

Khamees Ali Managnejo
 Chief resident Engineer, Mangi Dam Project. (Contractor: ZKB)

Test Performed By: Dr. /Engr. S. Asad Ali Gillani

Client Reference: CRE/MDP/Tech-2947-51

Dated: 02-04-2021

SOM Lab Ref: CED/SOM/4343,4344 (Page-1/2)

Dated: 26-05-2021

Test: Tension Test

Test Specification: ASTM-A-663

Sample Type: ROCK Bolt

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	3.831	25	24.93	491	488	255.00	342.50	519	523	698	702	40.0	200	20.0	
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BEND TEST:

25mm	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

Muhammad Danish Khurshid
 Manager Construction, Orient Electronics (Pvt) Ltd, Lahore

Test Performed By: Dr. /Engr. Nauman Khurram

Client Reference: OSH-SO/UET/Agha Steel Test/260521-12

Dated: 26-05-2021

SOM Lab Ref: CED/SOM/4346 (Page-1/1)

Dated: 26-05-2021

Test: Tensile 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	3.977	25	25.41	491	507	235.20	319.50	479	464	651	631	37.5	200	18.8	
2	3.871	25	25.06	491	493	215.70	301.00	439	438	613	611	35.0	200	17.5	
3	2.395	20	19.71	314	305	139.00	201.00	442	456	640	659	27.5	200	13.8	
4	2.421	20	19.82	314	308	136.50	195.70	434	443	623	635	27.5	200	13.8	
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BEND TEST:

25mm	Sample bend through 180 degrees Satisfactorily without any crack	Note:- Only Six Samples Received and Tested
20mm	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

Muhammad Asif Bajwa
Resident Engineer, PU Lahore Progressive Consultants (Pvt) Ltd.)

Test Performed By: Dr. /Engr.

S. Asad Ali
Gillani

Client Reference: PCL-562/LHR/IEEE/PU/152

Dated: 21-05-2021

SOM Lab

Ref: 4341(Page-1/1)

Dated: 25-05-2021

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	2.566	8	0.980	0.79	0.754	21.27	29.77	59390	62230	83100	87070	1.30	8.0	16.3	
2	1.487	6	0.746	0.44	0.437	15.26	19.16	76490	77020	96060	96720	1.00	8.0	12.5	
3	0.656	4	0.496	0.20	0.193	5.73	7.31	63180	65470	80600	83520	1.00	8.0	12.5	
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BEND TEST:

# 8	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	
# 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

Engr. Asif Raza

Test Performed By:

Dr. /Engr. Nauman Khurram

Resident Engineer, BSC. Civil Engineering, (MPEC) Allied Engineering Consultants (Pvt) Ltd.

Client Reference: AEC/MBC/2021/46

SOM Lab

Ref: 4342(Page-1/1)

Dated: 25-05-2021

Dated: 26-05-2021

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	2.670	8	1.000	0.79	0.785	24.08	34.05	67220	67650	95050	95660	1.20	8.0	15.0	
2	2.669	8	0.999	0.79	0.784	24.06	33.79	67160	67680	94340	95060	1.30	8.0	16.3	
3	1.511	6	0.752	0.44	0.444	14.34	18.86	71890	71250	94530	93680	1.40	8.0	17.5	
4	1.515	6	0.753	0.44	0.445	14.22	18.88	71280	70480	94630	93570	1.40	8.0	17.5	
5	0.670	4	0.501	0.20	0.197	6.17	8.53	68010	69050	94090	95520	1.20	8.0	15.0	
6	0.673	4	0.502	0.20	0.198	6.17	8.51	68010	68700	93860	94810	1.30	8.0	16.3	
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BEND TEST:

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

Muhammad Danial
 Construction Manager, Ortho Hospital 96-B, Hali Road Gulberg-II, Lahore

Test Performed By: Dr. /Engr. M Irfan UI Hassan

Client Reference: nil

SOM Lab 4345(Page-

Ref: 1/2)

Dated: 26-05-2021

Dated: 26-05-2021

Test: Tension Test & Bend Test

Test Specification: ASTM-A-615

Guage 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	0.656	4	0.496	0.20	0.193	5.61	7.31	61830	64070	80600	83520	1.40	8.0	17.5	
2	0.657	4	0.496	0.20	0.193	5.27	7.00	58120	60230	77230	80030	1.50	8.0	18.8	
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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

Muhammad Danial
Construction Manager, Ortho Hospital 96-B, Hali Road Gulberg-II, Lahore

Test Performed By: Dr. /Engr. M Irfan UI Hassan

Client Reference: nil

SOM Lab 4345(Page-

Ref: 2/2)

Dated: 26-05-2021

Dated: 26-05-2021

Test: Tension Test & Bend Test

Test Specification: ASTM-A-615

Guage 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	2.497	8	0.967	0.79	0.734	20.31	29.26	56690	61020	81680	87910	1.60	8.0	20.0	
2	2.493	8	0.966	0.79	0.733	20.69	29.58	57770	62260	82590	89010	1.60	8.0	20.0	
3	1.409	6	0.726	0.44	0.414	11.47	16.38	57480	61090	82110	87270	1.50	8.0	18.8	
4	1.410	6	0.726	0.44	0.414	11.62	16.48	58250	61910	82620	87810	1.40	8.0	17.5	
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BEND TEST:

# 8	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

Ass. Project Director

Test Performed By:

Dr. /Engr.

S. Asad Ali
Gillani

PMU-SBP (North), Project Management Unit (PMU), Govt. of The Punjab, Sports Bord Punjab

Client Reference: APD/PMU/SBP/TEST/01

SOM Lab

Ref: 4347(Page-1/1)

Dated: 16-05-2021

Dated: 26-05-2021

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	2.592	8	0.985	0.79	0.762	28.85	36.16	80540	83500	100940	104650	1.10	8.0	13.8	
2	2.576	8	0.982	0.79	0.757	29.77	36.80	83100	86720	102730	107210	1.00	8.0	12.5	
3	1.499	6	0.749	0.44	0.441	16.21	20.80	81240	81060	104230	104000	1.20	8.0	15.0	
4	1.498	6	0.748	0.44	0.440	16.00	19.88	80220	80220	99640	99640	1.20	8.0	15.0	
5	0.662	4	0.498	0.20	0.195	6.29	9.48	69360	71140	104540	107220	1.20	8.0	15.0	
6	0.665	4	0.498	0.20	0.195	6.24	9.53	68800	70560	105100	107800	0.90	8.0	11.3	
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BEND TEST:

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