

Material Engineer,
754 Const Team Engrs, C/O Sig Center (FWO) Chacklala.

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

Client Reference: 607/Lab/UET/003

Dated: 06-11-2019

SOM Lab Ref: CED/SOM/1696 (Page-1/2)

Dated: 06-11-2019

Test: Tension Test & Bend Test

Test Specification: ASTM-A 615

Sample Type: M S 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	2.169	19	18.75	284	276	129.00	174.00	455	468	614	631	40.0	200	20.0	
2	2.179	19	18.80	284	278	130.50	175.20	460	471	618	632	42.5	200	21.3	
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BEND TEST:

19mm	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

Material Engineer,
754 Const Team Engrs, C/O Sig Center (FWO) Chacklala.

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

Client Reference: 607/Lab/UET/004

Dated: 06-11-2019

SOM Lab Ref: CED/SOM/1696 (Page-2/2)

Dated: 06-11-2019

Test: Tension Test & Bend Test

Test Specification: ASTM-A 615

Sample Type: M S 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	3.803	25	24.82	491	484	225.00	302.50	458	465	616	625	40.0	200	20.0	
2	3.785	25	24.78	491	482	224.00	302.00	456	465	615	627	47.5	200	23.8	
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BEND TEST:

25mm	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

Engr. Fizan Hussain
Assistant Engineer, B & W Department, U. E. T. Lahore

Test Performed By: Dr. /Engr.

Riaz Ahmad
Gotaya

Client Reference: B & W/AEN/1200

Dated: 06-11-2019

Test: Tension Test & Bend Test

Gauge Length: 8 inch

Test Specification:

Sample Type:

SOM Lab

Ref: 1691 (Page-1/1)

Dated: 06-11-2019

ASTM-A-615

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	6.88	8.74	75880	78630	96340	99830	1.20	8.0	15.0	
2	0.655	4	0.494	0.20	0.192	7.44	9.35	82060	85480	103080	107370	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

Wajid Ali Shah
GM - Works, FF Steel Lahore

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

Client Reference: Nil

SOM Lab

Ref: 1692(Page-1/1)

Dated: 4-11-019

Dated: 06-11-2019

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	1.522	6	0.754	0.44	0.447	15.67	20.18	78530	77310	101170	99580	1.40	8.0	17.5	
2	1.527	6	0.756	0.44	0.449	15.68	20.08	78590	77010	100660	98640	1.40	8.0	17.5	
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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

M. Kamran Siddiqui
Chief Engineer (HVDC), NTDC, Lahore

Test Performed By: Dr. /Engr.

S. Asad Ali
Gillani

Client Reference: 7726-29/CE/HVDC/NTDC.LHR

Dated: 06-11-2019

Test: Tension Test & Bend Test

Gauge Length: 8 inch

Test Specification:

Sample Type:

SOM Lab

Ref: 1694(Page-1/1)

Dated: 06-11-2019

ASTM-A-615

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	1.470	6	0.742	0.44	0.432	12.92	19.47	64740	65940	97590	99400	1.20	8.0	15.0	
2	1.488	6	0.746	0.44	0.437	13.12	19.54	65760	66210	97950	98620	1.30	8.0	16.3	
3	1.491	6	0.747	0.44	0.438	12.71	19.47	63720	64010	97590	98040	1.50	8.0	18.8	
4	0.647	4	0.492	0.20	0.190	5.78	8.82	63740	67090	97230	102350	1.10	8.0	13.8	
5	0.644	4	0.491	0.20	0.189	5.78	8.82	63740	67450	97230	102890	1.20	8.0	15.0	
6	0.649	4	0.493	0.20	0.191	7.14	8.82	78690	82400	97230	101820	1.00	8.0	12.5	
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Witnessed By: M Abbas OE, M. Umair Asalam, DM (HVDC) NTDC,

BEND TEST:

# 6(S.1,2)	Sample bend through 180 degrees Satisfactorily without any crack
# 6(S.3)	Sample bend through 180 degrees Satisfactorily without any crack
# 4(S.4,5)	Sample bend through 180 degrees Satisfactorily without any crack
# 4(S. 6)	Sample bend through 180 degrees Satisfactorily without any crack

Note:-

Only Twelve Samples Received and Tested

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

M. Kamran Siddiqui
Chief Engineer (HVDC), NTDC, Lahore

Test Performed By: Dr. /Engr.

S. Asad Ali
Gillani

Client Reference: 7726-29/CE/HVDC/NTDC.LHR

SOM Lab

Ref: 1694(Page-1/1)

Dated: 06-11-2019

Dated: 06-11-2019

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	1.470	6	0.742	0.44	0.432	12.92	19.47	64740	65940	97590	99400	1.20	8.0	15.0	
2	1.488	6	0.746	0.44	0.437	13.12	19.54	65760	66210	97950	98620	1.30	8.0	16.3	
3	1.491	6	0.747	0.44	0.438	12.71	19.47	63720	64010	97590	98040	1.50	8.0	18.8	
4	0.647	4	0.492	0.20	0.190	5.78	8.82	63740	67090	97230	102350	1.10	8.0	13.8	
5	0.644	4	0.491	0.20	0.189	5.78	8.82	63740	67450	97230	102890	1.20	8.0	15.0	
6	0.649	4	0.493	0.20	0.191	7.14	8.82	78690	82400	97230	101820	1.00	8.0	12.5	
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Witnessed By: M Abbas OE, M. Umair Asalam, DM (HVDC) NTDC,

BEND TEST:

# 6(S.1,2)	Sample bend through 180 degrees Satisfactorily without any crack
# 6(S.3)	Sample bend through 180 degrees Satisfactorily without any crack
# 4(S.4,5)	Sample bend through 180 degrees Satisfactorily without any crack
# 4(S. 6)	Sample bend through 180 degrees Satisfactorily without any crack

Note:-

Only Twelve Samples
Received and Tested

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

M. Kamran Siddiqui
Chief Engineer (HVDC), NTDC, Lahore

Test Performed By: Dr. /Engr.

S. Asad Ali
Gillani

Client Reference: 7730-33/CE/HVDC/NTDC.LHR

SOM Lab

Ref: 1695(Page-1/1)

Dated: 06-11-2019

Dated: 06-11-2019

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	0.665	4	0.498	0.20	0.195	7.31	8.84	80600	82670	97460	99960	1.00	8.0	12.5	
2	0.653	4	0.494	0.20	0.192	6.65	8.36	73290	76350	92180	96020	1.00	8.0	12.5	
3	0.680	4	0.505	0.20	0.200	6.90	8.58	76100	76100	94650	94650	1.10	8.0	13.8	
4	0.655	4	0.494	0.20	0.192	7.10	8.97	78350	81620	98920	103040	1.10	8.0	13.8	
5	0.653	4	0.494	0.20	0.192	7.70	8.36	84870	88410	92180	96020	0.90	8.0	11.3	
6	0.681	4	0.505	0.20	0.200	7.65	9.63	84310	84310	106230	106230	1.00	8.0	12.5	
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Witnessed By: M Abbas OE, M. Umair Asalam, DM (HVDC) NTDC, & Engr Hassan, CET

BEND TEST:

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