

Transtech Engineering Corporation,
Punjab Thermal Power Plant, Haveli Bahadar Shah, Jhang,

Test Performed By: Dr. /Engr. M Rehan Ashraf

Client Reference: TEC/UET/19042001
SOM Lab Ref: CED/SOM/880(Page-1/3)
Test: Tension Test & Bend Test
Sample Type: Deformed Bar (Ittefaq Steel)

Dated: 22-05-2019
Dated: 23-05-2019
Test Specification: ASTM-A 615
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	2.490	20	20.09	314	317	174.50	219.50	555	551	699	693	30.0	200	15.0	1826
2	2.490	20	20.10	314	317	173.70	218.00	553	548	694	688	30.0	200	15.0	1826
3	2.483	20	20.07	314	316	177.50	221.50	565	562	705	701	30.0	200	15.0	1791
4	2.483	20	20.07	314	316	185.70	226.00	591	588	719	715	25.0	200	12.5	1791
5	2.482	20	20.06	314	316	189.00	223.50	602	598	711	707	25.0	200	12.5	1906
6	2.482	20	20.06	314	316	178.00	213.00	567	564	678	674	27.5	200	13.8	1906
7	0.890	12	12.02	113	113	52.00	82.50	460	459	729	728	25.0	200	12.5	7139
8	0.885	12	11.98	113	113	54.70	83.00	484	486	734	737	30.0	200	15.0	7139
9	0.886	12	11.99	113	113	83.50	82.70	738	741	731	734	30.0	200	15.0	1950
10	0.887	12	11.99	113	113	53.00	83.50	469	470	738	740	27.5	200	13.8	1950

Witnessed By: Niaz Hussain, SE, NESPAK

BEND TEST:

20mm	Sample bend through 180 degrees Satisfactorily without any crack	Note:- Only Fifteen Samples Received and Tested
20mm	Sample bend through 180 degrees Satisfactorily without any crack	
20mm	Sample bend through 180 degrees Satisfactorily without any crack	
12mm	Sample bend through 180 degrees Satisfactorily without any crack	
12mm	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

Transtech Engineering Corporation,
Punjab Thermal Power Plant, Haveli Bahadar Shah, Jhang,

Test Performed By: Dr. /Engr. M Rehan Ashraf

Client Reference: TEC/UET/19052101
SOM Lab Ref: CED/SOM/880(Page-2/3)
Test: Tension Test & Bend Test
Sample Type: Deformed Bar (Ittefaq Steel)

Dated: 22-05-2019
Dated: 23-05-2019
Test Specification: ASTM-A 615
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	3.788	25	24.80	491	483	279.00	334.70	568	578	682	693	30.0	200	15.0	7443
2	3.782	25	24.77	491	482	284.00	341.20	579	590	695	709	25.0	200	12.5	7443
3	2.439	20	19.89	314	311	168.00	200.20	535	541	637	645	25.0	200	12.5	7088
4	2.425	20	19.83	314	309	165.00	200.20	525	535	637	649	25.0	200	12.5	7088
5	1.550	16	15.85	201	197	114.00	136.00	567	578	676	689	25.0	200	12.5	6875
6	1.554	16	15.88	201	198	117.00	135.00	582	591	671	682	22.5	200	11.3	6875
7	0.927	12	12.26	113	118	51.50	79.70	455	437	705	676	27.5	200	13.8	7380
8	0.927	12	12.26	113	118	51.50	80.00	455	437	707	678	27.5	200	13.8	7380
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Witnessed By: Niaz Hussain, SE, NESPAK

BEND TEST:

25mm	Sample bend through 180 degrees Satisfactorily without any crack	Note:- Only Twelve Samples Received and Tested
20mm	Sample bend through 180 degrees Satisfactorily without any crack	
16mm	Sample bend through 180 degrees Satisfactorily without any crack	
12mm	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

Transtech Engineering Corporation,
Punjab Thermal Power Plant, Haveli Bahadar Shah, Jhang,

Test Performed By: Dr. /Engr. M Rehan Ashraf

Client Reference: TEC/UET/19042601
SOM Lab Ref: CED/SOM/880(Page-3/3)
Test: Tension Test & Bend Test
Sample Type: Deformed Bar (Ittefaq Steel)

Dated: 22-05-2019
Dated: 23-05-2019
Test Specification: ASTM-A 615
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	3.853	25	25.00	491	491	301.00	351.50	613	614	716	716	27.5	200	13.8	1936
2	3.838	25	24.95	491	489	307.00	347.00	625	628	707	710	25.0	200	12.5	1936
3	3.837	25	24.95	491	489	293.00	345.20	597	600	703	707	25.0	200	12.5	6997
4	3.848	25	24.98	491	490	286.00	338.70	583	584	690	691	27.5	200	13.8	6997
5	2.435	20	19.87	314	310	172.70	211.70	550	557	674	683	27.5	200	13.8	1826
6	2.420	20	19.81	314	308	163.00	203.20	519	529	647	660	27.5	200	13.8	1826
7	2.410	20	19.77	314	307	169.00	209.70	538	551	667	684	22.5	200	11.3	1841
8	2.407	20	19.76	314	307	171.70	215.50	547	560	686	703	32.5	200	16.3	1841
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Witnessed By: Niaz Hussain, SE, NESPAK

BEND TEST:

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

Maj. Adnan khalid®

Test Performed By: Dr. /Engr. Abdur Rehman

Dy Dir MTL, Const of Kennel Hospital Sector -E, (Extn) DHA, Ph -6 - (M/S FAUZ Engrs Ltd.)

Client Reference: 408/241/E/Lab/583

SOM Lab

Ref: 872(Page-1/1)

Dated: 22-05-2019

Dated: 23-05-2019

Test: Tension Test & Bend Test

Test Specification:

ASTM-A-615

Gauge Length: 8 inch

Sample Type:

Deformed Bar (City 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	2.621	8	0.990	0.79	0.770	25.86	36.92	72200	74080	103080	105750	1.20	8.0	15.0	
2	2.629	8	0.992	0.79	0.773	25.38	36.51	70860	72420	101940	104180	1.20	8.0	15.0	
3	0.666	4	0.500	0.20	0.196	6.44	9.30	71040	72490	102520	104610	1.50	8.0	18.8	
4	0.662	4	0.498	0.20	0.195	6.42	9.17	70820	72640	101170	103760	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
# 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. Abdur Rehman

Dy Dir MTL, Const of Kennel Hospital Sector -E, (Extn) DHA, Ph -6 - (M/S FAUZ Engrs Ltd.)

Client Reference: 408/241/E/Lab/583-A

SOM Lab

Ref: 872(Page-2/2)

Dated: 22-05-2019

Dated: 23-05-2019

Test: Tension Test

Test Specification:

ASTM-A-615

Gauge Length: 8 inch

Sample Type:

Deformed Bar (City 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	1.465	6	0.741	0.44	0.431	16.00	21.87	80220	81900	109600	111890	0.90	8.0	11.3	
2	1.475	6	0.743	0.44	0.433	16.82	21.89	84310	85670	109700	111470	0.90	8.0	11.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

BEND TEST:

--	No Bend test performed	Note:- Only Two 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.

Nauman
Khurram

Dy Dir MTL, Const of Bdry Wall IVY Green Sector - Z, DHA PH -VIII - (M/S Compliance Engrs)

SOM Lab

Client Reference: 408/241/E/Lab/585/75

Ref:

874(Page-1/1)

Dated: 22-05-2019

Dated:

23-05-2019

Test: Tension Test & Bend Test

Test Specification:

ASTM-A-615

Deformed Bar (Saeed Kasur 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	1.057	5	0.629	0.31	0.311	9.33	14.50	66360	66150	103130	102800	1.10	8.0	13.8	
2	1.037	5	0.623	0.31	0.305	9.43	14.83	67090	68180	105520	107250	1.10	8.0	13.8	
3	0.650	4	0.493	0.20	0.191	6.27	9.73	69130	72390	107350	112410	0.90	8.0	11.3	
4	0.650	4	0.493	0.20	0.191	6.03	9.28	66550	69680	102290	107110	0.90	8.0	11.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

BEND TEST:

# 5	Sample bend through 180 degrees Satisfactorily without any crack	Note:- Only Six 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

Muhammad Saleem Bhatti
Resident Engineer, AZ Engineering Associates, Gujranwala

Test Performed By: Dr. /Engr. Nauman Khurram

Client Reference: AZEA/REKMK/776

SOM Lab

Ref: 875(Page-1/1)

Dated: 21-05-2019

Dated: 23-05-2019

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	2.721	8	1.009	0.79	0.800	19.11	28.80	53360	52690	80400	79390	1.70	8.0	21.3	
2	1.529	6	0.756	0.44	0.449	10.47	15.95	52480	51430	79970	78360	1.60	8.0	20.0	
3	0.669	4	0.501	0.20	0.197	5.02	7.21	55310	56150	79470	80690	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	
# 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 Muhammad Sohaib.

Test Performed By:

Dr. /Engr.

Nauman
Khurram

Assistant Engineer (Civil), Al Hussain Traders Contractors, (Contract No. TLC- 03-2017)

Client Reference: AHT/TLC-03/2701-04

SOM Lab

Ref: 876(Page-1/1)

Dated: 23-05-2019

Dated: 23-05-2019

Test: Tension Test & Bend Test

Test Specification:

ASTM-A-615

Deformed Bar (City
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	3.397	9	1.127	1.00	0.998	27.47	45.13	60590	60710	99530	99730	1.20	8.0	15.0	
2	3.410	9	1.130	1.00	1.002	27.57	45.18	60820	60690	99640	99440	1.30	8.0	16.3	
3	0.650	4	0.493	0.20	0.191	6.09	8.41	67110	70270	92740	97110	1.10	8.0	13.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Witnessed By: Sohaib Ali, NESPAK, Sub - ENGINEER

BEND TEST:

# 9	Sample bend through 180 degrees Satisfactorily without any crack	<p>Note:-</p> <p>Only Five Samples Received and Tested</p>
# 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

Sub Divisional Officer
Buildings Sub Division, Kamalia

Test Performed By: Dr. /Engr. Nauman Khurram

Client Reference: 502/

SOM Lab

Ref: 877 (Page-1/1)

Dated: 20-05-2019

Dated: 23-05-2019

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	1.590	6	0.771	0.44	0.467	10.40	15.57	52120	49110	78020	73510	1.60	8.0	20.0	
2	1.516	6	0.754	0.44	0.446	9.91	13.56	49670	49000	67960	67040	1.30	8.0	16.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

Sub Divisional Officer
Buildings Sub Division, Kamalia

Test Performed By: Dr. /Engr. Nauman Khurram

Client Reference: 500

SOM Lab

Ref: 878 (Page-1/1)

Dated: 20-05-2019

Dated: 23-05-2019

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	1.522	6	0.754	0.44	0.447	10.16	14.98	50940	50150	75110	73940	1.90	8.0	23.8	
2	1.524	6	0.755	0.44	0.448	10.32	14.95	51710	50790	74960	73620	1.80	8.0	22.5	
3	0.660	4	0.497	0.20	0.194	4.56	6.88	50250	51800	75880	78220	1.10	8.0	13.8	
4	0.649	4	0.493	0.20	0.191	4.51	6.70	49690	52030	73850	77330	1.40	8.0	17.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

BEND TEST:

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

Ch Abdul Ghafoor

Test Performed By:

Dr. /Engr.

Nauman Khurram

Resident Engineer, PEPAC, W. W. C. Adjacent to Sundar Ind. Estate, District Kasur (Package-R)

Client Reference: RE/PEPAC/WWC/KSR/83-00

SOM Lab

Ref: 879(Page-1/1)

Dated: 21-05-2019

Dated: 23-05-2019

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	1.482	6	0.745	0.44	0.436	16.69	20.08	83640	84410	100660	101580	1.10	8.0	13.8	
2	1.525	6	0.755	0.44	0.448	16.82	20.23	84310	82800	101420	99610	1.10	8.0	13.8	
3	0.660	4	0.497	0.20	0.194	5.98	9.30	65990	68030	102520	105690	1.10	8.0	13.8	
4	0.663	4	0.498	0.20	0.195	6.19	9.45	68230	69980	104200	106880	1.20	8.0	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

BEND TEST:

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

Sub Divisional Officer
Buildings Sub Division, Arifwala

Test Performed By: Dr. /Engr. M Rizwan Azam

Client Reference: 1126/SDO-PPN

SOM Lab

Ref: 881 (Page-1/1)

Dated: 02-05-2019

Dated: 23-05-2019

Test: Tension 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	1.446	6	0.736	0.44	0.425	15.14	19.27	75880	78560	96570	99980	1.30	8.0	16.3	
2	1.431	6	0.732	0.44	0.421	17.33	20.76	86860	90780	104080	108780	1.10	8.0	13.8	
3	0.647	4	0.492	0.20	0.190	7.39	9.40	81500	85790	103640	109100	1.20	8.0	15.0	
4	0.664	4	0.498	0.20	0.195	7.39	9.60	81500	83590	105890	108610	0.90	8.0	11.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

BEND TEST:

--	No Bend test performed	Note:- Only Four 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.

Nauman
Khurram

By Dir MTL, Infra Development Works of Sector - E, DHA Phase IX - (M/S Inland)

Client Reference: 408/241/E/Lab/589/46

SOM Lab

Ref: 882(Page-1/1)

Dated: 23-05-2019

Dated: 23-05-2019

Test: Tension Test & Bend Test

Test Specification:

ASTM-A-615

Gauge Length: 8 inch

Sample Type:

Deformed Bar (City 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	2.566	8	0.980	0.79	0.754	23.50	35.07	65600	68730	97900	102570	1.40	8.0	17.5	
2	2.624	8	0.991	0.79	0.771	23.14	35.02	64600	66190	97750	100160	1.40	8.0	17.5	
3	1.368	6	0.715	0.44	0.402	16.59	21.87	83130	90990	109600	119960	0.90	8.0	11.3	
4	1.423	6	0.730	0.44	0.418	17.09	22.09	85690	90200	110720	116550	0.90	8.0	11.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

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

Maj Adnan khalid®

Test Performed By: Dr. /Engr.

Nauman
Khurram

By Dir MTL, Infra Development Works Sector - B, DHA Phase V - (M/S Inland)

Client Reference: 408/241/E/Lab/590/27

SOM Lab

Ref: 883(Page-1/1)

Dated: 23-05-2019

Dated: 23-05-2019

Test: Tension Test & Bend Test

Test Specification:

ASTM-A-615

Gauge Length: 8 inch

Sample Type:

Deformed Bar (City 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	2.630	8	0.992	0.79	0.773	22.96	34.66	64090	65500	96760	98890	1.60	8.0	20.0	
2	2.624	8	0.991	0.79	0.771	23.24	34.98	64890	66490	97670	100080	1.50	8.0	18.8	
3	1.461	6	0.739	0.44	0.429	13.91	19.88	69750	71540	99640	102190	1.00	8.0	12.5	
4	1.416	6	0.728	0.44	0.416	16.26	21.94	81500	86200	109960	116300	1.00	8.0	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

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	

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

Sub Divisional Officer
Buildings Sub Division, Arifwala

Test Performed By: Dr. /Engr. M Rizwan Azam

Client Reference: 1126/SDO-PPN

SOM Lab

Ref: 881 (Page-1/1)

Dated: 02-05-2019

Dated: 23-05-2019

Test: Tension 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	1.446	6	0.736	0.44	0.425	15.14	19.27	75880	78560	96570	99980	1.30	8.0	16.3	
2	1.431	6	0.732	0.44	0.421	17.33	20.76	86860	90780	104080	108780	1.10	8.0	13.8	
3	0.647	4	0.492	0.20	0.190	7.39	9.40	81500	85790	103640	109100	1.20	8.0	15.0	
4	0.664	4	0.498	0.20	0.195	7.39	9.60	81500	83590	105890	108610	0.90	8.0	11.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

BEND TEST:

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

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