

Major Muhammad Aslam, (Retd)

Test Performed By:

Dr. /Engr.

S. Asad Ali Gillani

Resident Engineer, Penta Square Project, Al-Imam Enterprises (Pvt) Ltd Lahore

Client Reference: Al-Imam/746/PS-1/DHA/LHE/1241

Dated: 20-01-2021

SOM Lab Ref: CED/SOM/3801(Page-1/1)

Dated: 008-02-2021

Test: Tension Test

Test Specification:

ASTM-F-1554

Sample Type: J - Bolt 25mm

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	4.011	25	25.51	491	511	163.70	232.70	333	321	474	456	62.5	200	31.3	
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BEND TEST:

--	No Bend test performed	Note:- Only One Sample Received and Tested

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

Muhammad Shabbir
Construction Manager, Opal Deevan Developers Pvt. Ltd. Lahore

Test Performed By:

Dr. /Engr.

S Asad Ali Gillani

Client Reference: ZD/ZO/L/022

Dated: 08-02-2021

SOM Lab Ref: CED/SOM/3807 (Page-1/1)

Dated: 08-02-2021

Test: Tension Test & Bend Test

Test Specification: ASTM-A-615

Sample Type: 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	0.854	12	11.78	113	109	53.20	74.00	470	489	654	679	27.5	200	13.8	
2	0.846	12	11.72	113	108	52.00	74.20	460	483	656	689	30.0	200	15.0	
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BEND TEST:

12mm	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

Abdullah Hussain

Test Performed By:

Dr. /Engr.

Bilal Anwar

Resident Engineer, NESPAK Off, Street Ayesha Musjid Rawailpura(opposite Fateh Garh Agency) Sialkot

Client Reference: Nespak/SAH/UET/005

Dated: 06-02-2021

SOM Lab Ref: CED/SOM/3808 (Page-1/1)

Dated: 08-02-2021

Test: Tension Test Bend Test

Test Specification: ASTM-A-615

Sample Type: Deformed Bar (Ittefaq 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 ²	mm ²	kN	kN	MPa	MPa	MPa	MPa	mm	mm	%	
1	4.015	25	25.51	491	511	249.60	382.70	508	489	780	749	27.5	200	13.8	
2	3.911	25	25.19	491	498	262.80	404.70	535	528	824	813	27.5	200	13.8	
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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

Sajjad Ali Memon
Resident Engineer, Pillar & Sons, DHA Multan

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

Client Reference: P&S/OTH/GEN/00008

Dated: 5-02-2021

Test: Tension Test & Bend Test

Gauge Length: 8 inch

Test Specification:

Sample Type:

SOM Lab

Ref:

Dated:

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08-02-2021

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	2.737	8	1.012	0.79	0.804	26.45	35.34	73850	72560	98660	96950	1.30	8.0	16.3	
2	2.674	8	1.000	0.79	0.786	27.88	36.72	77830	78230	102510	103030	1.00	8.0	12.5	
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BEND TEST:

# 8	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

Abdul Ghafar
Project Manager Liberty Builders, Lahore

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

Client Reference: ST/UET/ 20210128-40

SOM Lab

Ref:

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Dated: 08-02-2021

Dated: 08-02-2021

Test: Tension Test & Bend Test

Test Specification: ASTM-A-615

Gauge Length: 8 inch

Sample Type:

Deformed Bar(Batala Premium)

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	24.21	34.02	67590	69980	94970	98330	1.40	8.0	17.5	
2	2.614	8	0.989	0.79	0.768	24.06	33.69	67160	69090	94050	96750	1.50	8.0	18.8	
3	2.587	8	0.984	0.79	0.760	24.08	33.81	67220	69870	94400	98120	1.40	8.0	17.5	
4	1.460	6	0.739	0.44	0.429	13.46	19.44	67450	69180	97440	99940	1.10	8.0	13.8	
5	1.453	6	0.737	0.44	0.427	14.07	19.78	70510	72660	99130	102140	1.00	8.0	12.5	
6	1.357	6	0.713	0.44	0.399	12.64	18.76	63360	69870	94020	103680	1.40	8.0	17.5	
7	0.660	4	0.497	0.20	0.194	5.81	8.74	64080	66060	96340	99310	1.30	8.0	16.3	
8	0.670	4	0.501	0.20	0.197	5.86	8.84	64640	65620	97460	98940	1.50	8.0	18.8	
9	0.667	4	0.500	0.20	0.196	5.81	8.77	64080	65380	96670	98650	1.50	8.0	18.8	
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BEND TEST:

# 8	Sample bend through 180 degrees Satisfactorily without any crack	Note:- Only Twelve 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

Abdul Ghafar
Project Manager Liberty Builders, Lahore

Test Performed By:

Dr. /Engr.

S. Asad Ali
Gillani

Client Reference: ST/UET/ 20210128-32

Dated: 08-02-2021

SOM Lab
Ref:

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1/1)

Dated:

08-02-2021

Test: Tension Test & Bend Test
Gauge Length: 8 inch

Test Specification: ASTM-A-615
Sample Type: Deformed Bar(Batala Premium)

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	24.43	36.16	68220	69180	100940	102370	1.30	8.0	16.3	
2	2.615	8	0.989	0.79	0.768	24.33	35.27	67930	69880	98470	101290	1.60	8.0	20.0	
3	2.618	8	0.990	0.79	0.769	25.05	35.65	69920	71830	99520	102240	1.30	8.0	16.3	
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BEND TEST:

# 8	Sample bend through 180 degrees Satisfactorily without any crack	Note:- Only Four 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

Dated: 08-02-2021

SOM Lab Ref: 3800(Page-1/1)
Dated: 08-02-2021

Test: Tension Test & Bend Test
Gauge Length: 8 inch

Test Specification: ASTM-A-615
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	2.626	8	0.991	0.79	0.772	28.00	37.87	78180	80000	105720	108190	1.30	8.0	16.3	
2	2.641	8	0.994	0.79	0.776	27.75	37.87	77460	78860	105720	107630	1.40	8.0	17.5	
3	1.492	6	0.747	0.44	0.438	15.97	20.18	80070	80430	101170	101630	1.30	8.0	16.3	
4	1.483	6	0.745	0.44	0.436	15.90	19.88	79710	80440	99640	100550	1.20	8.0	15.0	
5	0.660	4	0.497	0.20	0.194	7.67	9.25	84530	87150	101960	105110	1.00	8.0	12.5	
6	0.664	4	0.498	0.20	0.195	7.31	9.07	80600	82670	100050	102610	1.10	8.0	13.8	
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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

M. Waqas Zafar
Project Director, PEACH CLUB, Lahore

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

Client Reference: nil

Dated: 08-02-2021

Test: Tension Test & Bend Test

Gauge Length: 8 inch

Test Specification:

Sample Type:

SOM Lab

Ref:

Dated:

ASTM-A-615

Deformed Bar

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08-02-2021

S.No.	Weight	Dia.	Area	Yield	Ultimate	Yield Stress	Ult. Stress	Elongation	Gauge Length	% Elongation	Remarks
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		Nominal	Calculated	Nominal	Calculated	Load	Load	(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	0.661	4	0.497	0.20	0.194	7.31	9.12	80600	83090	100610	103720	1.20	8.0	15.0	
2	0.655	4	0.494	0.20	0.192	7.39	9.07	81500	84890	100050	104210	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

Muhammad Shabbir
Construction Manager, Opal, Deever Developers Pvt. Ltd. Lahore

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

Client Reference: ZD/ZO/L/022

Dated: 08-02-2021

Test: Tension Test & Bend Test

Gauge Length: 8 inch

SOM Lab 3807(Page-1/1)

Ref: 1/1)

Dated: 08-02-2021

Test Specification: ASTM-A-615

Sample Type: Deformed Bar

S. No	Weight	Dia.	Area	Yield	Ultimate	Yield Stress	Ult. Stress	Engineering	Engineering	Remarks
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		Nominal	Calculated	Nominal	Calculated	Load	Load	(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	0.664	4	0.498	0.20	0.195	5.73	8.69	63180	64800	95770	98230	1.30	8.0	16.3	
2	0.652	4	0.494	0.20	0.192	6.83	8.89	75320	78450	98020	102110	1.20	8.0	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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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

Abdullah Hussain
Resident Engineer, NESPAK Off, Street Ayesha Musjid Rawailpura(opposite Fateh Garh Agency) Sialkot

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

Client Reference: Nespak/SAH/UET/005 **SOM Lab Ref:** 3808 (Page-1/1)

Dated: 06-02-2021 **Dated:** 08-02-2021

Test: Tension Test & Bend Test **Test Specification:** ASTM-A-615

Guage Length: 8 inch **Sample Type:** Deformed Bar(Ittefaq Steel)

Sl. No	Weight	Dia.	Area	Yield	Ultimate	Yield Stress	Ult. Stress	Designation	Remarks
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		Nominal	Calculated	Nominal	Calculated	Load	Load	(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	1.481	6	0.744	0.44	0.435	15.24	19.22	76390	77270	96320	97420	1.20	8.0	15.0	
2	1.463	6	0.740	0.44	0.430	15.44	19.39	77410	79210	97180	99440	1.40	8.0	17.5	
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BEND TEST:

# 6	Sample bend through 180 degrees Satisfactorily without any crack	Note:- Only Three 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 Saeed
Project Engineer, ICON Developers (Project: BAH Wapda Town, Guranwala)

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

Client Reference: Nil

Dated: 04-02-2021

Test: Tension Test & Bend Test

Gauge Length: 8 inch

SOM Lab 3809 (Page-1/1)

Ref: 08-02-2021

Dated: 08-02-2021

Test Specification: ASTM-A-615

Sample Type: Deformed Bar

S. No	Weight	Dia.	Area	Yield	Ultimate	Yield Stress	Ult. Stress	Engineering	Engineering	Remarks
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		Nominal	Calculated	Nominal	Calculated	Load	Load	(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	2.567	8	0.980	0.79	0.754	32.21	39.30	89930	94220	109710	114940	1.20	8.0	15.0	
2	2.592	8	0.985	0.79	0.762	32.31	39.14	90210	93530	109280	113290	1.20	8.0	15.0	
3	1.483	6	0.745	0.44	0.436	16.21	20.13	81240	81990	100910	101840	1.20	8.0	15.0	
4	1.466	6	0.741	0.44	0.431	16.31	20.13	81750	83460	100910	103020	1.00	8.0	12.5	
5	0.683	4	0.506	0.20	0.201	7.24	9.14	79810	79420	100830	100330	1.10	8.0	13.8	
6	0.657	4	0.496	0.20	0.193	7.03	8.74	77560	80380	96340	99830	1.00	8.0	12.5	
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-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

ICON Developers
Project Residence 34-D1 Gulberg -2, Lahore

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

Client Reference: Nil

SOM Lab 3810 (Page-1/1)

Dated: 08-02-2021

Dated: 08-02-2021

Test: Tension Test & Bend Test

Test Specification: ASTM-A-615

Gauge Length: 8 inch

Sample Type: Deformed Bar(AFCO Steel)

S. No	Weight	Dia.	Area	Yield	Ultimate	Yield Stress	Ult. Stress	Engineering	Engineering	Remarks
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		Nominal	Calculated	Nominal	Calculated	Load	Load	(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	30.28	38.02	84520	88560	106150	111220	1.30	8.0	16.3	
2	2.558	8	0.979	0.79	0.752	30.07	37.77	83950	88190	105440	110770	1.20	8.0	15.0	
3	1.457	6	0.738	0.44	0.428	12.33	16.94	61830	63560	84920	87300	1.30	8.0	16.3	
4	1.447	6	0.736	0.44	0.425	12.08	16.92	60550	62690	84820	87810	1.50	8.0	18.8	
5	0.681	4	0.505	0.20	0.200	7.67	9.45	84530	84530	104200	104200	1.00	8.0	12.5	
6	0.663	4	0.498	0.20	0.195	7.26	9.53	80040	82090	105100	107800	1.00	8.0	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

Test Performed By: Dr. M. Irfan ul Hassan

Resident Engineer
NESPAK JOB # 3976 PICIIP
73-A, W Block Farid Town Sahiwal

Client Reference: 3976/11/MT/01/Lot-1/27

Dated 02-02-2021

SOM Laboratory Reference: CED/SOM/3803(Page-1/1)

Dated 08-02-2021

Test: Hoop Tensile Test, Tensile Strength Test & Compraiion Test.

Sample Type: GRP Pipe (Bland Pipe) 10" Diameter

GRP Pipe 10" inch)

External Diameter = 250 mm,

Wall Thickness = 6.8 mm

Tensile Test

Sample Type	Size of Sample (mm)	Ultimate Load (kN)	Ultimate Stress (MPa)
Fiberglass Blind Pipe	28.5 x 6.5	54.7	

Compressive Test

Sample Type	Size of Sample (mm)	Compressive Load (kN)	Compressive Stress (MPa)
Fiberglass Blind Pipe	13.2 x 10.5	30.0	

Hoop Tensile Test (ASTM-D-2290-04)

Sample Size (mm)				Hoop Tensile Load (kN)	Hoop Stress (MPa)
b ₁	t ₁	b ₂	t ₂		
10.8	6.5	10.5	6.5	72.5	

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

Test Performed By: Dr. M. Irfan ul Hassan

Resident Engineer
NESPAK JOB # 3976 PICIIP
73-A, W Block Farid Town Sahiwal

Client Reference: 3976/11/MT/01/Lot-1/27

Dated 02-02-2021

SOM Laboratory Reference: CED/SOM/3803(Page-2/2)

Dated 08-02-2021

Test: Hoop Tensile Test, Tensile Strength Test & Compaion Test.

Sample Type: GRP Pipe (Strainer Pipe) 10" Diameter

GRP Pipe 10" inch)

External Diameter = 263 mm,

Wall Thickness = 6.7 mm

Tensile Test

Sample Type	Size of Sample (mm)	Ultimate Load (kN)	Ultimate Stress (MPa)
Fiberglass Strainer Pipe	28.2 x 6.7	56.7	

Compressive Test

Sample Type	Size of Sample (mm)	Compressive Load (kN)	Compressive Stress (MPa)
Fiberglass Strainer Pipe	9.0 x 12.0	25.0	

Hoop Tensile Test (ASTM-D-2290-04)

Sample Size (mm)				Hoop Tensile Load (kN)	Hoop Stress (MPa)
b ₁	t ₁	b ₂	t ₂		
11.0	6.7	11.0	6.7	72.5	

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

Test Performed By: Dr. M. Irfan ul Hassan

Resident Engineer
NESPAK JOB # 3976 PICIIP
73-A, W Block Farid Town Sahiwal

Client Reference: 3976/11/MT/01/Lot-1/27

Dated 02-02-2021

SOM Laboratory Reference: CED/SOM/3803(Page-1/1)

Dated 08-02-2021

Test: Hoop Tensile Test, Tensile Strength Test & Compression Test.

Sample Type: GRP Pipe (Bland Pipe) 10" Diameter

GRP Pipe 10" inch)

External Diameter = 250 mm,

Wall Thickness = 6.8 mm

Tensile Test

Sample Type	Size of Sample (mm)	Ultimate Load (kN)	Ultimate Stress (MPa)
Fiberglass Blind Pipe	28.5 x 6.5	54.7	295.27

Compressive Test

Sample Type	Size of Sample (mm)	Compressive Load (kN)	Compressive Stress (MPa)
Fiberglass Blind Pipe	13.2 x 10.5	30.0	216.45

Hoop Tensile Test (ASTM-D-2290-04)

Sample Size (mm)				Hoop Tensile Load (kN)	Hoop Stress (MPa)
b ₁	t ₁	b ₂	t ₂		
10.8	6.5	10.5	6.5	72.5	516.38

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

Test Performed By: Dr. M. Irfan ul Hassan

Resident Engineer
NESPAK JOB # 3976 PICIIP
73-A, W Block Farid Town Sahiwal

Client Reference: 3976/11/MT/01/Lot-1/27 Dated 02-02-2021

SOM Laboratory Reference: CED/SOM/3803(Page-2/2) Dated 08-02-2021

Test: Hoop Tensile Test, Tensile Strength Test & Compression Test.

Sample Type: GRP Pipe (Strainer Pipe) 10" Diameter

GRP Pipe 10" inch)

External Diameter = 263 mm,

Wall Thickness = 6.7 mm

Tensile Test

Sample Type	Size of Sample (mm)	Ultimate Load (kN)	Ultimate Stress (MPa)
Fiberglass Strainer Pipe	28.2 x 6.7	56.7	300.1

Compressive Test

Sample Type	Size of Sample (mm)	Compressive Load (kN)	Compressive Stress (MPa)
Fiberglass Strainer Pipe	9.0 x 12.0	25.0	231.48

Hoop Tensile Test (ASTM-D-2290-04)

Sample Size (mm)				Hoop Tensile Load (kN)	Hoop Stress (MPa)
b ₁	t ₁	b ₂	t ₂		
11.0	6.7	11.0	6.7	72.5	491.86

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

Test Performed by: .S. Asad Ali Gillani

Ilam-ul-Din & Sons
Lahore

Client Reference No.: Nil

Dated: 08-02-2021

SOM Lab Ref: CED/SOM/3804 (Page 1/2)

Dated: 08-02-2021

Test Type: Tensile Test

Sample Type: Nut - Bolts (16mm Diameter)

Test Specification: ASTM – F-606

Tensile Test Results

Sample No.	Sample Type	Tested Diameter of Bolt (mm)	Ultimate Load (kN)	Ultimate Tensile Stress (MPa)	% Elongation
1	Nut- Bolt - 8.8 (16mm)	10.3	70.2	842	10.0

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

Test Performed by: .S. Asad Ali Gillani

Ilam-ul-Din & Sons
Lahore

Client Reference No.: Nil

Dated: 08-02-2021

SOM Lab Ref: CED/SOM/3804 (Page 2/2)

Dated: 08-02-2021

Sample Type: Nut - Bolts (16mm)

Test Type: Hardness Test

Hardness Test Details:

Machine used: Avery Rockwell Hardness Testing Machine

(Minor Load: 10 Kgf Major Load: 140.0 kgf Scale: C)

Hardness Test Results

Sample No.	Sample Type	Hardness
1	Bolt 16mm	HR – 15.17 – C
2	Nut 16mm	HR – 10.83 – C

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

Test Performed by: Dr. M Irfan Ul Hassan

Uzair Khan Jilani

Material Engineer

HBRP -- Haripur

Project: Construction of Haripur Bypass Road Project (package-VII)

Client Reference No.: RE/ACE/HBRP/Lab/83

Dated: 03-02-2021

SOM Lab Ref: CED/SOM/3805(Page-1/1)

Dated: 08-02-2021

Test: Tensile Test, Elongation at Break, Tear Test, Comp. Set Test & Hardness Test

Sample Type: Testing of Elastomeric Bearing Pad

TENSILE STRENGTH TEST (AS PER ASTM-D-412)

S. No	Sample Size (mm x mm)	Tensile Strength at (kN)	Tensile Strength (MPa)	% age Elongation
1	4.6 x 2.8	0.40	310	560.0

TEAR STRENGTH (AS PER ASTM-D-624)

S. No	Sample Size (mm)	Ultimate Load (kN)	Tear Strength (N/mm)
1	12.5 x 2.8	0.21	75.0

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

S. No.	Thickness of Sample (mm)	Final Thickness (mm)	Compression set (%)
1	2.80	2.75	3.5

- HARDNESS TEST (AS PER ASTM-D-2240)

S. No	Sample Type	Hardness (Shore A)
1	Elastomeric Bearing Pad	61.66

