

M/s Peach Club
a Project of P & D (Pvt) Ltd. Faisalabad

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

Client Reference: nil
Dated: 25-09-2019

SOM Lab
Ref: 1460(Page-1/1)
Dated: 25-09-2019

Test: Tension Test & Bend Test Test Specification:

ASTM-A-615
Deformed
Bar

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	0.605	4	0.476	0.20	0.178	6.20	7.85	68350	76790	86560	97250	1.00	8.0	12.5	
2	0.597	4	0.472	0.20	0.175	6.34	8.10	69920	79910	89370	102130	1.00	8.0	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

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

Maj Adnan khalid®

Test Performed By:

Dr. /Engr.

S. Asad Ali Gillani

Dy Dir MTL, Infra Dev Works (Pkg -II,III & IV) - DHA , Ph-IX (Prism) - (M/S NLC)

Client Reference: 408/241/E/Lab/714/1574

SOM Lab Ref: 1461(Page-1/1)

Dated: 25-09-2019

Dated: 25-09-2019

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	1.266	6	0.688	0.44	0.372	16.59	20.71	83130	98330	103830	122800	1.20	8.0	15.0	
2	1.477	6	0.743	0.44	0.434	17.15	21.22	85940	87130	106380	107850	1.20	8.0	15.0	
3	1.464	6	0.740	0.44	0.430	17.15	21.00	85940	87940	105260	107700	1.10	8.0	13.8	
4	1.489	6	0.747	0.44	0.438	15.26	20.59	76490	76840	103210	103680	1.20	8.0	15.0	
5	0.655	4	0.494	0.20	0.192	7.24	8.58	79810	83140	94650	98590	1.00	8.0	12.5	
6	0.642	4	0.491	0.20	0.189	6.93	8.31	76440	80890	91610	96950	1.10	8.0	13.8	
7	0.652	4	0.494	0.20	0.192	7.29	8.56	80370	83720	94420	98360	1.10	8.0	13.8	
8	0.626	4	0.484	0.20	0.184	6.98	8.15	77000	83700	89930	97750	0.90	8.0	11.3	
9	0.683	4	0.506	0.20	0.201	4.91	7.05	54180	53910	77790	77400	1.20	8.0	15.0	
10	0.687	4	0.507	0.20	0.202	4.76	6.93	52500	51980	76440	75680	1.50	8.0	18.8	

BEND TEST:

--	No Bend test performed

Note:-
Only Ten 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.

S. Asad Ali
Gillani

Dy Dir MTL, Infra Dev Works (Pkg-II , III & IV) - DHA , Ph-IX - (Prism) (M/S NLC)

Client Reference: 408/241/E/Lab/715/1573

SOM Lab

Ref: 1462(Page-1/1)

Dated: 25-09-2019

Dated: 25-09-2019

Test: Tension Test

Test Specification:

ASTM-A-615

Gauge Length: 8 inch

Sample Type:

Deformed Bar (S. J 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	1.477	6	0.743	0.44	0.434	13.93	19.01	69850	70810	95290	96610	1.10	8.0	13.8	
2	1.468	6	0.741	0.44	0.431	12.35	17.48	61930	63220	87630	89460	1.20	8.0	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

Engr M Naveed Sadiq
Resident Engineer, Orbit Housing, Lahore

Test Performed By: Dr. /Engr.

S. Asad Ali
Gillani

Client Reference: Nil

SOM Lab

Ref: 1463(Page-1/1)

Dated: 25-09-2019

Dated: 25-09-2019

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	2.634	8	0.993	0.79	0.774	30.43	36.41	84950	86700	101650	103750	1.20	8.0	15.0	
2	2.510	8	0.969	0.79	0.738	29.41	35.63	82100	87890	99460	106470	1.10	8.0	13.8	
3	1.468	6	0.741	0.44	0.431	14.95	20.03	74960	76520	100400	102500	1.10	8.0	13.8	
4	1.471	6	0.742	0.44	0.432	14.98	19.88	75110	76500	99640	101480	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

Maj Adnan khalid®

Test Performed By: Dr. /Engr.

S. Asad Al: Gillni

Dy Dir MTL, Const of Mosque at Sector -S, DHA Ph-VIII - (M/S Innovative)

SOM Lab

Client Reference: 408/241/E/Lab/716/64

Ref: 1464(Page-1/1)

Dated: 25-09-2019

Dated: 25-08-2019

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	1.480	6	0.744	0.44	0.435	13.83	20.00	69340	70140	100250	101400	1.20	8.0	15.0	
2	1.482	6	0.745	0.44	0.436	13.48	19.22	67550	68170	96320	97200	1.50	8.0	18.8	
3	0.650	4	0.493	0.20	0.191	6.14	8.46	67670	70860	93300	97700	1.10	8.0	13.8	
4	0.647	4	0.492	0.20	0.190	5.78	8.15	63740	67090	89930	94660	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

Muhammad Usman
 GE Project Manager, SMTH, Lahore

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

Client Reference: Nil
 Dated: 11-09-2019

SOM Lab
 Ref: 1465(Page-1/1)
 Dated: 25-09-2019

Test: Tension Test & Bend Test Test Specification:

ASTM-A-615
 Deformed
 Bar

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	1.506	6	0.751	0.44	0.443	17.64	22.27	88400	87800	111640	110890	1.10	8.0	13.8	
2	1.512	6	0.752	0.44	0.444	17.43	22.14	87370	86590	110980	109980	1.00	8.0	12.5	
3	0.666	4	0.500	0.20	0.196	6.57	8.97	72510	73990	98920	100940	1.50	8.0	18.8	
4	0.649	4	0.493	0.20	0.191	6.39	8.69	70480	73800	95770	100290	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

**Project Director (HVDC)
NTDC Lahore**

Test Performed By: Dr. /Engr. Nauman Khurram

Client Reference: 1898-1902/PD/HVDC/NTDC.LHR

SOM Lab

Ref: 1466(Page-2/3)

Dated: 25-09-2019

Dated: 25-09-2019

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	0.991	5	0.609	0.31	0.291	8.97	12.28	63820	67990	87390	93100	1.30	8.0	16.3	
2	0.997	5	0.611	0.31	0.293	8.94	12.05	63600	67290	85720	90700	1.50	8.0	18.8	
3	1.007	5	0.614	0.31	0.296	9.76	13.15	69410	72690	93550	97980	1.00	8.0	12.5	
4	0.991	5	0.609	0.31	0.291	9.91	13.07	70490	75100	92970	99040	1.10	8.0	13.8	
5	1.023	5	0.619	0.31	0.301	9.40	13.27	66870	68870	94420	97250	1.30	8.0	16.3	
6	1.027	5	0.620	0.31	0.302	9.68	13.53	68900	70720	96240	98790	1.30	8.0	16.3	
7	1.019	5	0.617	0.31	0.299	9.60	13.40	68320	70830	95370	98880	1.10	8.0	13.8	
8	1.024	5	0.619	0.31	0.301	9.35	13.17	66500	68490	93700	96500	1.30	8.0	16.3	
9	1.004	5	0.613	0.31	0.295	9.81	13.12	69770	73320	93340	98080	1.10	8.0	13.8	
10	1.002	5	0.612	0.31	0.294	10.62	13.63	75570	79680	96960	102240	1.20	8.0	15.0	

Witnessed By: M. Umair Asalam, DM (HVDC) NTDC, M Abbas OE, & M Aamir

BEND TEST:

# 6	Sample bend through 180 degrees Satisfactorily without any crack	Note:- Only Twenty Samples
# 4	Sample bend through 180 degrees Satisfactorily without any crack	

Received and Tested

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

Project Director (HVDC)
NTDC Lahore

Test Performed By: Dr. /Engr. Nauman Khurram

Client Reference: 1898-1902/PD/HVDC/NTDC.LHR

SOM Lab

Ref: 1466(Page-1/3)

Dated: 25-09-2019

Dated: 25-09-2019

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	2.658	8	0.997	0.79	0.781	25.76	34.78	71920	72740	97100	98220	1.30	8.0	16.3	
2	2.670	8	1.000	0.79	0.785	25.79	34.66	72000	72460	96760	97370	1.30	8.0	16.3	
3	2.670	8	1.000	0.79	0.785	26.01	34.96	72630	73090	97610	98230	1.40	8.0	17.5	
4	2.673	8	1.000	0.79	0.786	26.01	34.81	72630	73000	97190	97680	1.40	8.0	17.5	
5	2.665	8	0.998	0.79	0.783	25.91	34.81	72340	72990	97190	98050	1.30	8.0	16.3	
6	2.659	8	0.997	0.79	0.781	26.07	35.02	72770	73610	97750	98880	1.20	8.0	15.0	
7	0.637	4	0.488	0.20	0.187	5.63	7.75	62050	66370	85430	91370	1.20	8.0	15.0	
8	0.634	4	0.487	0.20	0.186	5.63	7.80	62050	66720	85990	92470	1.00	8.0	12.5	
9	0.638	4	0.488	0.20	0.187	5.71	7.82	62950	67330	86220	92210	1.30	8.0	16.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Witnessed By:

M. Umair Asalam, DM (HVDC) NTDC, M Abbas OE, & M Aamir

BEND TEST:

# 8(S.1,2)	Sample bend through 180 degrees Satisfactorily without any crack	Note:- Only Eighteen Samples Received and Tested
# 8(S.3,4)	Sample bend through 180 degrees Satisfactorily without any crack	
# 8(S.5,6)	Sample bend through 180 degrees Satisfactorily without any crack	
# 4(S. 7,8)	Sample bend through 180 degrees Satisfactorily without any crack	
# 4(S. 9,)	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		

Project Director (HVDC)
NTDC Lahore

Test Performed By: Dr. /Engr. Nauman Khurram

Client Reference: 1898-1902/PD/HVDC/NTDC.LHR

SOM Lab Ref: 1466(Page-2/3)

Dated: 25-09-2019

Dated: 25-09-2019

Test: Tension Test & Bend Test

Test Specification:

ASTM-A-615
Deformed
Bar

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	0.991	5	0.609	0.31	0.291	8.97	12.28	63820	67990	87390	93100	1.30	8.0	16.3	
2	0.997	5	0.611	0.31	0.293	8.94	12.05	63600	67290	85720	90700	1.50	8.0	18.8	
3	1.007	5	0.614	0.31	0.296	9.76	13.15	69410	72690	93550	97980	1.00	8.0	12.5	
4	0.991	5	0.609	0.31	0.291	9.91	13.07	70490	75100	92970	99040	1.10	8.0	13.8	
5	1.023	5	0.619	0.31	0.301	9.40	13.27	66870	68870	94420	97250	1.30	8.0	16.3	
6	1.027	5	0.620	0.31	0.302	9.68	13.53	68900	70720	96240	98790	1.30	8.0	16.3	
7	1.019	5	0.617	0.31	0.299	9.60	13.40	68320	70830	95370	98880	1.10	8.0	13.8	
8	1.024	5	0.619	0.31	0.301	9.35	13.17	66500	68490	93700	96500	1.30	8.0	16.3	
9	1.004	5	0.613	0.31	0.295	9.81	13.12	69770	73320	93340	98080	1.10	8.0	13.8	
10	1.002	5	0.612	0.31	0.294	10.62	13.63	75570	79680	96960	102240	1.20	8.0	15.0	

Witnessed By:

M. Umair Asalam, DM (HVDC) NTDC, M Abbas OE, & M Aamir

BEND TEST:

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

Project Director (HVDC)
NTDC Lahore

Test Performed By:

Dr. /Engr. Nauman Khurram

Client Reference: 1898-1902/PD/HVDC/NTDC.LHR

SOM Lab

Ref:

1466(Page-2/3)

Dated: 25-09-2019

Dated:

25-09-2019

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	0.991	5	0.609	0.31	0.291	8.97	12.28	63820	67990	87390	93100	1.30	8.0	16.3	
2	0.997	5	0.611	0.31	0.293	8.94	12.05	63600	67290	85720	90700	1.50	8.0	18.8	
3	1.007	5	0.614	0.31	0.296	9.76	13.15	69410	72690	93550	97980	1.00	8.0	12.5	
4	0.991	5	0.609	0.31	0.291	9.91	13.07	70490	75100	92970	99040	1.10	8.0	13.8	
5	1.023	5	0.619	0.31	0.301	9.40	13.27	66870	68870	94420	97250	1.30	8.0	16.3	
6	1.027	5	0.620	0.31	0.302	9.68	13.53	68900	70720	96240	98790	1.30	8.0	16.3	
7	1.019	5	0.617	0.31	0.299	9.60	13.40	68320	70830	95370	98880	1.10	8.0	13.8	
8	1.024	5	0.619	0.31	0.301	9.35	13.17	66500	68490	93700	96500	1.30	8.0	16.3	
9	1.004	5	0.613	0.31	0.295	9.81	13.12	69770	73320	93340	98080	1.10	8.0	13.8	
10	1.002	5	0.612	0.31	0.294	10.62	13.63	75570	79680	96960	102240	1.20	8.0	15.0	

Witnessed By:		M. Umair Asalam, DM (HVDC) NTDC, M Abbas OE, & M Aamir	
<u>BEND TEST:</u>			
# 6	Sample bend through 180 degrees Satisfactorily without any crack	Note:- Only Twenty 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			

Project Director (HVDC)
NTDC Lahore

Test Performed By: Dr. /Engr. Nauman Khurram

Client Reference: 1898-1902/PD/HVDC/NTDC.LHR

SOM Lab

Ref: 1466(Page-2/3)

Dated: 25-09-2019

Dated: 25-09-2019

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	0.991	5	0.609	0.31	0.291	8.97	12.28	63820	67990	87390	93100	1.30	8.0	16.3	
2	0.997	5	0.611	0.31	0.293	8.94	12.05	63600	67290	85720	90700	1.50	8.0	18.8	
3	1.007	5	0.614	0.31	0.296	9.76	13.15	69410	72690	93550	97980	1.00	8.0	12.5	
4	0.991	5	0.609	0.31	0.291	9.91	13.07	70490	75100	92970	99040	1.10	8.0	13.8	
5	1.023	5	0.619	0.31	0.301	9.40	13.27	66870	68870	94420	97250	1.30	8.0	16.3	
6	1.027	5	0.620	0.31	0.302	9.68	13.53	68900	70720	96240	98790	1.30	8.0	16.3	
7	1.019	5	0.617	0.31	0.299	9.60	13.40	68320	70830	95370	98880	1.10	8.0	13.8	
8	1.024	5	0.619	0.31	0.301	9.35	13.17	66500	68490	93700	96500	1.30	8.0	16.3	
9	1.004	5	0.613	0.31	0.295	9.81	13.12	69770	73320	93340	98080	1.10	8.0	13.8	

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-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Witnessed By: M. Umair Asalam, DM (HVDC) NTDC, M Abbas OE, & M Aamir

BEND TEST:

# 5(S.1,2)	Sample bend through 180 degrees Satisfactorily without any crack	Note:- Only Four Samples Received and Tested
# 5(S.3,4)	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

Project Director (HVDC)
NTDC Lahore

Test Performed By: Dr. /Engr. Nauman Khurram

Client Reference: 1898-1902/PD/HVDC/NTDC.LHR

SOM Lab

Ref: 1466(Page-2/3)

Dated: 25-09-2019

Dated: 25-09-2019

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	0.991	5	0.609	0.31	0.291	8.97	12.28	63820	67990	87390	93100	1.30	8.0	16.3	
2	0.997	5	0.611	0.31	0.293	8.94	12.05	63600	67290	85720	90700	1.50	8.0	18.8	
3	1.007	5	0.614	0.31	0.296	9.76	13.15	69410	72690	93550	97980	1.00	8.0	12.5	
4	0.991	5	0.609	0.31	0.291	9.91	13.07	70490	75100	92970	99040	1.10	8.0	13.8	
5	1.023	5	0.619	0.31	0.301	9.40	13.27	66870	68870	94420	97250	1.30	8.0	16.3	
6	1.027	5	0.620	0.31	0.302	9.68	13.53	68900	70720	96240	98790	1.30	8.0	16.3	
7	1.019	5	0.617	0.31	0.299	9.60	13.40	68320	70830	95370	98880	1.10	8.0	13.8	

8	1.024	5	0.619	0.31	0.301	9.35	13.17	66500	68490	93700	96500	1.30	8.0	16.3	
9	1.004	5	0.613	0.31	0.295	9.81	13.12	69770	73320	93340	98080	1.10	8.0	13.8	
10	1.002	5	0.612	0.31	0.294	10.62	13.63	75570	79680	96960	102240	1.20	8.0	15.0	

Witnessed By: M. Umair Asalam, DM (HVDC) NTDC, M Abbas OE, & M Aamir

BEND TEST:

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