



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
 SMEC International Pty Ltd
 Peshawar–Karachi Motorway (PKM) Consultants Sukkur – Multan Section (392 km) (Section-6)

Reference # CED/TFL **32589** (Dr. Umbreen)
 Reference of the request letter # 5065057/6/6/407

Dated: 25-02-2019
 Dated: 23-02-2019

Tension Test Report (Page – 1/2)

Date of Test 08-03-2019
 Gauge length 2 inches
 Description Cast Iron Grating Cover Strip Tensile Test

Sr. No.	Designation	Size of Strip	X Section Area	Yield load	Breaking Load	Yield Stress	Ultimate Stress	Elongation	% Elongation	Remarks
	-----	(mm)	(mm ²)	(kN)	(kN)	(MPa)	(MPa)	(in)		
1	Grating Cover	12.60x9.20	115.92	-----	12.00	-----	103.52	0.10	5.00	
.	
.	
.	
.	
.	
.	
Only One Sample for Tensile Test										
Bend Test										

I/C Testing Laboratories
UET Lahore, Pakistan.

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Reference # CED/TFL **32589** (Dr. Umbreen)
Reference of the request letter # 5065057/6/6/407

Dated: 25-02-2019
Dated: 23-02-2019

Size Test Report (Page – 2/2)
Date of Test 08-02-2019
Gauge length -----
Description Cast Iron Grating Cover Size Test

Sr. No.	Designation	Diameter	Thickness	Remark
		(mm)	(mm)	
1	Grating Cover	171.60	28.50	
-	-		-	
-	-		-	
-	-		-	
-	-		-	
-	-		-	
-	-		-	
-	-		-	
-	-		-	
Only One Sample for Test				

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Ref: CED/TFL/03/32769

Dated: 06-03-2019

To,
M/S Amin Brothers Engineering Pak (Pvt) Ltd
Gulberg-III, Lahore

Subject: - CALIBRATION OF DYNAMOMETER (MARK: TFL/03/32769)

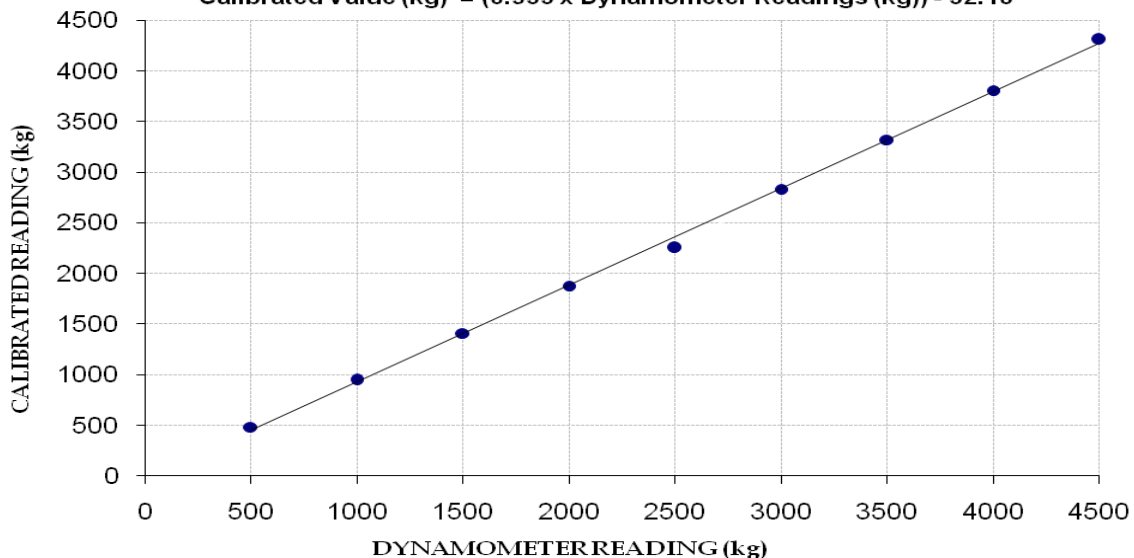
Ref: Your letter No. Amin/UET/06/19, dated: 31/01/2019 on the subject cited above.
One Dynamometer as received by us has been calibrated. The results are tabulated as under:

Total Range : Zero - 5000 (kg)
Calibrated Range : Zero - 4500 (kg)

Dynamometer Readings (kg)	500	1000	1500	2000	2500	3000	3500	4000	4500
Calibrated Readings (kN)	4.70	9.25	13.80	18.43	22.06	27.77	32.54	37.35	42.25
Calibrated Readings (kg)	479	943	1407	1878	2249	2831	3317	3807	4307

Calibration Curve for Dynamometer

Calibrated Value (kg) = (0.955 × Dynamometer Readings (kg)) - 32.16



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To,
M/S Defence Housing Authority.
Lahore Cantt
(Infra Dev Works of Ph-IX (Pkg-II, III & IV) DHA Lahore (M/s NLC))

Reference # CED/TFL **32785** (Dr. Umbreen) Dated: 07-03-2019
Reference of the request letter # 408/241/E/Lab/471/14678 Dated: 06-03-2019

Tension Test Report (Page -1/2)

Date of Test 08-03-2019
Gauge length -----
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A496

Sr. No.	Weight (Kg/m)	Diameter/ size		Area (mm ²)		Yield load (kg)	Breaking Load (kg)	Yield Stress (Mpa)		Ultimate Stress (Mpa)		Elongation (mm)	% Elongation	Remarks
		Nominal (#)	Actual (mm)	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.172	1.25	5.29	19.35	21.96	1000	1700	507	447	862	759	----	----	
2	0.165	1.25	5.18	19.35	21.06	1000	1800	507	466	913	839	----	----	
3	0.269	2	6.60	32.26	34.25	1100	2000	335	315	608	573	----	----	
4	0.261	2	6.50	32.26	33.20	1300	2000	395	384	608	591	----	----	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Note: only four samples for tensile and two samples for bend test

Bend Test

#1.25 Bar Bend Test Through 180° is Satisfactory

#2 Bar Bend Test Through 180° is Satisfactory

I/C Testing Laboratoires
UET Lahore, Pakistan.

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To,
M/S Defence Housing Authority.
Lahore Cantt
(Infra Dev Works of Ph-IX (Pkg-II, III & IV) DHA Lahore (M/s NLC))

Reference # CED/TFL **32785** (Dr. Umbreen)

Dated: 07-03-2019

Reference of the request letter # 408/241/E/Lab/471/14678

Dated: 06-03-2019

Tension Test Report (Page -1/1)

Date of Test 08-03-2019

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	0.360	3	0.367	0.11	0.106	2900	4400	58200	60440	88200	91700	1.20	15.0	Ajmal Steel
2	0.338	3	0.356	0.11	0.099	2700	4600	54100	59890	92200	102100	0.90	11.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														

I/C Testing Laboratoires
UET Lahore, Pakistan.

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Ref: CED/TFL/03/32793

Dated: 07-03-17

To,
DCRE/RE-1
Zeeruk International (Pvt) Ltd
Lahore Sialkot Motorway Project

Subject: - CALIBRATION OF STRESSING JACK WITH GAUGE (MARK: TFL/03/32781)

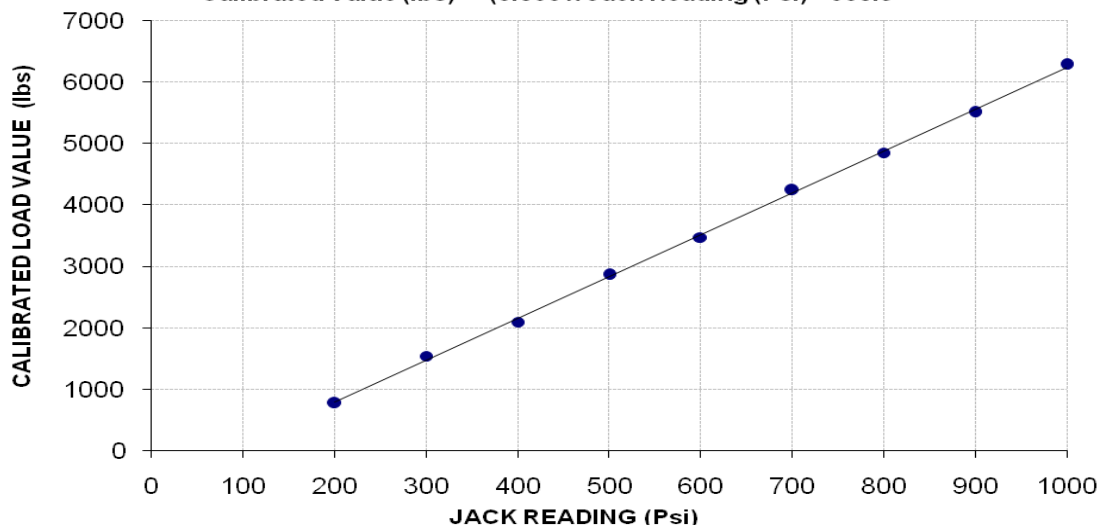
Reference to your Letter No. LSMP/RE-1/2019/684, dated: 07/03/2019 on the subject cited above. One Stressing Jack with Gauge as received by us has been calibrated. The results are tabulated as under:

Total Range : Zero - 3500 (Psi)
Calibrated Range : Zero - 1000 (Psi)

Jack Reading (Psi)	200	300	400	500	600	700	800	900	1000	
Calibrated Load	(kg)	350	700	950	1300	1575	1925	2200	2500	2850
	(lbs)	772	1543	2094	2866	3472	4244	4850	5512	6283

CALIBRATION FOR STRESSING JACK WITH GAUGE

Calibrated Value (lbs) = (6.806 x Jack Reading (Psi) - 568.9)



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To,
 Quality Manager
 Typsa-Asian Jv
 Passenger Terminal Expansion Project at Allama Iqbal International Airport (AIIAP), Lahore –
 Access Roads Package (Mughal Steel)

Reference # CED/TFL **32797** (Dr. Umbreen)

Dated: 08-03-2019

Reference of the request letter # TYPsa-PK-2271-19

Dated: 08-03-2019

Tension Test Report (Page -1/1)

Date of Test 08-03-2019

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	0.374	3	0.374	0.11	0.110	4000	5300	80200	80290	106200	106400	0.90	11.3	
2	0.371	3	0.373	0.11	0.109	4100	5300	82200	82840	106200	107100	0.90	11.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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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