

I. H. ZARRAR

Test Performed By:

Dr. /Engr.

Nauman
Khurram

Engineering Design Bureau, Lahore

Client Reference: EDB/PMCL/23

Dated: 04-09-2019

SOM Lab Ref: CED/SOM/1349(Page-1/1)

Dated: 04-09-2019

Test: Tension 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	2.365	22	19.58	380	301	144.70	204.70	381	481	538	681	30.0	200	15.0	
2	1.521	16	15.71	201	194	109.70	144.00	546	567	716	744	30.0	200	15.0	
3	0.592	12.5	9.80	123	75	41.70	54.50	340	553	444	723	25.0	200	12.5	
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BEND TEST:

--	No Bend test performed	Note:- Only Three Samples Received and Tested

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

Umair Latif
Development Engineer, University of The Punjab, Lahore

Test Performed By: Dr. /Engr. Nauman Khurram

Client Reference: PU/MTP/Steel/EB

SOM Lab

Ref: 1342(Page-1/1)

Dated: 27-08-2019

Dated: 04-08-2019

Test: Tension 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	1.486	6	0.746	0.44	0.437	15.82	20.59	79300	79850	103210	103920	1.00	8.0	12.5	
2	0.612	4	0.479	0.20	0.180	6.71	8.66	73970	82190	95550	106160	0.90	8.0	11.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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BEND TEST:

# 6	Sample bend through 180 degrees Satisfactorily without any crack	Note:- Only Four Samples Received and Tested
# 4	Sample bend through 180 degrees Satisfactorily without any crack	

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

Maj Adnan khalid®

Test Performed By: Dr. /Engr. Nauman Khurram

Dy Dir MTL, Const of Security Check Post, DHA Ph-VII, Y - Sector - (M/S Hasnat Const)

Client Reference: 408/241/E/Lab/681

SOM Lab

Ref: 1343(Page-1/1)

Dated: 02-09-2019

Dated: 04-09-2019

Test: Tension Test & Bend Test

Test Specification:

ASTM-A-615

Deformed Bar (Saeed

Gauge Length: 8 inch

Sample Type:

Kasur)

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	0.734	4	0.524	0.20	0.216	5.17	7.65	56990	52770	84310	78060	1.20	8.0	15.0	
2	0.685	4	0.506	0.20	0.201	5.22	7.77	57560	57270	85660	85230	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

Masood Farid
Sr. Engineer (Civil) SWP, Pakistan Atomic Energy Commission, D G Khan

Test Performed By: Dr. /Engr. Nauman Khurram

Client Reference: SWP/W(2328)/2019

SOM Lab
Ref: 1345 (Page-1/6)

Dated: 03-09-2019

Dated: 04-09-2019

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	2.590	8	0.984	0.79	0.761	25.61	32.82	71490	74210	91640	95130	1.30	8.0	16.3	
2	2.587	8	0.984	0.79	0.760	25.23	31.77	70440	73220	88700	92210	1.50	8.0	18.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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BEND TEST:

# 8	Sample bend through 180 degrees Satisfactorily without any crack	Note:- Only Three Samples Received and Tested

Masood Farid
Sr. Engineer (Civil) SWP, Pakistan Atomic Energy Commission, D G Khan

Test Performed By: Dr. /Engr. Nauman Khurram

Client Reference: SWP/W(2328)/2019

SOM Lab

Ref: 1345 (Page-2/6)

Dated: 03-09-2019

Dated: 04-09-2019

Test: Tension Test & Bend Test

Test Specification:

ASTM-A-615

Deformed

Gauge Length: 8 inch

Sample Type:

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	1.460	6	0.739	0.44	0.429	15.16	19.03	75980	77930	95400	97840	1.10	8.0	13.8	
2	1.459	6	0.739	0.44	0.429	15.01	18.88	75210	77140	94630	97060	1.30	8.0	16.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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BEND TEST:

# 6	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

Masood Farid
Sr. Engineer (Civil) SWP, Pakistan Atomic Energy Commission, D G Khan

Test Performed By: Dr. /Engr. Nauman Khurram

Client Reference: SWP/W(2328)/2019

SOM Lab

Ref: 1345 (Page-3/6)

Dated: 03-09-2019

Dated: 04-09-2019

Test: Tension Test & Bend Test

Test Specification:

ASTM-A-615

Deformed

Gauge Length: 8 inch

Sample Type:

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	0.650	4	0.493	0.20	0.191	6.17	8.56	68010	71210	94420	98870	1.00	8.0	12.5	
2	0.650	4	0.493	0.20	0.191	6.29	8.72	69360	72630	96110	100640	1.10	8.0	13.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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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

Masood Farid
Sr. Engineer (Civil) SWP, Pakistan Atomic Energy Commission, D G Khan

Test Performed By: Dr. /Engr. Nauman Khurram

Client Reference: SWP/W(2349)/2019

SOM Lab

Ref: 1345 (Page-4/6)

Dated: 03-09-2019

Dated: 04-09-2019

Test: Tension Test & Bend Test

Test Specification:

ASTM-A-615

Deformed

Gauge Length: 8 inch

Sample Type:

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	2.671	8	1.000	0.79	0.785	25.28	34.35	70580	71030	95900	96520	1.50	8.0	18.8	
2	2.611	8	0.988	0.79	0.767	21.61	31.42	60330	62140	87710	90340	1.60	8.0	20.0	
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BEND TEST:

# 8	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

Masood Farid
Sr. Engineer (Civil) SWP, Pakistan Atomic Energy Commission, D G Khan

Test Performed By: Dr. /Engr. Nauman Khurram

Client Reference: SWP/W(2349)/2019

SOM Lab

Ref: 1345 (Page-5/6)

Dated: 03-09-2019

Dated: 04-09-2019

Test: Tension Test & Bend Test

Test Specification:

ASTM-A-615

Deformed

Gauge Length: 8 inch

Sample Type:

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	1.476	6	0.743	0.44	0.434	12.35	16.72	61930	62790	83800	84960	1.50	8.0	18.8	
2	1.471	6	0.742	0.44	0.432	12.84	17.09	64380	65570	85690	87270	1.40	8.0	17.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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BEND TEST:

# 6	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

Masood Farid
Sr. Engineer (Civil) SWP, Pakistan Atomic Energy Commission, D G Khan

Test Performed By: Dr. /Engr. Nauman Khurram

Client Reference: SWP/W(2349)/2019

SOM Lab

Ref: 1345 (Page-6/6)

Dated: 03-09-2019

Dated: 04-09-2019

Test: Tension Test & Bend Test

Test Specification:

ASTM-A-615

Deformed

Gauge Length: 8 inch

Sample Type:

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	0.659	4	0.497	0.20	0.194	6.70	7.92	73850	76140	87340	90040	1.00	8.0	12.5	
2	0.666	4	0.500	0.20	0.196	6.90	8.41	76100	77660	92740	94630	1.10	8.0	13.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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BEND TEST:

# 6	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

Maj Adnan khalid®

Test Performed By: Dr. /Engr.

M Irfan UI Hassan

Dy Dir MTL, Proposed Commercial Plaza, DRGCC Ph-III, DHA Ph-VI, (M/S Construct)

Client Reference: 408/241/E/Lab/682/3488

SOM Lab 1346,1348(Page-1/1)
Ref: 1/1)

Dated: 03-09-2019

Dated: 04-09-2019

Test: Tension Test & Bend Test

Test Specification:

ASTM-A-615

Gauge Length: 8 inch

Sample Type:

Deformed Bar (Kamran 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	1.449	6	0.736	0.44	0.426	13.25	18.45	66430	68610	92480	95520	1.40	8.0	17.5	
2	1.447	6	0.736	0.44	0.425	13.58	20.31	68060	70460	101780	105370	1.10	8.0	13.8	
3	1.452	6	0.737	0.44	0.427	13.53	18.81	67810	69870	94270	97140	1.20	8.0	15.0	
4	1.451	6	0.736	0.44	0.426	12.92	17.74	64740	66870	88910	91830	1.00	8.0	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
6	1.042	5	0.624	0.31	0.306	8.97	12.59	63820	64660	89570	90740	1.50	8.0	18.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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BEND TEST:

# 6	Sample bend through 180 degrees Satisfactorily without any crack	Note:- Only Six Samples Received and Tested
# 6	Sample bend through 180 degrees Satisfactorily without any crack	

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

G3 Engineering Consultant (Pvt)
Ltd.
MNS- UA Multan

Test Performed By: Dr. /Engr. Nauman Khurram

Client Reference: G3/RE/MNS-UAM/20819-2
Dated: 20-08-2019
Test: Tension Test & Bend Test
Gauge Length: 8 inch

SOM Lab
Ref: 1347(Page-1/1)
Dated: 04-09-2019
ASTM-A-615
Deformed Bar(Amreli 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	0.721	4	0.520	0.20	0.212	7.39	8.92	81500	76890	98360	92790	1.20	8.0	15.0	
2	0.692	4	0.508	0.20	0.203	7.17	8.63	79030	77860	95210	93800	1.20	8.0	15.0	
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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

Abdullah Khadim
Resident Engineer, DAR Engineering

Test Performed By: Dr. /Engr. Nauman Khurram

Client Reference: DB-78/DAR/RE/ME/2019/0203

SOM Lab
Ref: 1351(Page-1/1)

Dated: 03-09-2019

Dated: 04-09-2019

Test: Tension Test & Bend Test

Test Specification:

ASTM-A-615
Deformed Bar(Kamran 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	1.474	6	0.743	0.44	0.433	12.84	18.45	64380	65420	92480	93980	1.20	8.0	15.0	A-49
2	1.476	6	0.743	0.44	0.434	12.97	18.83	65000	65890	94370	95680	1.30	8.0	16.3	A-49
3	0.652	4	0.494	0.20	0.192	6.14	8.72	67670	70490	96110	100120	1.20	8.0	15.0	P-773
4	0.653	4	0.494	0.20	0.192	6.03	8.46	66550	69320	93300	97190	1.30	8.0	16.3	P-773
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BEND TEST:

# 6	Sample bend through 180 degrees Satisfactorily without any crack	Note:- Only Six Samples Received and Tested
# 6	Sample bend through 180 degrees Satisfactorily without any crack	

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

Test Performed By: S. Asad Ali Gillani

Hamid Ali
Resident Engineer
M. Garh - D. G. Khan Road

Client Reference: 3949/HA/01/306,
SOM Laboratory Reference: CED/SOM/1334(Page-1/1)

Dated: 02-09-2019

Dated: 03-09-2019

Test: Compression Strength

Sample Type: Aluminum Stud, .

Test Specification: ASTM-D4280

Test Results

Sr. No.	Sample Type	Top Dimensions (mm)	Bottom Dimensions (mm)	Thickness (mm)	Inclination (Degree)	Compression Load (Kg)
1	Aluminum Stud	126.0 x 50.0	195.0 x 101.0	49.0	56.82°	17992.00

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

Test Performed by: Dr. Nauman Khurram

M/S K K Steel
International, Faisalabad

Client Reference No.: Nil

Dated: 02-09-2019

SOM Lab Ref: CED/SOM/1344(P-1/1)

Dated: 04-09-2019

Test Type: Compressive Strength

Sample Type: Sandwich Panel Sheet

Tensile Test Results: Sandwich Panel Sheet Compressive Strength as ASTM C365/365M

Sample No.	Sample Size	Load at 2% Deflection (N)	Ultimate Load (N)	Strength at Deflection (kpa)	Ultimate Strength (kpa)	Remarks
1	4" x 4"	870	1750	83.62	168.20	Uniform Compressive Failure

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

Test Performed by: Dr. M. Irfan ul Hassan

Director,
United Engineering Associates
Muzaffrabad Azad Jammu & Kashmir

Client Reference: Nil

Dated: 04-09-2019

SOM Laboratory Reference: CED/SOM/1350(Page-2/2)

Dated: 04-09-2019

Test Type: Hardness Test

Sample Type: H. T. Wire

Hardness Test Details:

Machine used: Avery Rockwell Hardness Testing Machine

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

Hardness Test Results

Sample No.	Sample Type	Hardness
1	H. T. Wire	HR – 91.0 – C

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