-2019  
 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 <sup>2</sup> )		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	4100	5100	82200	79860	102200	99400	0.90	11.3	Frontier Foundry
2	0.381	3	0.378	0.11	0.112	4200	5200	84200	82660	104200	102400	0.80	10.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile and one sample for bend test</b>														
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](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, Package-1  
 NESPAK  
 Construction/ Improvement & Rehabilitation of at Grade Works along Lahore Orange Line  
 Metro Train Corridor Construction Package-1 Widdening of Bridge at Sukh Nehar G.T Road,  
 Lahore  
 Reference # CED/TFL **33637** (Dr. Waseem Abbas) Dated: 26-07-2019  
 Reference of the request letter # 4042/13/FAM/steel-075 Dated: 22-07-2019

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

Date of Test 29-07-2019  
 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 <sup>2</sup> )		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	5.319	11	1.411	1.56	1.563	44600	66200	63100	62880	93600	93400	1.60	20.0	Frontier Foundry
2	5.319	11	1.411	1.56	1.563	45600	66800	64500	64290	94400	94200	1.50	18.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile and one sample for bend test</b>														
Bend Test														
#11 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](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/Team Leader  
 Prime Engineering Consultancy  
 Kallurkot Bridge Project  
 Construction of 4 Lane Bridge over River Indus Connecting Kallur Kot with D.I Khan  
 (Nomee Steel)  
 Reference # CED/TFL **33638** (Dr. Waseem Abbas) Dated: 29-07-2019  
 Reference of the request letter # KK-DIK—BR-PJ/2019/035 Dated: 24-07-2019

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

Date of Test 30-07-2019  
 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 <sup>2</sup> )		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	4.268	32	32.10	1.25	1.254	39600	53800	69842	69580	94886	94600	1.50	18.8	
2	4.257	32	32.06	1.25	1.251	38600	53400	68078	67990	94181	94100	1.60	20.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile and two samples for bend test</b>														
Bend Test														
32mm 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  
[http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing\\_reports](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  
 Buildings Sub Division  
 Essa Khel  
 (Re-Construction of Dilapidated Building and Examination Hall at Govt. Girls High School Essa Khel Tehsil Essa Khel District Mianwali)  
 Reference # CED/TFL **33639** (Dr. Waseem Abbas)      Dated: 29-07-2019  
 Reference of the request letter # 152      Dated: 12-06-2019

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

Date of Test                      30-07-2019  
 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 <sup>2</sup> )		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	0.386	3/8	0.380	0.11	0.113	2400	3500	48100	46630	70200	68100	1.50	18.8	
2	0.382	3/8	0.378	0.11	0.112	4200	6000	84200	82490	120300	117900	1.10	13.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile and one sample for bend test</b>														
<b>Bend Test</b>														
3/8" 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  
[http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing\\_reports](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,  
 GM  
 Professional Construction Services (Pvt) Ltd  
 Swimming Pool of SICAS School Building Johar Town Lahore

Reference # CED/TFL **33641** (Dr. Waseem Abbas)  
 Reference of the request letter # PCS/19Eng-50

Dated: 29-07-2019  
 Dated: 29-07-2019

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

Date of Test 30-07-2019  
 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 <sup>2</sup> )		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	4.381	10	1.280	1.27	1.288	56000	66400	97200	95860	115300	113700	1.40	17.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only one sample for tensile and one sample for bend test</b>														
Bend Test														
#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](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/07/33644

Dated: 29-07-19

To  
Lahore RCC Pipe Factory  
Lahore

Subject: - CALIBRATION OF PRESSURE GAUGE (MARK: TFL/07/33644)

Reference to your Letter No. Nil, Dated: 29/07/2019 on the subject cited above. One Pressure Gauge as received by us has been calibrated. The results are tabulated as under:

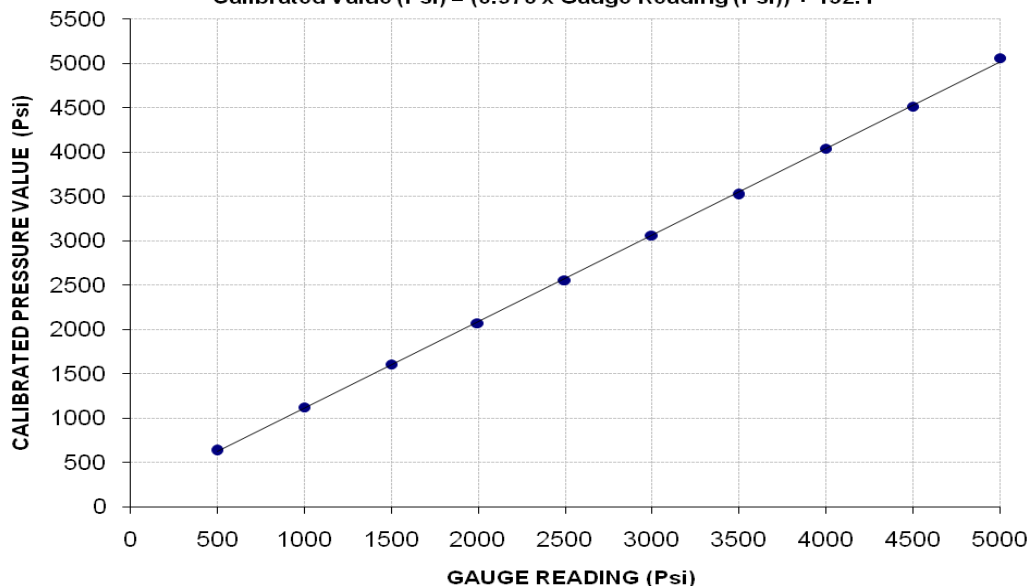
**Total Range : Zero - 6000 (Psi)**  
**Calibrated Range : Zero - 5000 (Psi)**

Pressure Gauge Reading (Psi)	500	1000	1500	2000	2500	3000	3500	4000	4500	5000
Calibrated Load (kg)	8800	15600	22400	28800	35600	42600	49000	56200	62800	70400
Calibrated Pressure (Psi)	632.13	1120.60	1609.07	2068.80	2557.27	3060.10	3519.83	4037.03	4511.13	5057.07

The Ram Area use for Calibration = 198 cm<sup>2</sup>

**Calibration Curve for Pressure Gauge**

Calibrated Value (Psi) = (0.976 × Gauge Reading (Psi)) + 132.1



**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](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, Package-1  
 NESPAK  
 Construction/ Improvement & Rehabilitation of at Grade Works along Lahore Orange Line  
 Metro Train Corridor Package-1 (Section-II) Shalimar Station to Coop Store (Right Side)

Reference # CED/TFL **33645** (Dr. Waseem Abbas)  
 Reference of the request letter # 4042/13/FAM/steel-059

Dated: 29-07-2019  
 Dated: 17-07-2019

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

Date of Test 30-07-2019  
 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 <sup>2</sup> )		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	0.414	3	0.394	0.11	0.122	4200	5400	84200	75980	108200	97700	1.20	15.0	Mughal
2	0.415	3	0.394	0.11	0.122	4200	5300	84200	75860	106200	95800	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile and one sample for bend test</b>														
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](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,  
 PMCS Manager  
 MAK Associates  
 Golfers Lounge Project at PAF Skyview Golf and Country Club, Bedian Road, Lahore

Reference # CED/TFL **33646** (Dr. Waseem Abbas)  
 Reference of the request letter # MAK/PAF/SV-GL/TB-021

Dated: 29-07-2019  
 Dated: 27-07-2019

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

Date of Test 30-07-2019  
 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 <sup>2</sup> )		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	0.378	3	0.376	0.11	0.111	2700	4000	54100	53630	80200	79500	1.70	21.3	
2	0.382	3	0.378	0.11	0.112	2600	3900	52100	51090	78200	76700	1.70	21.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile and one sample for bend test</b>														
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](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