Test Performed by: Dr. Syed Asad Ali Gillani

Sohail Ahmad,
Building Standards Ltd. Lahore

Client Reference No.: BS/240829-039 Dated: 29-08-2024

SOM Lab Ref: CED/SOM/4707 (**Page 1/1**) Dated: 29-08-2024

Test Type: Calibration of Enerpac Gauge [Model GF-813P) with Load Cell

This is with reference to your above-mentioned letter. The calibration of Enerpac Gauge [Model GF-813P) with load cell No. AG LZM 10/50 PN 500 1991 0187 has been carried out and the results are given below.

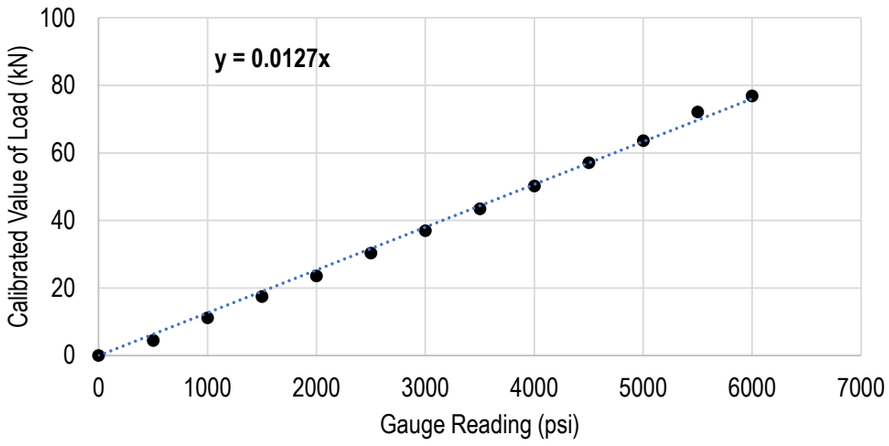
Calibration Result for Enerpac Gauge [Model GF-813P) with Load Cell

Gage Reading (psi)	0	500	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000
Calibrated Value, kN	0	4.5	11.2	17.5	23.6	30.35	37.0	43.45	50.2	57.1	63.6	72.1	76.85

Note: Ram area of the load cell = 3.1415 inch²

Calibration Curve for Enerpac Gauge [Model GF-813P) with Load Cell

Calibrated Value of Load (kN) = 0.0127 x Gauge Reading in psi



Test Performed by: Dr. S. Asad Ali Gillani

Khurram Ahmad
Project Manager
SD Steel Technologies Pvt. Ltd Lahore.

Client Reference No.: Nil Dated: Nil
SOM Lab Ref: CED/SOM/4708 (Page 1/4) Dated: 29-08-2024
Test Type: Tension Test
Sample Type: FRP Angle

Tension Test Results

Sr No.	Sample Type	Sample Size (Strip), mm	Ultimate Load (kN)	Ultimate Stress (MPa)
1	FRP Angle	12.0 x 4.90	14.0	238.09

Note: Please always confirm the results on web www.uet-civil.edu.pk

Test Performed by: Dr. S. Asad Ali Gillani

Khurram Ahmad

Project Manager
SD Steel Technologies Pvt. Ltd Lahore.

Client Reference No.: Nil Dated: Nil
SOM Lab Ref: CED/SOM/4708 (Page 2/4) Dated: 29-08-2024
Test Type: Load Test
Sample Type: FRP Sample (Refer to Figure-1)
Test Standard: Non-standard test [Supports and loading area as per client requirements, shown in Figure-1]

Load Test Results

Sr. No.	Sample Type	Ultimate Load (kN)
1	FRP Sample (Sample # 4), Figure -1	15.0

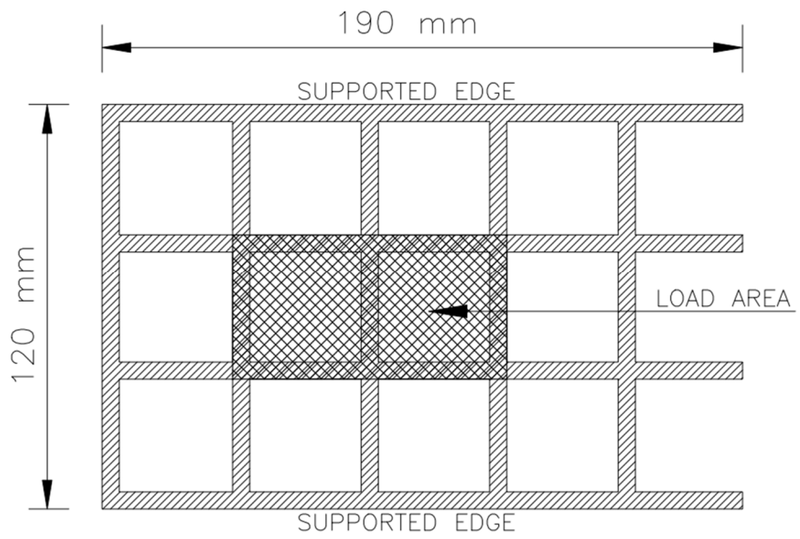


Figure 1: Sample # 4 [Strip thickness = 6.2 mm, square size (inner) = 32 x 32 mm]
Note: Please always confirm the results on web www.uet-civil.edu.pk

Test Performed by: Dr. S. Asad Ali Gillani

Khurram Ahmad
Project Manager
SD Steel Technologies Pvt. Ltd Lahore.

Client Reference No.: Nil Dated: Nil
SOM Lab Ref: CED/SOM/4708 (Page 3/4) Dated: 29-08-2024

Test Type: Load Test

Sample Type: FRP Sample (Refer to Figure-2)

Test Standard: Non-standard test [Supports and loading area as per client requirements, shown in Figure-2]

Load Test Results

Sr. No.	Sample Type	Ultimate Load (kN)
1	FRP Sample (Sample # 2), Figure -2	32.50

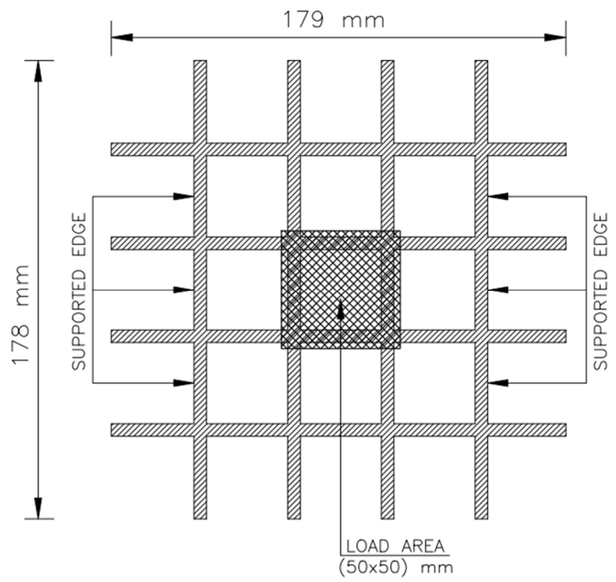


Figure 2: Sample # 2 [Strip thickness = 5.2 mm, square size (inner) = 32.2 x 32.2 mm]

Note: Please always confirm the results on web www.uet-civil.edu.pk

Test Performed by: Dr. S. Asad Ali Gillani

Khurram Ahmad
Project Manager
SD Steel Technologies Pvt. Ltd Lahore.

Client Reference No.: Nil Dated: Nil

SOM Lab Ref: CED/SOM/4708 (Page 4/4) Dated: 29-08-2024

Test Type: Load Test

Sample Type: FRP Sample (Refer to Figure-3)

Test Standard: Non-standard test [Supports and loading area as per client requirements, shown in Figure-3]

Load Test Results

Sr. No.	Sample Type	Ultimate Load (kN)
1	FRP Sample (Sample # 3), Figure -3	23.50

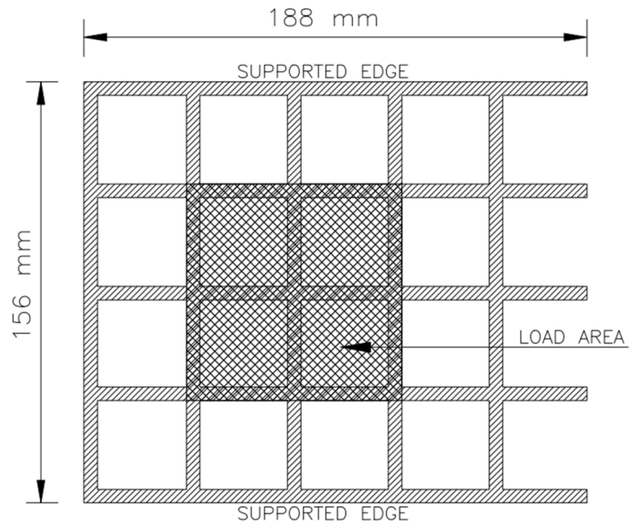


Figure 3: Sample # 3 [Strip thickness = 5.2 mm, square size (inner) = 32 x 32 mm]

Note: Please always confirm the results on web www.uet-civil.edu.pk

Muhammad Construction Company **Test Performed By:** **Dr. /Engr.** Nauman Khurram

Nathuwala Chak No.180R.B, Tehsil Shahkot.(Reliance Cotton Spinning Mill Ltd)

Client Reference: Nil **Dated:** 29-08-2024

SOM Lab Ref: CED/SOM/4704(Page-1/1) **Dated:** 29-08-2024

Test: Tension Test & Bend Test **Test Specification:** ASTM-A 615

Sample Type: Deformed Bar **Gauge Length:** 200 mm

S.No.	Weight	Dia.		Area		Yield Load	Ultimate Load	Yield Stress		Ult. Stress		Elongation	Gauge Length	%age Elongation	Remarks
		Nominal	Calculated	Nominal	Calculated			(according to nominal area)	(according to measured area)	(according to nominal area)	(according to measured area)				
	kg/m	mm	mm	mm^2	mm^2	kN	kN	MPa	MPa	MPa	MPa	mm	mm	%	
1	2.382	20	19.64	314	303	131.50	205.70	419	434	655	679	37.5	200	18.8	
2	2.384	20	19.66	314	304	131.00	203.50	417	432	648	671	37.5	200	18.8	
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BEND TEST:

20mm	Sample bend through 180 degrees Satisfactorily without any crack

Note:-

Only Three Samples Received and Tested

Note: Please always confirm the results of above report on web www.uet-civil.edu.pk

Prime Steel Re-Rolling Mills
Sheikhupura.

Test Performed By: **Dr. /Engr.** Nauman Khurram

Client Reference: Nil
Dated: 29-08-2024

SOM Lab Ref: 4705 (Page-1/1)
Dated: 29-08-2024

Test: Tension Test & Bend Test
Gauge Length: 8 inch

Test Specification: ASTM-A-615
Sample Type: Deformed Bar

S.No.	Weight	Dia.		Area		Yield Load	Ultimate Load	Yield Stress		Ult. Stress		Elongation	Gauge Length	%age Elongation	Remarks
		Nominal	Calculated	Nominal	Calculated			(according to nominal area)	(according to measured area)	(according to nominal area)	(according to measured area)				
	lb/ft	#	in	in^2	in^2	Tons	Tons	psi	psi	psi	psi	in	in	%	
1	0.667	4	0.500	0.20	0.196	5.78	8.63	63740	65040	95210	97150	1.30	8.0	16.3	
2	0.666	4	0.500	0.20	0.196	5.63	8.58	62050	63320	94650	96580	1.30	8.0	16.3	
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BEND TEST:

# 4	Sample bend through 180 degrees Satisfactorily without any crack

Note:-

Only Three Samples Received and Tested

Note: Please always confirm the results of above report on web www.uet-civil.edu.pk

Engr. Naveed Sadiq **Test Performed By:** **Dr. /Engr.** Asad Ali Gillani

RE Orbit Developers.Lahore.(The Springs Atrium,Gulberg Lahore)

Client Reference: Nil **SOM Lab Ref:** 4706 (Page-1/1)

Dated: 29-08-2024 **Dated:** 29-08-2024

Test: Tension Test & Bend Test **Test Specification:** ASTM-A-615

Gauge Length: 8 inch **Sample Type:** Deformed Bar

S.No.	Weight	Dia.		Area		Yield Load	Ultimate Load	Yield Stress		Ult. Stress		Elongation	Gauge Length	%age Elongation	Remarks
		Nominal	Calculated	Nominal	Calculated			(according to nominal area)	(according to measured area)	(according to nominal area)	(according to measured area)				
	lb/ft	#	in	in^2	in^2	Tons	Tons	psi	psi	psi	psi	in	in	%	
1	2.597	8	0.986	0.79	0.763	24.11	33.18	67310	69690	92630	95910	1.50	8.0	18.8	
2	2.603	8	0.987	0.79	0.765	23.85	33.13	66590	68770	92490	95510	1.50	8.0	18.8	
3	1.482	6	0.745	0.44	0.436	15.34	19.78	76900	77610	99130	100030	1.30	8.0	16.3	
4	1.518	6	0.754	0.44	0.446	16.16	20.39	80990	79900	102190	100820	1.30	8.0	16.3	
5	0.672	4	0.501	0.20	0.197	7.14	9.14	78690	79890	100830	102370	1.00	8.0	12.5	
6	0.670	4	0.501	0.20	0.197	7.51	9.35	82850	84110	103080	104650	1.00	8.0	12.5	
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BEND TEST:

# 8	Sample bend through 180 degrees Satisfactorily without any crack
# 6	Sample bend through 180 degrees Satisfactorily without any crack
# 4	Sample bend through 180 degrees Satisfactorily without any crack

Note:-

Only Nine Samples Received and Tested

Note: Please always confirm the results of above report on web www.uet-civil.edu.pk

Ref. No: CED/ *Dated:* 11.09.2024

The Worthy Vice Chancellor,
University of Engineering &
Technology Lahore.

Subject: Request to Offer MSc Subject: "Seismic Design of Masonry Structures (SE:514)"

It is stated that the masonry construction is very common in our construction industry. It is need of the day that subjects related to design of masonry structures and its safety against earthquake loading should be offered on continuous basis as a fourth subject in M.Sc. Structural Engineering (Evening Program). Fortunately, an optional subject "SE 514: Seismic Design of Masonry Structures" is part of M.Sc. curriculum and offered as an optional subject for M.Sc. Structural Engineering Weekend program. This subject, if offered in evening program along with three major subjects, will provide great opportunity to not only the M.Sc. students of Civil Engineering Department but also to the students of M.Sc. Building and Architectural Engineering, to learn about latest techniques of constructing masonry buildings in earthquake prone areas. Also, department received multiple requests from M.Sc. Structural Engineering students to offer this subject as 4th minor subject. Keeping in view the importance of the subject and request from the students, it is requested to allow offering and claiming remuneration for SE 514: Seismic Design of Masonry Structures as fourth minor subject on permanent basis in addition to 3 major subjects of MSc Structural Engineering Evening program in ongoing Fall 2024 semester. This subject will be taught by Dr. Syed Asad Ali Gillani and Dr. M. Rizwan Riaz.

_____
Head of Structural Engineering Division, Civil
Engineering Department

_____
Chairman,
Civil Engineering Department

_____
Dean,
Faculty of Civil Engineering

_____
Vice Chancellor for approval please