

Maj Adnan Khalid ®

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

Dy Dir MTL, Const of (U/G) External Elect Works Alongwith Street Light System Pak-E-3, (M/s DHA FWO)

Client Reference: 408/241/E/1048A/824

Dated: 09-12-2020

SOM Lab Ref: CED/SOM/3402 (Page-1/1)

Dated: 09-12-2020

Test: Tension Test

Test Specification: ASTM-F-1554

Sample Type: J - 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	4.064	25	25.68	491	518	196.00	289.50	399	379	590	559	47.5	200	23.8	
2	4.090	25	25.76	491	521	193.70	292.50	395	372	596	562	50.0	200	25.0	
3	4.069	25	25.69	491	518	194.00	287.70	395	375	586	556	42.5	200	21.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

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

Engr Zafar Iqbal
 Project Manager, Liberty Condominiums, Lahore

Test Performed By: Dr. /Engr.

S. Asad Ali
Gillnai

Client Reference: LC/T/2/20

SOM Lab

Ref: 3398(Page-1/1)

Dated: 09-12-2020

Dated: 09-12-2020

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	2.583	8	0.983	0.79	0.759	22.70	35.90	63380	65970	100230	104320	1.50	8.0	18.8	
2	2.553	8	0.977	0.79	0.750	22.53	35.70	62890	66250	99660	104980	1.70	8.0	21.3	
3	1.423	6	0.730	0.44	0.418	13.46	21.07	67450	71000	105610	111170	1.50	8.0	18.8	
4	1.439	6	0.734	0.44	0.423	13.63	21.22	68320	71060	106380	110660	1.20	8.0	15.0	
5	0.651	4	0.493	0.20	0.191	5.58	9.07	61490	64390	100050	104760	1.40	8.0	17.5	
6	0.681	4	0.505	0.20	0.200	5.81	9.58	64080	64080	105670	105670	1.40	8.0	17.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

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

Engr. Yousaf Zaman
Resident Engineer, M-3 IC Industrial City, Faisalabad

Test Performed By: Dr. /Engr.

S. Asad Ali
Gillani

Client Reference: CRE/M3IC/FIC-041/Lab/846

SOM Lab

Ref: 3400 (Page-1/1)

Dated: 30-11--2020

Dated: 09-12-2020

Test: Tension Test & Bend Test

Test Specification:

ASTM-A-615

Gauge Length: 8 inch

Sample Type:

Deformed Bar(ITHAD 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	2.652	8	0.996	0.79	0.779	22.78	35.68	63610	64500	99600	101010	1.50	8.0	18.8	
2	2.644	8	0.995	0.79	0.777	23.01	35.63	64230	65310	99460	101130	1.50	8.0	18.8	
3	1.596	6	0.773	0.44	0.469	18.65	22.34	93510	87720	112000	105080	1.30	8.0	16.3	
4	1.626	6	0.780	0.44	0.478	18.57	22.17	93100	85700	111130	102300	1.20	8.0	15.0	
5	1.035	5	0.622	0.31	0.304	11.85	14.55	84270	85940	103490	105530	1.00	8.0	12.5	
6	1.035	5	0.622	0.31	0.304	11.90	14.55	84630	86310	103490	105530	1.20	8.0	15.0	
7	0.663	4	0.498	0.20	0.195	5.73	8.56	63180	64800	94420	96850	1.30	8.0	16.3	
8	0.664	4	0.498	0.20	0.195	5.81	8.56	64080	65720	94420	96850	1.40	8.0	17.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

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	
# 5	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

ARCE

Test Performed By:

Dr. /Engr.

S Asad Ali
Gillani

Ahsan Plaza Contractor & Engineers, Office No 48, Commercial Market Eden Orchard, Faisalabad

Client Reference: ARCE/FSD/746

SOM Lab

Ref:

3401(Page-1/1)

Dated: 09-12-2020

Dated:

9-12-2020

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	2.596	8	0.986	0.79	0.763	25.56	33.61	71350	73870	93830	97150	1.30	8.0	16.3	
2	2.616	8	0.990	0.79	0.769	25.20	33.18	70350	72270	92630	95160	1.50	8.0	18.8	
3	0.663	4	0.498	0.20	0.195	6.65	8.89	73290	75170	98020	100530	1.10	8.0	13.8	
4	0.664	4	0.498	0.20	0.195	6.57	8.82	72510	74360	97230	99730	1.20	8.0	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

BEND TEST:

8 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

Test Performed By: Dr. S. Asad Ali Gillani

Maj Adnan Khalid ®

Dy Dir MTL.

Testing of J-Bolt, Infra Dev Works Pkg-3, Sector-L, DHA Phase-IX - (M/S FWO)

Client Reference: 408/241/E/1048A/824

Dated: 09-12-2020

SOM Lab Ref: CED/SOM/3402(Page-1/1)

Dated: 09-12-2020

Test: Tension Test

Test Specification: ASTM-F -1554

Sample Type: J Bolt

Gauge Length: 200 mm

S.No.	Dia.		Area	Yield Load	Ultimate Load	Yield Stress	Ultimate. Stress	Elongation	Gauge Length	%age Elongation	Reduction of Area (%)
	Original Diameter	Tested Diameter									
	mm	mm	mm ²	kN	kN	MPa	MPa	mm	M m	%	
1	25	25.68	518	196.00	289.50	379	559	47.5	200	23.8	53.6
2	25	25.76	521	193.70	292.50	372	562	50.0	200	25.0	52.5
3	25	25.69	518	194.00	287.70	375	556	42.5	200	21.3	53.5

Note:-

Only Three Samples
Received and Tested

Note: Please always confirm the results of above report on web www.uet-civil.edu.pk(U/G)

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

Maj Adnan Khalid ®

Dy Dir MTL.

Testing of Anchor Bolt, Const of (U/G) External Elec works Along with Street Light System

Pkg –E-3, Sector –L, DHA Ph-IX – Prism-9 (M/S FWO)

Client Reference: 408/241/E/1051/912

Dated: 09-12-2020

SOM Lab Ref: CED/SOM/3021(Page-2/3)

Dated: 09-12-2020

Test: Tension Test

Test Specification: ASTM-F -606

Sample Type: Anchor Bolt

Gauge Length: 50 mm

S.No.	Dia.		Area	Yield Load	Ultimate Load	Yield Stress	Ultimate. Stress	Elongation	Gauge Length	%age Elongation	Reduction of Area (%)
	Original Diameter	Tested Diameter									
	mm	Mm	mm ²	kN	kN	MPa	MPa	mm	M m	%	
1	12	8.5		19.5	29.0	369	549	12.5	50	25.0	51.7
2	12	8.2		22.0	30.0	416.5	568	12.5	50	25.0	58.2
3	12	8.2		19.7	29.7	373	562	12.5	50	25.0	55.0

Note:-

**Only Three Samples
Received and Tested**

Note: Please always confirm the results of above report on web www.uet-civil.edu.pk(U/G)

Test Performed By: Dr. S. Asad Ali Gillani

Maj Adnan Khalid ®

Dy Dir MTL.

Testing of J-Bolt, Infra Dev Works Pkg-3, Sector-L, DHA Phase-IX - (M/S FWO)

Client Reference: 408/241/E/1048A/824

Dated: 09-12-2020

SOM Lab Ref: CED/SOM/3402(Page-1/2)

Dated: 09-12-2020

Test: Tension Test

Test Specification: ASTM-F -1554

Sample Type: J Bolt

Gauge Length: 200 mm

S.No.	Dia.		Area	Yield Load	Ultimate Load	Yield Stress	Ultimate. Stress	Elongation	Gauge Length	%age Elongation	Reduction of Area (%)
	Original Diameter	Tested Diameter									
	mm	mm	mm ²	kN	kN	MPa	MPa	mm	mm	%	
1	25	25.68	518	196.00	289.50	379	559	47.5	200	23.8	53.6
2	25	25.76	521	193.70	292.50	372	562	50.0	200	25.0	52.5
3	25	25.69	518	194.00	287.70	375	556	42.5	200	21.3	53.5

Note:-

**Only Three Samples
Received and Tested**

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

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

Maj Adnan Khalid ®

Dy Dir MTL.

Testing of Anchor Bolt, Const of (U/G) External Elec works Along with Street Light System

Pkg –E-3, Sector –L, DHA Ph-IX – Prism-9 (M/S FWO)

Client Reference: 408/241/E/1051/912

Dated: 09-12-2020

SOM Lab Ref: CED/SOM/3402(Page-2/2)

Dated: 09-12-2020

Test: Tension Test

Test Specification: ASTM-F -606

Sample Type: Anchor Bolt

Gauge Length: 50 mm

S.No.	Dia.		Area	Yield Load	Ultimate Load	Yield Stress	Ultimate. Stress	Elongation	Gauge Length	%age Elongation	Reduction of Area (%)
	Original Diameter	Tested Diameter									
	mm	Mm	mm ²	kN	kN	MPa	MPa	mm	Mm	%	
1	12	8.2	52.80	19.5	29.0	369	549	12.5	50	25.0	51.7
2	12	8.2	52.80	22.0	30.0	416.5	568	12.5	50	25.0	58.2
3	12	8.2	52.80	19.7	29.7	373	562	12.5	50	25.0	55.0

Note:-

**Only Three Samples
Received and Tested**

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

Test Performed by: .Dr. M. Irfan ul Hassan

Mohsin Hussain
Manager I & QC,
DTR & SG
Pak Elektron Ltd. (PEL)
Lahore

Client Reference No.: I & QC

Dated: 09-12-2020

SOM Lab Ref: CED/SOM/3403 (Page 1/2)

Dated: 10-12-2020

Test Type: Tensile Test & Hardness Test

Sample Type: Hex Head - Bolts (M12x35mm) M/s One Stop Discouted Supplies

-Tensile Test Results

Sample No.	Sample Type	Tested Diameter of Bolt (mm)	Ultimate Load (kN)	Ultimate Tensile Stress (MPa)	% Elongation
1	Hex Head Bolt (12 x 35mm)	6.0	21.0	742.7	24.0

-Hardness Test Details:

Machine used: Avery Rockwell Hardness Testing Machine

(Minor Load: 10 Kgf Major Load: 90.0 kgf Scale: B)

Hardness Test Results

Sample No.	Sample Type	Hardness	Sample Type	Hardness
1	Bolt 12mm	HR – 84.5 – B	Nut	HR – 95.83- B

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

Test Performed by: Dr. S. Asad Ali Gillani

Assistant Resident Engineer
AKA DHA
Sector "F" Bahawalpur

Client Reference No.: ARE/AKA/TTC-F/SITE/44

Dated: 09 -12-2020

SOM Lab Ref: CED/SOM/3422(Page-1/1)

Dated: 11-12-2020

Test: Tensile Test & Elongation Test , Hardness Test & Water Absorption Test

Sample Type: Gaskets Rubber Ring for RCC Pipe

Tensile Strength & Elongation Test (ASTM-D-412)

Description	Unit	Before Aging	After aging @100°C.	Standard ASTM
Tensile Strength	Kgs/cm	261.04	245.44	D-412
Elongation at Break	%	520	490	D-412
Hardness (Shore A)	Point	45.5	50.0	D-2240

- COMPRESSION SET TEST (AS PER ASTM-D-395)

S. No.	Thickness of Sample (mm)	Final Thickness (mm)	Compression set (%)
1	11.8	9.5	19.491

Water Absorption (ASTM-D-2240)

S. No	Sample Type	Remarks
1	Gaskets Rubber Ring	No absorption

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