



**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/11/34129

Dated: 05-11-19

Dated of Test: 12-11-19

To  
**M/s PLE International**  
**Lahore**

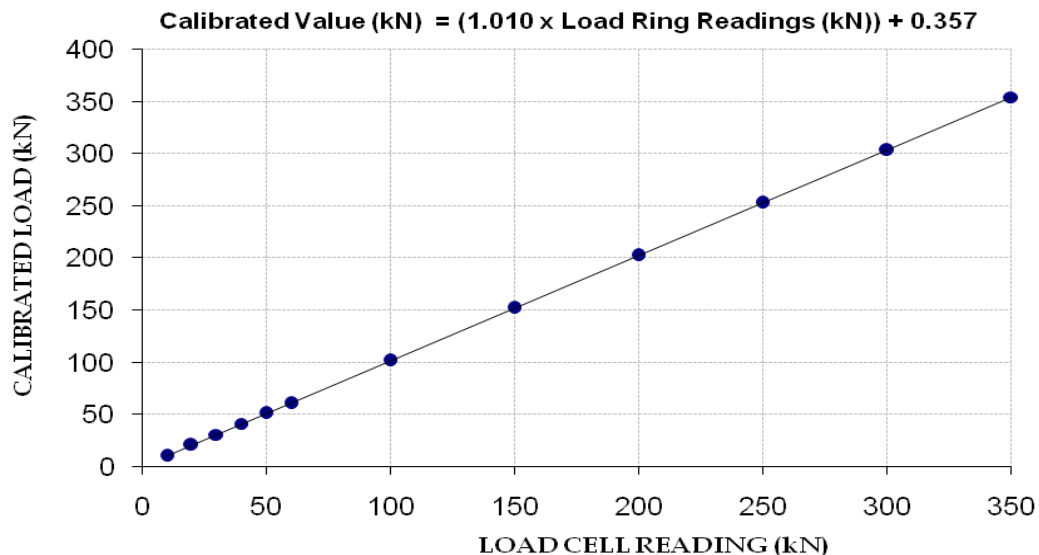
Subject: - **CALIBRATION OF LOAD CELL (MARK: TFL/11/34129)** (Page -2/2)

Reference to your Letter No. Nil, dated: 02/05/2017, on the subject cited above. One Load Cell (40 Ton Sr. No. 12005017) as received by us has been calibrated on standard calibration device. The results are tabulated as under:

**Total Range : Zero - 392 (kN)**  
**Calibrated Range : Zero - 350 (kN)**

Load Cell Reading (kN)	10	20	30	40	50	60	100	150	200	250	300	350
Calibrated Load (kN)	10.25	20.50	30.75	41.00	51.00	60.75	101.50	152.00	202.50	253.00	303.50	354.00

**Calibration Curve for Load Cell**



**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)
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**Department of Civil Engineering**  
**University of Engineering and Technology Lahore, 54890**  
**Pakistan. Ph: 92-42-99029202**

Ref: CED/TFL/11/34131

Dated: 05-11-19

Dated of Test: 12-11-19

To  
M/s PLE International  
Lahore

Subject: - **CALIBRATION OF PROVING RING (MARK: TFL/11/34131)** (Page -1/2)

Reference to your Letter No. Nil, dated: 05/11/2019, on the subject cited above. One Proving Ring, (50kN Sr. No. 5694 – L.C 0.001 mm) as received by us has been calibrated on standard calibration device. The results are tabulated as under:

**Total Range : Zero - 10000**  
**Calibrated Range : Zero - 2400**

Proving Ring Reading	Calibrated Load (kN)
100	2.00
200	4.00
300	6.00
400	7.70
500	9.70
600	11.50
700	13.50
800	15.55
900	17.50
1000	19.50
1200	23.50
1400	27.60
1600	31.50
1800	35.20
2000	39.35
2400	47.00

**I/C Testing Laboratoires**  
**UET Lahore, Pakistan.**

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Ref: CED/TFL/11/34131

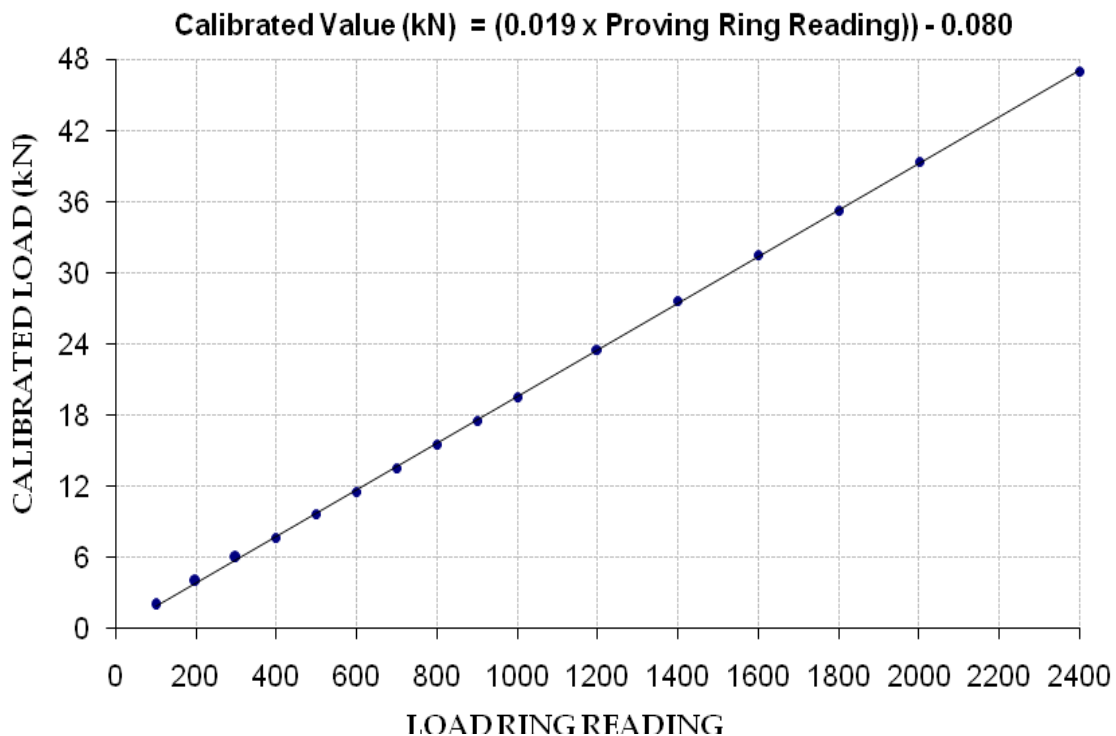
Dated: 05-11-19

Dated of Test: 12-11-19

To  
M/s PLE International  
Lahore

Subject: - CALIBRATION OF PROVING RING (MARK: TFL/11/34131) (Page -2/2)

### Calibration Curve for Proving Ring



**I/C Testing Laboratoires**  
**UET Lahore, Pakistan.**

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To,  
 Resident Engineer  
 Peas Consulting (Pvt) Ltd  
 NA's (North-Zone) Project  
 Construction of Bridge at km (26+068) on (N-125)

Reference # CED/TFL **34150** (Dr. Ali Ahmed) Dated: 08-11-2019  
 Reference of the request letter # RE/PEAS/NHA/BR-REH/N-125/2017/046 Dated: 07-11-2019

**Tension Test Report** (Page – 1/3)

Date of Test 12-11-2019  
 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	777.0	18100	177.56	19600	192.28	198	>3.50	20823
2	12.70 (1/2")	775.0	779.0	18600	182.47	19700	193.26	199	>3.50	20825
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
<b>Only two samples for Test</b>										

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:

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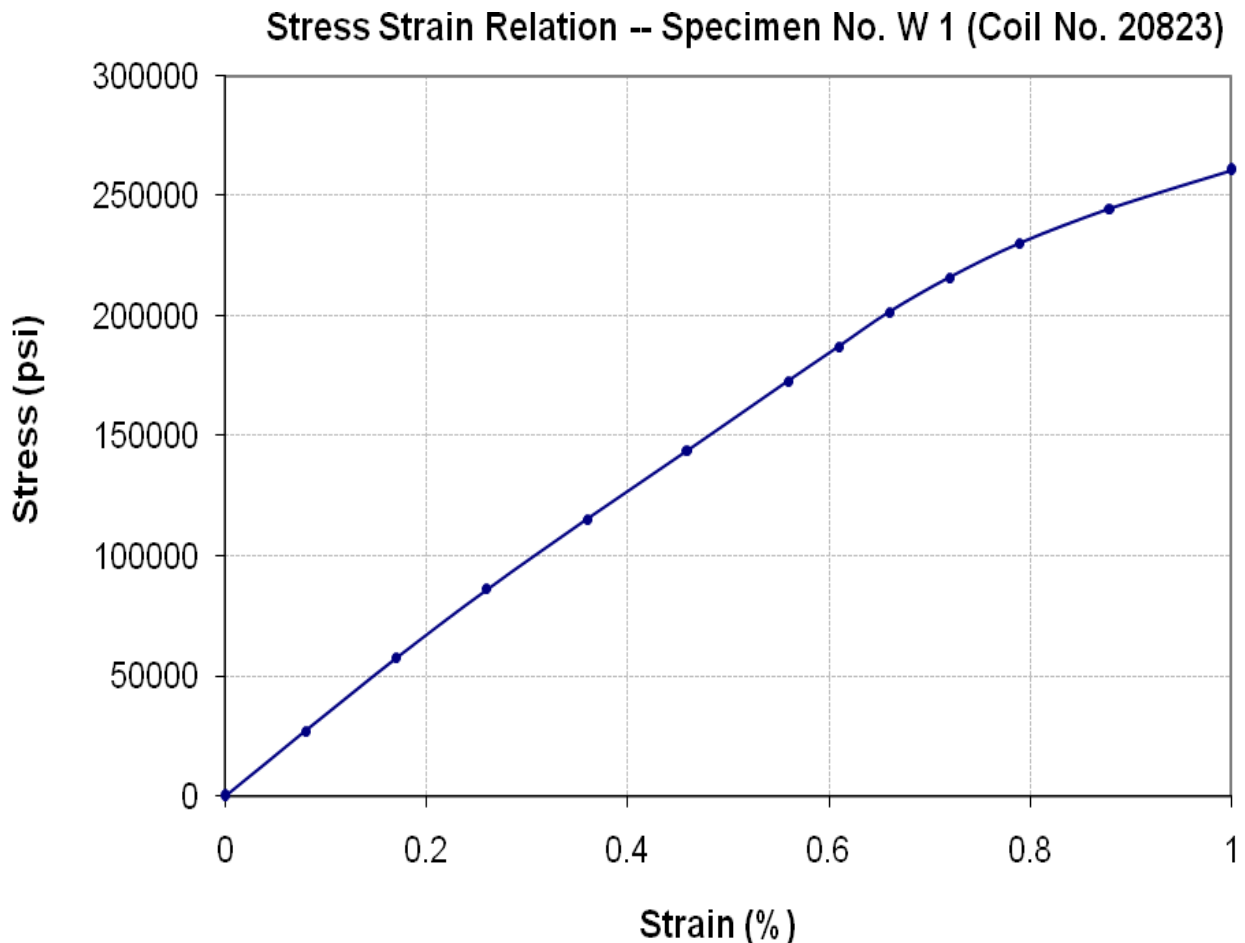
To,  
Resident Engineer  
Peas Consulting (Pvt) Ltd  
NA's (North-Zone) Project  
Construction of Bridge at km (26+068) on (N-125)

Reference # CED/TFL **34150** (Dr. Ali Ahmed)

Dated: 08-11-2019

Reference of the request letter # RE/PEAS/NHA/BR-REH/N-125/2017/046 Dated: 07-11-2019

**Graph** (Page – 2/3)



**I/C Testing Laboratories**  
**UET Lahore, Pakistan.**

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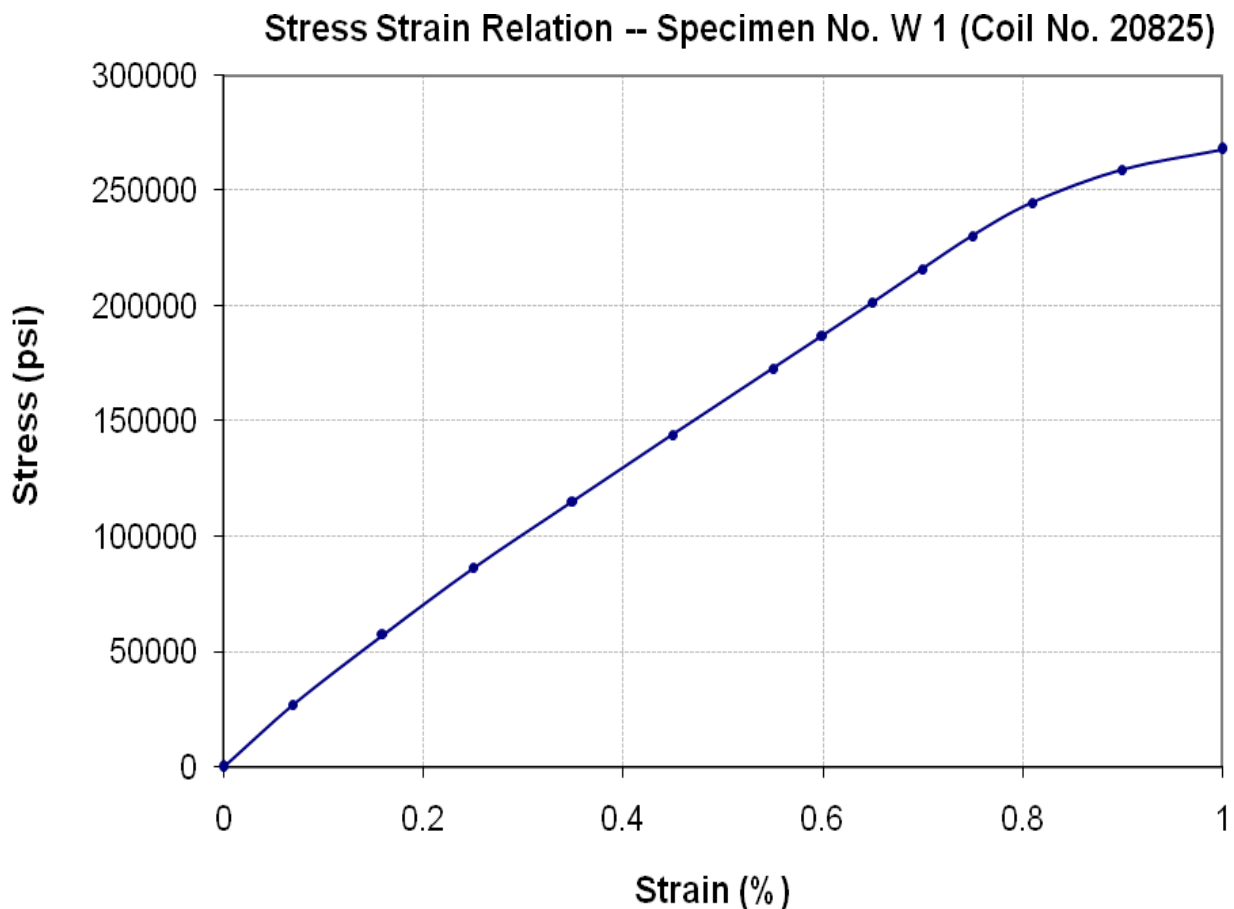
To,  
Resident Engineer  
Peas Consulting (Pvt) Ltd  
NA's (North-Zone) Project  
Construction of Bridge at km (26+068) on (N-125)

Reference # CED/TFL **34150** (Dr. Ali Ahmed)

Dated: 08-11-2019

Reference of the request letter # RE/PEAS/NHA/BR-REH/N-125/2017/046 Dated: 07-11-2019

**Graph** (Page – 3/3)



**I/C Testing Laboratories**  
**UET Lahore, Pakistan.**

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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,  
 Chief Resident Engineer, Package-1  
 NESPAK  
 Construction/Improvement & Rehabilitation of at Grade Works along Lahore Orange Line Metro  
 Train Corridor Package-I Widening of Bridge at Sukh Nehar G.T. Road Lahore (WMI)

Reference # CED/TFL **34153** (Dr. Ali Ahmed)  
 Reference of the request letter # 4042/FAM/S.Wire-145

Dated: 08-11-2019  
 Dated: 30-10-2019

**Tension Test Report** (Page – 1/2)

Date of Test 12-11-2019  
 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	779.0	18000	176.58	19200	188.35	199	>3.50	20749
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
<b>Only one sample for Test</b>										

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  
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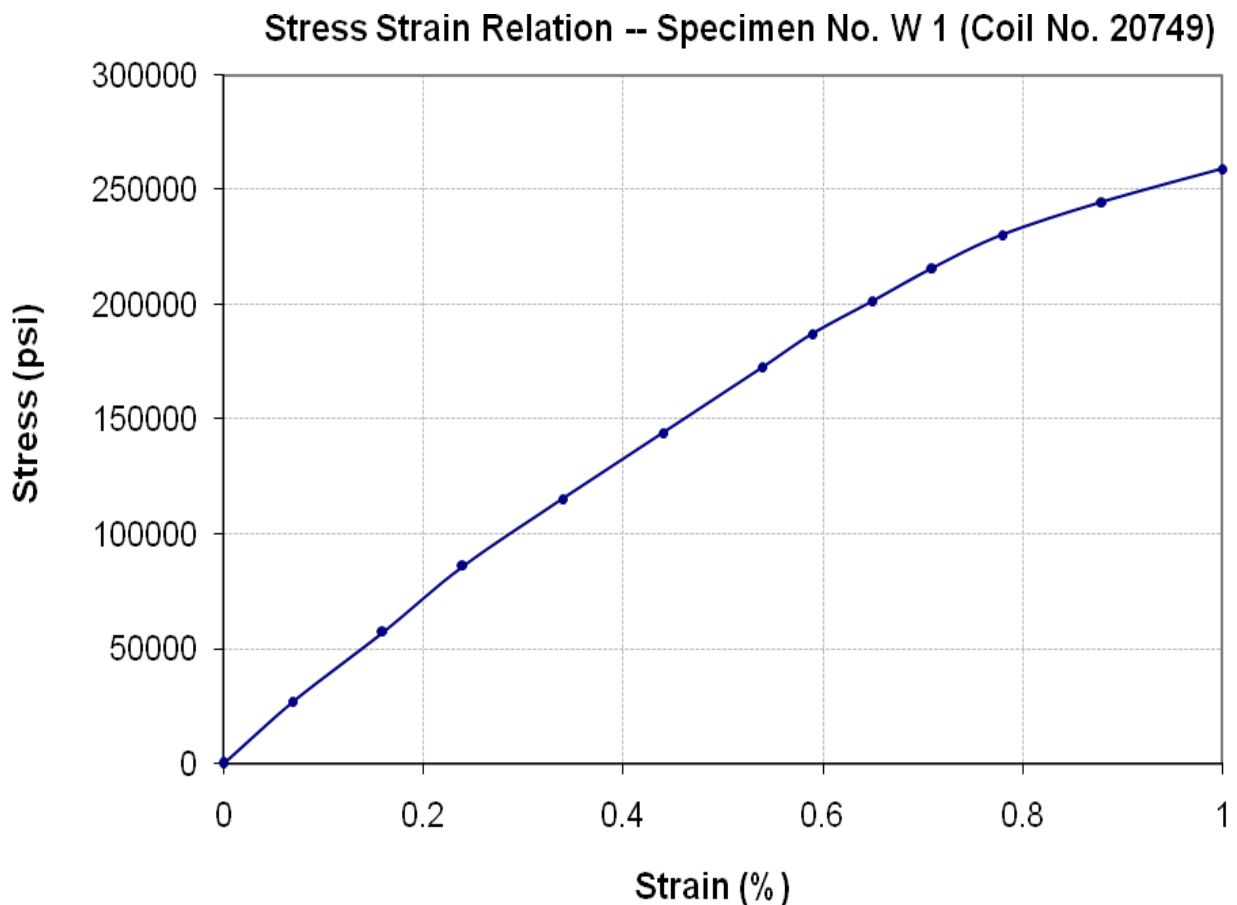
To,  
Chief Resident Engineer, Package-1  
NESPAK  
Construction/Improvement & Rehabilitation of at Grade Works along Lahore Orange Line Metro  
Train Corridor Package-I Widening of Bridge at Sukh Nehar G.T. Road Lahore (WMI)

Reference # CED/TFL **34153** (Dr. Ali Ahmed)  
Reference of the request letter # 4042/FAM/S.Wire-145

Dated: 08-11-2019

Dated: 30-10-2019

**Graph** (Page – 2/2)



**I/C Testing Laboratories**  
**UET Lahore, Pakistan.**

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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,  
 Sub Divisional Officer  
 Highway Sub Division  
 Sahiwal  
 (Construction of Flyover at Jhall Road Railway Crossing to Sahiwal City)

Reference # CED/TFL **34158** (Dr. Ali Ahmed)  
 Reference of the request letter # 165/SDO

Dated: 11-11-2019  
 Dated: 04-11-2019

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

Date of Test 12-11-2019  
 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	0.391	3	0.383	0.11	0.115	3300	5000	66200	63240	100200	95900	1.20	15.0	
2	0.389	3	0.382	0.11	0.114	3300	5000	66200	63570	100200	96400	1.00	12.5	
3	3.654	1 <sup>1</sup> / <sub>4</sub>	1.169	1.27	1.074	30200	49400	52500	61980	85800	101400	1.40	17.5	
4	3.677	1 <sup>1</sup> / <sub>4</sub>	1.173	1.27	1.081	29600	49600	51400	60370	86100	101200	1.40	17.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only four samples for tensile and two samples for bend test</b>														
Bend Test														
3/8" Dia Bar Bend Test Through 180° is Satisfactory														
1 <sup>1</sup> / <sub>4</sub> " Dia Bar Bend Test Through 180° is Satisfactory														

**I/C Testing Laboratories**  
**UET Lahore, Pakistan.**

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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/11/34160

Dated: 11-11-19

Dated of Test: 12-11-19

To  
Chief Cantonment Engineer  
Walton Cantt Lahore  
(Covering of Nullah at Nishat Colony)

Subject: **TESTING OF RCC SLAB**

Reference to your letter No. WC/CCE/13849, dated 28.10.2019 on the subject cited above. One RCC Slab as received by us has been tested in Flexure (Two point loading). The results are tabulated as under.

Sr. No.	Load Carried in Third Point Flexure Test 'P'	
	Proof Load (kN)	Ultimate Load (kN)
1	4.50	10.20

**I/C Testing Laboratories**  
**UET Lahore, Pakistan.**

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**Test Floor Laboratory**  
**Department of Civil Engineering**  
**University of Engineering and Technology Lahore, 54890**  
**Pakistan. Ph: 92-42-99029202**

To,  
M/S M.R. Electric Concern (Pvt) Ltd  
Lahore

Reference # CED/TFL **34161** (Dr. Ali Ahmed)  
Reference of the request letter # MREC/080/2019

Dated: 11-11-2019

Dated: 11-11-2019

**Tension Test Report** (Page – 1/1)

Date of Test 12-11-2019  
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 / Coil No.
	(mm)	(kg/km)	(kg/km)	(kg)	(kN)	(kg)	(kN)		
1	11.11 (7/16")	582.0	586	13000	127.53	14300	140.28	>3.50	xx
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
Only one sample for Test									

**I/C Testing Laboratoires**  
**UET Lahore, Pakistan.**

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**Test Floor Laboratory**  
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**University of Engineering and Technology Lahore, 54890**  
**Pakistan. Ph: 92-42-99029202**

To,  
 GE, General Manager  
 Guarantee Engineers (Pvt) Ltd  
 Nishat Bhikhi, Sheikhpura

Reference # CED/TFL **34162** (Dr. Ali Ahmed)  
 Reference of the request letter # Nil

Dated: 11-11-2019  
 Dated: 06-11-2019

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

Date of Test 12-11-2019  
 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	0.422	3/8	0.397	0.11	0.124	4300	5500	86200	76470	110200	97900	1.10	13.8	
2	0.426	3/8	0.400	0.11	0.125	4400	5600	88200	77370	112300	98500	1.10	13.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile and one sample for bend test</b>														
Bend Test														
3/8" Dia Bar Bend Test Through 180° is Satisfactory														

**I/C Testing Laboratoires**  
**UET Lahore, Pakistan.**

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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,  
M/S Riaz Construction Company  
Lahore  
(TCF Primery School, Narowal)

Reference # CED/TFL **34163** (Dr. Ali Ahmed)  
Reference of the request letter # Nil

Dated: 11-11-2019  
Dated: 11-11-2019

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

Date of Test 12-11-2019  
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	0.375	3	0.375	0.11	0.110	3500	5600	70200	69980	112300	112000	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only one sample 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.**

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

To,  
 Resident Engineer  
 Al-Imam Enterprises (Pvt) Ltd  
 Construction of Penta Square, Phase-V, D.H.A, Lahore  
 (Kamran Steel)

Reference # CED/TFL **34164** (Dr. Ali Ahmed)  
 Reference of the request letter # Al-Imam/746/PS-1/DHA/LHE/979

Dated: 11-11-2019  
 Dated: 31-10-2019

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

Date of Test 12-11-2019  
 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	0.398	10	9.80	0.12	0.117	3400	5000	62464	64130	91858	94300	1.40	17.5	
2	0.399	10	9.81	0.12	0.117	3400	5100	62464	63950	93696	96000	1.50	18.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile and one sample for bend test</b>														
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  
[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  
 Al-Imam Enterprises (Pvt) Ltd  
 Construction of Penta Square, Phase-V, D.H.A, Lahore  
 (FF Steel)

Reference # CED/TFL **34164** (Dr. Ali Ahmed)  
 Reference of the request letter # Al-Imam/746/PS-1/DHA/LHE/994

Dated: 11-11-2019  
 Dated: 05-11-2019

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

Date of Test 12-11-2019  
 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	4.135	32	31.60	1.25	1.216	38800	54800	68431	70360	96650	99400	1.40	17.5	
2	4.213	32	31.89	1.25	1.238	39000	53800	68784	69420	94886	95800	1.40	17.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile and one sample for bend test</b>														
Bend Test														
32mm Dia Bar Bend Test Through 180° is Satisfactory														

**I/C Testing Laboratoires**  
**UET Lahore, Pakistan.**

Note:

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2. The above results pertain to sample /samples supplied to this laboratory.
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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,  
 Additional Director Development  
 DHA Phase-XI (Rahbar)  
 Construction of DHA Girls School at Block- 'B' Sector-I, DHA Phase-XI (Rahbar)

Reference # CED/TFL **34166** (Dr. Ali Ahmed) Dated: 12-11-2019  
 Reference of the request letter # 700/3/Girls School/Ph-XI/Projs/3200 Dated: 11-11-2019

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

Date of Test 12-11-2019  
 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	0.383	3/8	0.378	0.11	0.113	3400	5400	68200	66610	108200	105800	1.20	15.0	Ittefaq Steel
2	0.382	3/8	0.378	0.11	0.112	3500	5400	70200	68790	108200	106200	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	

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

**Bend Test**

3/8" Dia Bar Bend Test Through 180° is Satisfactory

**I/C Testing Laboratoires**  
**UET Lahore, Pakistan.**

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