

Engr Muhammad Sohaib.

**Test Performed By:**

Dr. /Engr.

S. Asad Ali Gillani

Assistant Manager (Civil), Al Hussain Traders Contractors, (Tender No: NOR - 701 - 2019)

**Client Reference:** AHT/NOR-701/4397 - 4401

**Dated:** 03-09-2020

**SOM Lab Ref:** CED/SOM/2912 (Page-1/2)

**Dated:** 03-09-2020

**Test:** Tension & Bend Test

**Test Specification:** ASTM-A 615

**Sample Type:** Deformed Bar(Union Steel)

**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 <sup>2</sup>	mm <sup>2</sup>	kN	kN	MPa	MPa	MPa	MPa	mm	mm	%	
1	3.791	25	24.80	491	483	278.20	329.50	567	576	671	683	30.0	200	15.0	
2	3.775	25	24.75	491	481	282.70	339.00	576	588	691	705	30.0	200	15.0	
3	3.748	25	24.66	491	478	282.30	337.50	575	592	688	707	40.0	200	20.0	
4	2.304	20	19.33	314	294	148.00	192.20	471	505	612	655	37.5	200	18.8	
5	2.287	20	19.26	314	291	153.00	193.70	487	526	617	665	32.5	200	16.3	
6	2.281	20	19.24	314	291	156.00	197.20	497	537	628	679	35.0	200	17.5	
7	1.554	16	15.88	201	198	99.70	125.50	496	504	624	634	27.5	200	13.8	
8	1.564	16	15.93	201	199	101.70	126.50	506	511	629	635	30.0	200	15.0	
9	1.574	16	15.98	201	201	98.50	130.20	490	492	648	650	27.5	200	13.8	
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**Witnessed By:** M. Farhan, Sr. Engineer (Civil) Barqaab

**BEND TEST:**

25mm(S1,2) Sample bend through 180 degrees Satisfactorily without any crack

20mm(S4,5) Sample bend through 180 degrees Satisfactorily without any crack

16mm(S7,8) Sample bend through 180 degrees Satisfactorily without any crack

**Note:-**

Only Fifteen Samples Received and Tested

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

Engr Muhammad Sohaib.

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

Assistant Manager (Civil), Al Hussain Traders Contractors, (Tender No: NOR - 701 - 2019)

**Client Reference:** AHT/NOR-701/4397 - 4401

**Dated:** 03-09-2020

**SOM Lab Ref:** CED/SOM/2912 (Page-2/2)

**Dated:** 03-09-2020

**Test:** Tension & Bend Test

**Test Specification:** ASTM-A 615

**Sample Type:** Deformed Bar(Union Steel)

**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 <sup>2</sup>	mm <sup>2</sup>	kN	kN	MPa	MPa	MPa	MPa	mm	mm	%	
1	0.873	12	11.89	113	111	54.70	71.00	484	493	628	640	30.0	200	15.0	
2	0.881	12	11.96	113	112	52.20	68.00	462	465	601	606	30.0	200	15.0	
3	0.880	12	11.95	113	112	55.00	71.20	486	491	630	636	30.0	200	15.0	
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**Witnessed By:** M. Farhan, Sr. Engineer (Civil) Barqaab

**BEND TEST:**

12mm	Sample bend through 180 degrees Satisfactorily without any crack	<b>Note:-</b>  Only Five Samples Received and Tested
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](http://www.uet-civil.edu.pk)

Maj Adnan Khalid ®

Test Performed By:

Dr. /Engr.

S Asad Ali Gillani

Dy Dir MTL, Infra Dev Works Sector-Q Phase-IX, Prism I (M/s DHA Const Coy)

Client Reference: 408/241/E/972/0020

Dated: 03-09-2020

SOM Lab Ref: CED/SOM/2913 (Page-1/2)

Dated: 03-09-2019

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 <sup>2</sup>	mm <sup>2</sup>	kN	kN	MPa	MPa	MPa	MPa	mm	mm	%	
1	4.014	25	25.51	491	511	213.70	335.00	435	419	682	656	35.0	200	17.5	
2	3.980	25	25.41	491	507	179.00	276.20	365	354	563	545	45.0	200	22.5	
3	3.969	25	25.37	491	506	203.50	313.50	415	403	639	621	35.0	200	17.5	
4	3.860	25	25.02	491	492	207.00	326.20	422	421	665	664	27.5	200	13.8	
5	3.941	25	25.28	491	502	204.50	351.00	417	408	715	700	30.0	200	15.0	
6	4.037	25	25.59	491	514	206.00	325.00	420	401	662	632	32.5	200	16.3	
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**BEND TEST:**

--	No Bend test performed	<b>Note:-</b>  Only Six Samples Received and Tested

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

Engr Khawaja Irfan Saddiqui  
 Construction Manager, Deedar Developers Pvt. Ltd. Lahore

**Test Performed By:** Dr. /Engr. M. Irfan Ul Hassan

**Client Reference:** ZD/ZO/L/032

**SOM Lab**

**Ref:** 2909(Page-1/1)

**Dated:** 02-09-2020

**Dated:** 03-09-2020

**Test:** Tension Test & Bend Test

**Test Specification:** ASTM-A-615

ASTM-A-615

**Gauge Length:** 8 inch

**Sample Type:** Deformed Bar

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 <sup>2</sup>	in <sup>2</sup>	Tons	Tons	psi	psi	psi	psi	in	in	%	
1	0.644	4	0.491	0.20	0.189	6.65	8.92	73290	77560	98360	104080	1.40	8.0	17.5	
2	0.685	4	0.506	0.20	0.201	6.73	8.74	74190	73820	96340	95860	1.10	8.0	13.8	
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**BEND TEST:**

# 4	Sample bend through 180 degrees Satisfactorily without any crack	<b>Note:-</b>  Only Three Samples Received and Tested

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

Umair Yousaf

**Test Performed By:**

Dr. /Engr.

S. Asad Ali Gillani

Project Manager, MA Engg. Services, Lahore(Project: Commercial Plaza at Al Rehman Garden Lahore)

**Client Reference:** MA/UETL/008

**SOM Lab**

**Ref:**

2910 (Page-1/1)

**Dated:** 43899

**Dated:**

03-09-2020

**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 <sup>2</sup>	in <sup>2</sup>	Tons	Tons	psi	psi	psi	psi	in	in	%	
1	0.668	4	0.500	0.20	0.196	6.54	8.74	72170	73640	96340	98300	1.20	8.0	15.0	
2	0.667	4	0.500	0.20	0.196	6.54	8.72	72170	73640	96110	98070	1.10	8.0	13.8	
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**BEND TEST:**

# 4	Sample bend through 180 degrees Satisfactorily without any crack	<b>Note:-</b>  Only Three Samples Received and Tested

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

Maj Adnan khalid@

Dy Dir MTL, Infra Dev Works Sector -R, Phase -9 - (M/S DHA Const Coy)

**Test Performed By:**

Dr. /Engr.

S. Asad Ali  
Gillani

**Client Reference:** 408/241/E/Lab/968/888

**Dated:** 28-09-2020

**Test:** Tension Test & Bend Test

**Gauge Length:** 8 inch

**Test Specification:**

**Sample Type:**

**SOM Lab**

**Ref:** 2911(Page-1/1)

**Dated:** 03-09-2020

ASTM-A-615

Deformed Bar ( AF 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 <sup>2</sup>	in <sup>2</sup>	Tons	Tons	psi	psi	psi	psi	in	in	%	
1	2.594	8	0.985	0.79	0.762	24.82	34.73	69300	71840	96960	100520	1.10	8.0	13.8	
2	2.603	8	0.987	0.79	0.765	24.11	34.17	67310	69500	95390	98510	0.90	8.0	11.3	
3	0.673	4	0.502	0.20	0.198	5.73	8.51	63180	63810	93860	94810	1.10	8.0	13.8	
4	0.668	4	0.500	0.20	0.196	5.96	8.51	65760	67100	93860	95780	1.10	8.0	13.8	
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**BEND TEST:**

# 8	Sample bend through 180 degrees Satisfactorily without any crack	<b>Note:-</b>  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](http://www.uet-civil.edu.pk)

Engr Muhammad Sohaib.

**Test Performed By:** Dr. /Engr. S. Asad Ali gillani

Assistant Manager (Civil), Al Hussain Traders Contractors, (Tender No: NOR - 701 - 2019)

**Client Reference:** AHT/NOR-701/4397 - 4401

**SOM Lab**

**Ref:** 2912(Page-1/2)

**Dated:** 03-09-2020

**Dated:** 03-09-2020

**Test:** Tension Test & Bend Test

**Test Specification:** ASTM-A-615

**Gauge Length:** 8 inch

**Sample Type:** Deformed Bar (Union 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 <sup>2</sup>	in <sup>2</sup>	Tons	Tons	psi	psi	psi	psi	in	in	%	
1	2.547	8	0.977	0.79	0.749	28.36	33.59	79170	83510	93770	98900	1.20	8.0	15.0	
2	2.536	8	0.974	0.79	0.745	28.82	34.56	80450	85310	96470	102300	1.20	8.0	15.0	
3	2.518	8	0.971	0.79	0.740	28.78	34.40	80340	85770	96050	102540	1.60	8.0	20.0	
4	1.548	6	0.761	0.44	0.455	15.09	19.59	75620	73130	98210	94970	1.50	8.0	18.8	
5	1.536	6	0.758	0.44	0.451	15.60	19.75	78180	76270	98970	96560	1.30	8.0	16.3	
6	1.532	6	0.757	0.44	0.450	15.90	20.10	79710	77940	100760	98520	1.40	8.0	17.5	
7	1.044	5	0.625	0.31	0.307	10.16	12.79	72310	73010	91020	91910	1.10	8.0	13.8	
8	1.051	5	0.627	0.31	0.309	10.37	12.90	73760	74000	91740	92040	1.20	8.0	15.0	
9	1.057	5	0.629	0.31	0.311	10.04	13.27	71440	71210	94420	94120	1.10	8.0	13.8	
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**Witnessed By:** M. Farhan, Sr. Engineer (Civil) Barqaab

**BEND TEST:**

# 8(Sr.1,2)	Sample bend through 180 degrees Satisfactorily without any crack
# 6(Sr.4,5)	Sample bend through 180 degrees Satisfactorily without any crack
# 5(Sr.7,8)	Sample bend through 180 degrees Satisfactorily without any crack

**Note:-**

Only Fifteen Samples Received and Tested

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

Engr Muhammad Sohaib.

**Test Performed By:**

Dr. /Engr. S. Asad Ali gillani

Assistant manager (Civil), Al Hussain Traders Contractors, (Tender No: NOR - 701 - 2019)

**Client Reference:** AHT/NOR-701/4397 - 4401

**SOM Lab**

**Ref:** 2912(Page-2/2)

**Dated:** 03-09-2020

**Dated:** 03-09-2020

**Test:** Tension Test & Bend Test

**Test Specification:**

ASTM-A-615

**Gauge Length:** 8 inch

**Sample Type:**

Deformed Bar (Union 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 <sup>2</sup>	in <sup>2</sup>	Tons	Tons	psi	psi	psi	psi	in	in	%	
1	0.587	4	0.469	0.20	0.173	5.58	7.24	61490	71090	79810	92270	1.20	8.0	15.0	
2	0.592	4	0.471	0.20	0.174	5.32	6.93	58680	67450	76440	87860	1.20	8.0	15.0	
3	0.591	4	0.471	0.20	0.174	5.61	7.26	61830	71070	80040	92000	1.20	8.0	15.0	
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**Witnessed By:** M. Farhan, Sr. Engineer (Civil) Barqaab

**BEND TEST:**

# 4	Sample bend through 180 degrees Satisfactorily without any crack	<b>Note:-</b>  Only Five 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](http://www.uet-civil.edu.pk)

Muhammad Faizan  
Project Engineer, NETRACON Technologies (Pvt) Ltd. Lahore

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

**Client Reference:** NTT-HO/FSDW-GS/019

**SOM Lab Ref:** 2914,2915(Page-1/1)

**Dated:** 03-09-2020

**Dated:** 03-09-2020

**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 <sup>2</sup>	in <sup>2</sup>	Tons	Tons	psi	psi	psi	psi	in	in	%	
1	2.596	8	0.986	0.79	0.763	26.42	35.52	73770	76380	99180	102690	1.30	8.0	16.3	
2	2.686	8	1.002	0.79	0.789	24.64	33.38	68790	68870	93200	93320	1.40	8.0	17.5	
3	1.497	6	0.748	0.44	0.440	16.69	20.66	83640	83640	103570	103570	1.00	8.0	12.5	
4	1.503	6	0.750	0.44	0.442	16.13	21.00	80830	80470	105260	104780	1.10	8.0	13.8	
5	1.067	5	0.632	0.31	0.314	9.38	14.60	66720	65870	103850	102530	1.20	8.0	15.0	
6	1.045	5	0.625	0.31	0.307	9.28	14.34	66000	66640	102040	103040	1.30	8.0	16.3	
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**Witnessed By:** Sohaib Ali, NESPAK

**BEND TEST:**

# 8(Sr 1&2)	Sample bend through 180 degrees Satisfactorily without any crack	<b>Note:-</b>  Only Twelve Samples Received and Tested
# 6(Sr 3&4)	Sample bend through 180 degrees Satisfactorily without any crack	
# 5(Sr 5&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](http://www.uet-civil.edu.pk)

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

Maj Adnan Khalid ®

Dy Dir MTL.

Infra Dew Works Sector-Q, Phase-IX, (Prism) - (M/S DHA Const Coy)

**Client Reference:** 408/241/E/972/0020

**Dated:** 03-09-2020

**SOM Lab Ref:** CED/SOM/2913(Page-1/2)

**Dated:** 03-09-2020

**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 <sup>2</sup>	kN	kN	MPa	MPa	mm	M m	%	
1	25	25.51	511	213.70	335.00	419	656	35.0	200	17.5	38.5
2	25	25.41	507	179.00	276.20	354	545	45.0	200	22.5	46.4
3	25	25.37	506	203.50	313.50	403	621	35.0	200	17.5	32.8
4	25	25.02	492	207.00	326.20	421	664	27.5	200	13.8	22.7
5	25	25.28	502	204.50	351.00	408	700	30.0	200	15.0	22.88
6	25	25.59	514	206.00	325.00	401	632	32.5	200	16.3	26.7

Sr. No. 1,2 & 3 Sample Size (1000 x 25mm) & Sr. No. 4,5 & 6 Sample Size (800 x 25mm)

**Note:-**

Only Six Samples  
Received and Tested

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



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

Maj Adnan Khalid ®

Dy Dir MTL.

Infra Dew Works Sector-Q, Phase-IX, (Prism) - (M/S DHA Const Coy)

**Client Reference:** 408/241/E/972-B/0020

**Dated:** 03-09-2020

**SOM Lab Ref:** CED/SOM/2913(Page-2/2)

**Dated:** 03-09-2020

**Test:** Tension Test

**Test Specification:** ASTM-F -1554

**Sample Type:** Y Bolt

**Gauge Length:** 25 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 <sup>2</sup>	kN	kN	MPa	MPa	mm	mm	%	
1	12	9.0	63.61	31.0	44.7	487.29	702.64	5.0	25	20.0	39.5
2	12	9.0	63.61	36.0	58.0	565.88	911.70	5.0	25	20.0	58.5
3	12	9.0	63.61	31.6	45.0	496.72	707.36	7.5	25	30.0	64.0

**Note:-**

Only Three Samples  
Received and Tested

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

