Test Performed by: Dr. Nauman Khurram

Engr. Zaheer Ud Din Babar,
Dy.General Manager (Works)
Habib Rafiq Engineering (Pvt.) Ltd,Lahore
(Construction of Sky Gardens Tower, Lahore.)

Client Reference No.: HRLE/SKG/2024/158A (Retest) Dated: 05-08-2024
SOM Lab Ref: CED/SOM/4564-4563(Page-1/1) Dated: 05-08-2024
Test: Tensile Test
Sample Type: M.S Deformed Steel bar with Coupler (Bismillah Engineering)

Tension Test Results

Sr. No.	Bar Size	Area	Yield Load	Ultimate Load	Yield stress	Ultimate stress	Remarks
	(mm)	(mm^2)	kN	kN	(Mpa)	(Mpa)	
1	22	387	178.2	223.7	460	578	Threaded failure
2	22	387	179.7	238.7	464	617	Threaded failure
3	22	387	181.5	220.7	469	580	Threaded failure

Witnessed By: M Irfan (QC Eng, HRL), M. Akram (101 Group)
Note: Please always confirm the results on web www.uet-civil.edu.pk

Client Reference No.: Nil **Dated:** 05-08-2024

SOM Lab Ref: CED/SOM/4565 (Page 1/1) **Dated:** 05-08-2024

Test Type: Pull-Out Test (Threaded Bar Embedded in Kerb Stone with Epoxy)

Test Performed by: Dr. Syed Asad Ali Gillani

Engr. M. Qasim

Creative Electronics

Lahore

This is with reference to your above-mentioned letter and SOM receipt No. 4565 dated: 05-08-2024. The samples for pull-out test submitted in the Laboratory have been tested and the results are provided below.

Pull-Out Test Results

Sample No.	Sample Type	Size of Embedded Steel Bar	Maximum Load Attained	Mode of Failure
1	Kerb Stone	10mm (Threaded Bar)	8.70 kN	Steel Bar Pull-Out (Slippage) Failure

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

Test Performed by: .S. Asad Ali Gillani

PAVRON
Resident Engineer
MKTG Bajaur.
(Improvement/Up gradation of Road Mohmand Ghat-Khar-Timergara (Bajaur)-TorGhundai-
Timaergara Including Existing/New By-Passes)

Client Reference No.: RE/TDP/2024/1018 Dated: 25-07-2024

SOM Lab Ref: CED/SOM/4572 (Page 1/1) Dated: 05-08-2024

Test Type: Tensile Test & Thickness Test
Sample Type: Aluminum Sheet, GI Pipe **Gauge Length:** 2 inches

Tensile Test Results

Sr. No.	Size of Steel strip (mm)	X Section Area (mm^2)	Yield Load (kN)	Ultimate Load (kN)	Yield Stress (MPa)	Ultimate Tensile Stress (MPa)	Elongation (inch)	% Elongation
1 (Aluminum Sheet)	14.1x3.00	42.30	7.60	10.70	179.67	252.96	0.40	20.00
2 (Aluminum Sheet)	14.1x3.00	42.30	7.50	10.70	177.30	252.96	0.40	20.00
3 (GI Pipe)	15.0x2.10	31.50	10.40	15.00	330.16	476.19	0.50	25.00
4 (GI Pipe)	15.0x2.10	31.50	10.20	14.20	323.81	450.79	0.50	25.00

Thickness Test Results

Sr. No.	Sample Type	Thickness (mm)
1	Aluminum Sheet	3.0
2	GI Pipe	2.1

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

Test Performed by: Dr.Nauman Khurram

Process Dynamics Camp

Lahore .

(Const Of Steel Structure Shed for Cable Left over as MCR Parco,Mahmood Kott)

Client Reference No.: PDC/Parco/UET/002 Dated: 02-08-2024

SOM Lab Ref: CED/SOM/4573(Page 2/2) Dated: 05-08-2024

Test Type: Hardness Test

Sample Type: Anchorage Bolt (30mm)

Hardness Test Details:

Machine used: Avery Rockwell Hardness Testing Machine

(Minor Load: 10 Kgf Major Load: 140.0 kgf Scale: C)

Hardness Test Results

Sr #	Sample Type	Hardness Avg
1	Anchor Bolt	HR –29.5 – C

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

Process Dynamics Camp **Test Performed By:** **Dr. /Engr.** Nauman Khurram

Lahore .(Const Of Steel Structure Shed for Cable Left over as MCR Parco,Mahmood Kott)

Client Reference: PDC/Parco/UET/002 **Dated:** 02-08-2024

SOM Lab Ref: CED/SOM/4573(Page-1/2) **Dated:** 05-08-2024

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

Sample Type: Anchor Bolt (Plain 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	5.633	30	30.24	707	718	293.50	508.20	415	409	719	708	37.5	200	18.8	
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BEND TEST:

--	No Bend test performed

Note:-

Only One Sample Received and Tested

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

ALI RAZA
Lahore

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

Client Reference: Nil
Dated: 03-08-2024

SOM Lab Ref: 4558 (Page-1/1)
Dated: 05-08-2024

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	2.659	8	0.997	0.79	0.781	23.85	33.71	66590	67360	94110	95200	1.40	8.0	17.5	
2	2.636	8	0.993	0.79	0.775	24.87	34.76	69440	70780	97040	98920	1.50	8.0	18.8	
3	1.464	6	0.740	0.44	0.430	12.64	17.96	63360	64830	90030	92120	1.50	8.0	18.8	
4	1.463	6	0.740	0.44	0.430	13.27	19.01	66530	68080	95290	97510	1.40	8.0	17.5	
5	1.054	5	0.628	0.31	0.310	9.94	13.91	70710	70710	98990	98990	1.40	8.0	17.5	
6	0.725	5	0.521	0.31	0.213	9.99	14.02	71070	103440	99720	145130	1.30	8.0	16.3	
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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
# 5	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

Al- Tameer **Test Performed By:** **Dr. /Engr.** Nauman Khurram
Construction Manager Lahore.(Grey Structure Project, PGECHS Society Lahore)

Client Reference: 3875/DO/PGECHS/1403 **SOM Lab Ref:** 4559 (Page-1/1)
Dated: 11-07-2024 **Dated:** 05-08-2024

Test: Tension Test & Bend Test **Test Specification:** ASTM-A-615
Gauge Length: 8 inch **Sample Type:** Deformed Bar (Ittefaq Steel)

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	1.485	6	0.745	0.44	0.436	14.63	17.96	73320	74000	90030	90860	1.40	8.0	17.5	
2	1.481	6	0.744	0.44	0.435	15.14	18.20	75880	76750	91210	92250	1.50	8.0	18.8	
3	0.668	4	0.500	0.20	0.196	6.88	8.94	75880	77430	98580	100600	1.00	8.0	12.5	
4	0.670	4	0.501	0.20	0.197	6.80	8.84	74980	76120	97460	98940	1.00	8.0	12.5	
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BEND TEST:

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

Note:-

Only Six Samples Received and Tested

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

Engr.M.Imran, RE **Test Performed By:** **Dr. /Engr.** Nauman Khurram

Master Consulting Engineers.(7-Storey Residential Block Having Min 100 Rooms Facilities at NNS)

Client Reference: NKB/RE/MCE/STEEL/05 **SOM Lab Ref:** 4560(Page-1/1)

Dated: 05-08-2024 **Dated:** 05-08-2024

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	1.034	5	0.622	0.31	0.304	10.98	13.97	78110	79650	99360	101320	1.00	8.0	12.5	
2	1.020	5	0.618	0.31	0.300	10.35	13.20	73610	76070	93920	97050	1.20	8.0	15.0	
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BEND TEST:

# 5	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

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

Unit Head PMO ABL-UML-P#199-200.(Const Of ABL Upper Mall Lahore Plot No 199,200)

Client Reference: ABL-UML-AMC-QAQC-86 **SOM Lab Ref:** 4561 (Page-1/1)

Dated: 05-08-2024 **Dated:** 05-08-2024

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

Gauge Length: 8 inch **Sample Type:** Deformed Bar (FF Steel)

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	2.620	8	0.990	0.79	0.770	26.98	36.36	75330	77290	101510	104150	1.40	8.0	17.5	
2	2.585	8	0.984	0.79	0.760	25.86	35.58	72200	75050	99320	103240	1.40	8.0	17.5	
3	1.502	6	0.749	0.44	0.441	14.93	19.93	74860	74690	99890	99670	1.20	8.0	15.0	
4	1.484	6	0.745	0.44	0.436	14.55	19.57	72910	73580	98100	99000	1.30	8.0	16.3	
5	1.044	5	0.625	0.31	0.307	10.30	13.58	73250	73960	96600	97540	1.40	8.0	17.5	
6	1.046	5	0.625	0.31	0.307	10.65	13.91	75790	76530	98990	99960	1.40	8.0	17.5	
7	0.646	4	0.492	0.20	0.190	6.34	8.74	69920	73600	96340	101410	1.20	8.0	15.0	
8	0.656	4	0.496	0.20	0.193	6.32	8.77	69700	72220	96670	100180	1.20	8.0	15.0	
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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
# 5	Sample bend through 180 degrees Satisfactorily without any crack
# 4	Sample bend through 180 degrees Satisfactorily without any crack

Note:-

Only Twelve Samples Received and Tested

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

Jawad Qayyum Khan,RE **Test Performed By:** **Dr. /Engr.** Nauman Khurram

NESPAK (4376) Sargodha. (Const Of Flyover at 47/Pull Length 4400 RFT in Distt Sargodha)

Client Reference: 4376/JQK/24/6798 **SOM Lab Ref:** 4562 (Page-2/2)

Dated: 29-07-2024 **Dated:** 05-08-2024

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

Gauge Length: 8 inch **Sample Type:** Deformed Bar (FF Steel)

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	2.659	8	0.997	0.79	0.781	26.17	35.68	73050	73900	99600	100750	1.40	8.0	17.5	
2	2.687	8	1.003	0.79	0.790	25.79	35.37	72000	72000	98750	98750	1.30	8.0	16.3	
3	1.511	6	0.752	0.44	0.444	13.86	18.45	69490	68870	92480	91650	1.40	8.0	17.5	
4	1.487	6	0.746	0.44	0.437	14.07	18.40	70510	71000	92230	92860	1.20	8.0	15.0	
5	0.672	4	0.501	0.20	0.197	6.52	8.89	71940	73040	98020	99510	1.20	8.0	15.0	
6	0.670	4	0.501	0.20	0.197	6.34	8.63	69920	70990	95210	96660	1.30	8.0	16.3	
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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

Jawad Qayyum Khan,RE **Test Performed By:** **Dr. /Engr.** Nauman Khurram

NESPAK (4376) Sargodha. (Const Of Flyover at 47/Pull Length 4400 RFT in Distt Sargodha)

Client Reference: 4376/JQK/24/6797 **SOM Lab Ref:** 4562 (Page-1/2)

Dated: 29-07-2024 **Dated:** 05-08-2024

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

Gauge Length: 8 inch **Sample Type:** Deformed Bar (Sheikhoo Steel)

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	2.560	8	0.979	0.79	0.752	24.77	32.59	69160	72650	90980	95580	1.60	8.0	20.0	
2	2.611	8	0.988	0.79	0.767	26.01	34.40	72630	74800	96050	98930	1.70	8.0	21.3	
3	1.489	6	0.747	0.44	0.438	13.93	19.24	69850	70170	96420	96860	1.50	8.0	18.8	
4	1.492	6	0.747	0.44	0.438	13.78	19.16	69080	69400	96060	96500	1.40	8.0	17.5	
5	0.666	4	0.500	0.20	0.196	6.75	8.87	74420	75940	97800	99790	1.20	8.0	15.0	
6	0.668	4	0.500	0.20	0.196	6.49	8.69	71610	73070	95770	97730	1.10	8.0	13.8	
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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

Tahir Mehmood,Chief Engr **Test Performed By:** **Dr. /Engr.** Nauman Khurram
Zaitoon,New Lahore City.(Infra Work Of Zaitoon City by Iftikhar & Brother Construction Company)

Client Reference: ZC/CE/0175 **SOM Lab Ref:** 4566 (Page-1/1)
Dated: 02-08-2024 **Dated:** 05-08-2024
Test: Tension Test & Bend Test **Test Specification:** ASTM-A-615
Gauge Length: 8 inch **Sample Type:** Deformed Bar (Hunza Steel)

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	0.664	4	0.498	0.20	0.195	6.29	8.31	69360	71140	91610	93960	1.30	8.0	16.3	
2	0.637	4	0.488	0.20	0.187	6.14	8.15	67670	72380	89930	96180	1.40	8.0	17.5	
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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

Muhammad Shabbir Sandhu,ME **Test Performed By:** **Dr. /Engr.** Nauman Khurram

NESPAK,EPCM Consult Swl. PICIIP (Trunk Main Sewer Lines and Allied Works,Lot-03,02)

Client Reference: 3976/11/MIA/SWL/Lot-03&02/01/112 **SOM Lab Ref:** 4567 (Page-1/1)

Dated: 27-07-2024 **Dated:** 05-08-2024

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

Gauge Length: 8 inch **Sample Type:** Deformed Bar (FF Steel)

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	0.670	4	0.501	0.20	0.197	6.44	8.72	71040	72130	96110	97570	1.10	8.0	13.8	
2	0.668	4	0.500	0.20	0.196	6.52	8.74	71940	73410	96340	98300	1.40	8.0	17.5	
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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

Muhammad Shabbir Sandhu,ME **Test Performed By:** **Dr. /Engr.** Nauman Khurram
NESPAK,EPCM Consult Swl. PICIIP (Trunk Main Sewer Lines and Allied Works,Lot-03,02)

Client Reference: 3976/11/MIA/SWL/Lot-03&02/01/107 **SOM Lab Ref:** 4568 (Page-1/1)
Dated: 26-06-2024 **Dated:** 05-08-2024

Test: Tension Test & Bend Test **Test Specification:** ASTM-A-615
Gauge Length: 8 inch **Sample Type:** Deformed Bar (FF Steel)

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	1.462	6	0.740	0.44	0.430	14.14	19.18	70870	72520	96160	98400	1.20	8.0	15.0	
2	1.455	6	0.738	0.44	0.428	13.99	19.11	70100	72070	95800	98490	1.20	8.0	15.0	
3	1.038	5	0.623	0.31	0.305	9.55	13.46	67960	69070	95730	97300	1.30	8.0	16.3	
4	1.036	5	0.622	0.31	0.304	9.63	13.48	68540	69890	95880	97770	1.40	8.0	17.5	
5	0.674	4	0.502	0.20	0.198	6.54	8.89	72170	72900	98020	99010	1.20	8.0	15.0	
6	0.672	4	0.501	0.20	0.197	6.52	8.84	71940	73040	97460	98940	1.20	8.0	15.0	
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BEND TEST:

# 6	Sample bend through 180 degrees Satisfactorily without any crack
# 5	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

Luqman Maqsood,RE **Test Performed By:** **Dr. /Engr.** Nauman Khurram

Shahzad Ayub Associates New Metro City Sri Alamgir.(Asif developer)

Client Reference: SAA-St-Rep-25 **SOM Lab Ref:** 4569 (Page-1/1)

Dated: 05-08-2024 **Dated:** 05-08-2024

Test: Tension Test & Bend Test **Test Specification:** ASTM-A-615 Deformed Bar (S.J Steel)

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

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	0.678	4	0.503	0.20	0.199	6.90	9.25	76100	76490	101960	102470	1.30	8.0	16.3	
2	0.659	4	0.497	0.20	0.194	6.85	8.99	75540	77880	99150	102210	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

Luqman Maqsood,RE **Test Performed By:** **Dr. /Engr.** Nauman Khurram

Shahzad Ayub Associates New Metro City Sri Alamgir.(Ghousia Engineering)

Client Reference: SAA-St-Rep-24 **SOM Lab Ref:** 4570 (Page-1/1)

Dated: 05-08-2024 **Dated:** 05-08-2024

Test: Tension Test & Bend Test **Test Specification:** ASTM-A-615 Deformed Bar (S.J Steel)

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

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	1.557	6	0.764	0.44	0.458	14.07	18.20	70510	67740	91210	87620	1.10	8.0	13.8	
2	1.447	6	0.736	0.44	0.425	14.39	18.98	72150	74690	95140	98500	1.20	8.0	15.0	
3	0.651	4	0.493	0.20	0.191	6.22	8.00	68570	71800	88240	92400	1.30	8.0	16.3	
4	0.655	4	0.494	0.20	0.192	6.34	8.05	69920	72830	88800	92500	1.30	8.0	16.3	
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BEND TEST:

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

Note:-

Only Six Samples Received and Tested

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

Engineer Muhammad Irshad
Dy Dir Dev. DHA Gujranwala.(Plot 13 & 16 Comm Plaza)

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

Client Reference: 111/3/DD/Dev/Plot 13 & 16 Comm/26
Dated: 05-08-2024

SOM Lab Ref: 4571 (Page-1/1)
Dated: 05-08-2024

Test: Tension Test & Bend Test
Test Specification: ASTM-A-615
Gauge Length: 8 inch
Sample Type: Deformed Bar (Nomee Steel)

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	1.480	6	0.744	0.44	0.435	14.04	18.73	70360	71170	93860	94940	1.30	8.0	16.3	
2	1.495	6	0.748	0.44	0.439	14.53	19.22	72810	72980	96320	96530	1.20	8.0	15.0	
3	0.667	4	0.500	0.20	0.196	7.16	9.07	78910	80520	100050	102090	1.40	8.0	17.5	
4	0.660	4	0.497	0.20	0.194	6.93	8.87	76440	78800	97800	100820	1.40	8.0	17.5	
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Witnessed By: Farooq-e-Azam (L.T DHAG)

BEND TEST:

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

Note:-

Only Six Samples Received and Tested

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

Sub Divisional Officer,BSD **Test Performed By:** **Dr. /Engr.** Nauman Khurram
Shakargarh.(All T.H.Q Hospitals in Punjab One at Shakargarh ADP # 792 For The Year 2021-22)

Client Reference: 1656/Sg **SOM Lab Ref:** 4574 (Page-1/1)
Dated: 06-01-2024 **Dated:** 05-08-2024
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	0.638	4	0.488	0.20	0.187	5.86	7.54	64640	69130	83180	88970	1.10	8.0	13.8	
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BEND TEST:

# 4	Sample bend through 180 degrees Satisfactorily without any crack

Note:-

Only Two Samples Received and Tested

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

Major Rana Aftab Saleem **Test Performed By:** **Dr. /Engr.** Nauman Khurram
For Commander HQ 495 Engr Group NHS Gate No.12 Sigcen Lahore.

Client Reference: PC920/Testing/A.F Steel/Ord **SOM Lab Ref:** 4575 (Page-1/1)
Dated: 05-08-2024 **Dated:** 05-08-2024

Test: Tension Test & Bend Test **Test Specification:** ASTM-A-615 Deformed Bar (A.F Steel)

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

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	2.655	8	0.997	0.79	0.780	22.63	32.31	63180	63990	90210	91370	1.30	8.0	16.3	
2	2.667	8	0.999	0.79	0.784	22.85	33.79	63810	64290	94340	95060	1.50	8.0	18.8	
3	1.513	6	0.753	0.44	0.445	15.57	20.69	78020	77150	103720	102560	1.20	8.0	15.0	
4	1.525	6	0.755	0.44	0.448	15.24	20.39	76390	75020	102190	100370	1.30	8.0	16.3	
5	1.043	5	0.625	0.31	0.307	10.57	13.61	75210	75940	96820	97760	1.00	8.0	12.5	
6	1.042	5	0.624	0.31	0.306	10.65	13.91	75790	76780	98990	100290	1.10	8.0	13.8	
7	0.666	4	0.500	0.20	0.196	6.78	9.12	74750	76280	100610	102660	1.10	8.0	13.8	
8	0.670	4	0.501	0.20	0.197	6.95	9.23	76660	77830	101730	103280	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
# 5	Sample bend through 180 degrees Satisfactorily without any crack
# 4	Sample bend through 180 degrees Satisfactorily without any crack

Note:-

Only Twelve Samples Received and Tested

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