



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/11/34231

Dated: 29-11-19

Dated of Test: 03-12-2019

To
Project Manager
Deepwell Corporation (Pvt) Ltd
Sky Residence Lahore

Subject: - CALIBRATION OF PRESSURE GAUGE (MARK: TFL/11/34231) (Page # 1/2)

Reference to your Letter No. Nil, dated: 28/11/2019 on the subject cited above.
One Pressure Gauge No. NKS(NAGANO) as received by us has been calibrated. The results are tabulated as under:

Total Range : Zero - 10000 (Psi)
Calibrated Range : Zero - 5000 (Psi)

Pressure Gauge Reading (Psi)	Calibrated Load (kg)	Calibrated Pressure (Psi)
250	4400	316.07
500	7900	567.48
750	11500	826.08
1000	15200	1091.87
1250	18300	1314.55
1500	21600	1551.60
1750	25100	1803.02
2000	28800	2068.80
2250	32000	2298.67
2500	35600	2557.27

Pressure Gauge Reading (Psi)	Calibrated Load (kg)	Calibrated Pressure (Psi)
2750	39200	2815.87
3000	42800	3074.47
3250	46000	3304.33
3500	49400	3548.57
3750	52800	3792.80
4000	56400	4051.40
4250	59800	4295.63
4500	63200	4539.87
4750	66300	4762.55
5000	70000	5028.33

The Ram Area of Calibration = 198 cm²

I/C Testing Laboratoires
UET Lahore, Pakistan.

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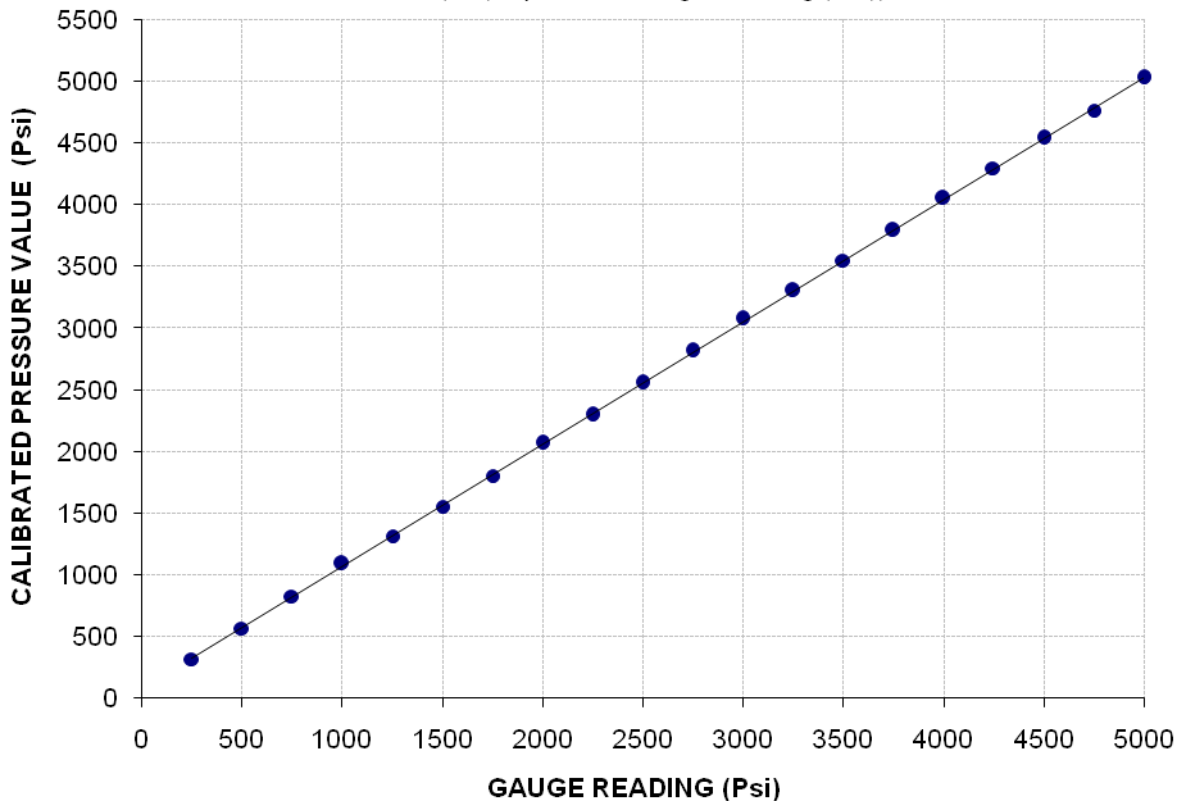
Dated of Test: 03-12-2019

To
Project Manager
Deepwell Corporation (Pvt) Ltd
Sky Residence Lahore

Subject: - CALIBRATION OF PRESSURE GAUGE (MARK: TFL/11/34231) (Page # 2/2)

Calibration Curve for Pressure Gauge

$$\text{Calibrated Value (Psi)} = (0.990 \times \text{Gauge Reading (Psi)}) + 79.43$$



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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 Construction of Steel Impact Gantries for Stations of Package-I

Reference # CED/TFL **34246** (Dr. Qasim Khan) Dated: 02-12-2019
 Reference of the request letter # 4042/13/FAM/Structural-Steel-140 Dated: 24-10-2019

Tension Test Report (Page – 1/1)

Date of Test 03-12-2019
 Gauge length 2 inches
 Description Steel Plate Steel Strip Tensile Test as per ASTM A-36

Sr. No.	Designation	Size of Strip	X Section Area	Yield load	Breaking Load	Yield Stress	Ultimate Stress	Elongation	% Elongation	Remarks
	(mm)	(mm)	(mm ²)	(kg)	(kg)	(MPa)	(MPa)	(in)		
1	12	27.50x12.00	330.00	10600	16200	315.11	481.58	0.70	35.00	
2		27.50x12.00	330.00	10800	16200	321.05	481.58	0.75	37.50	
3	24	27.60x24.10	665.16	19400	31900	286.12	470.47	0.90	45.00	
4		27.60x24.00	662.40	19200	31900	284.35	472.43	0.90	45.00	
-	40	27.50x39.00	1072.50	44200	64000	404.29	585.40	1.00	50.00	
-		27.50x39.00	1072.50	43800	63800	400.63	583.57	0.90	45.00	
Only Six Samples for Tensile Test										
Bend Test										

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To,
 Project Manager
 TAISEI CORPORATION
 Widening and Strengthening of National Highway N-70 (RakhiGajj-Bewata Section) 33.84 km
 of East West Road Improvement Project Package-1 (Sta.7+600 to Sta.19+500)

Reference # CED/TFL **34251** (Dr. Qasim Khan)
 Reference of the request letter # TC/OTH/GEN/04217

Dated: 02-12-2019
 Dated: 29-11-2019

Tension Test Report (Page – 1/1)

Date of Test 03-12-2019
 Gauge length 2 inches
 Description W-Section, Vertical Post and Spacer Strip Tensile Test
 as per AASHTOO A-180

Sr. No.	Designation	Size of Strip	X Section Area	Yield load	Breaking Load	Yield Stress	Ultimate Stress	Elongation	% Elongation	Remarks
1	W-Section	2.72x0.28	0.76	2700	3200	3545.17	4201.68	0.55	27.50	
2		2.72x0.28	0.76	2900	3500	3807.77	4595.59	0.40	20.00	
3	Post	2.77x0.50	1.39	5600	7000	4043.32	5054.15	0.60	30.00	
4		2.77x0.50	1.39	5600	7000	4043.32	5054.15	0.65	32.50	
-	Spacer	2.72x0.49	1.33	5100	6900	3826.53	5177.07	0.60	30.00	
-		2.72x0.49	1.33	5000	6900	3751.50	5177.07	0.60	30.00	
Only Six Samples for Tensile Test										
Bend Test										

Witness Test Report

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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 **34253** (Dr. M Rizwan Riaz) Dated: 03-12-2019
 Reference of the request letter # 700/3/Girls School/Ph-XI/Projs/3331 Dated: 02-12-2019

Tension Test Report (Page -1/1)

Date of Test 03-12-2019
 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 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	0.366	3/8	0.370	0.11	0.107	2500	3700	50100	51270	74200	75900	1.90	23.8	Agha Steel
2	0.374	3/8	0.374	0.11	0.110	2700	3800	54100	54180	76200	76300	1.70	21.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
3/8" Dia Bar Bend Test Through 180° is Satisfactory														

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To,
 Ahsan Raza (CEO)
 Swiss Consultants
 Quaid-e-Azam Industrial Estate, Lahore

Reference # CED/TFL **34254** (Dr. M Rizwan Riaz)
 Reference of the request letter # Nil

Dated: 03-12-2019
 Dated: 02-12-2019

Tension Test Report (Page -1/1)

Date of Test 03-12-2019
 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	0.382	3	0.378	0.11	0.112	4200	5200	84200	82440	104200	102100	0.90	11.3	
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Note: only one sample for tensile test														
Bend Test														

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