



STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
 Material Engineer
 Project Implementation Consultants (PICs)
 Jalalpur Irrigation Project (JIP)

Reference # CED/TFL **36606** (Dr. Ali Ahmed)
 Reference of the request letter # JIPIC/TECH/CRE/249

Dated: 21-06-2021
 Dated: 14-06-2021

Tension Test Report (Page – 1/1)

Date of Test 07-07-2021
 Gauge length 2 inches
 Description Elastomeric Bearing Pad Plate Steel Strip Tensile Test

Sr. No.	Designation	Size of Strip	X Section Area	Yield load	Breaking Load	Yield Stress	Ultimate Stress	Elongation	% Elongation	Remarks
	-----	(mm)	(mm ²)	(kg)	(kg)	(MPa)	(MPa)	(in)		
1	Elastomeric Bearing Pad Plate	13.30x3.10	41.23	-----	2600	-----	618.63	1.00	50.00	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
Only One Sample for Tensile Test										
Bend Test										

I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

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STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
CEO
Bemsol Pvt. Ltd
Structural Strengthening Silos at Kohat Cement

Reference # CED/TFL **36687** (Dr. Ali Ahmed)
Reference of the request letter # BPL/UET/202107031

Dated: 05-07-2021
Dated: 003-07-2021

Tension Test Report (Page – 1/4)

Date of Test 07-07-2021
Gauge length 640 mm
Description Steel Strand Tensile Test as per ASTM A-416-94a

Sr. No.	Nominal Diameter	Nominal Weight	Measured weight	Yield strength clause (6.3)		Breaking strength clause (6.2)		Young's Modulus of Elasticity	% Elongation	Remarks / Coil No.
	(mm)	(kg/km)	(kg/km)	(kg)	(kN)	(kg)	(kN)	E, GPa		
1	15.24 (0.6")	1102.0	1120.0	24000	235.44	27300	267.81	199	>3.50	21019016-3
2	15.24 (0.6")	1102.0	1131.0	25000	245.25	27300	267.81	198	>3.50	21011014-6
3	15.24 (0.6")	1102.0	1120.0	24100	236.42	26900	263.89	199	>3.50	21019019-7
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-

Only three samples for Test

Note:

1. Modulus of Elasticity is based on nominal steel area of the steel strand vide clause 13.3 of ASTM – A416a
2. Load versus percentage strain graphs are attached

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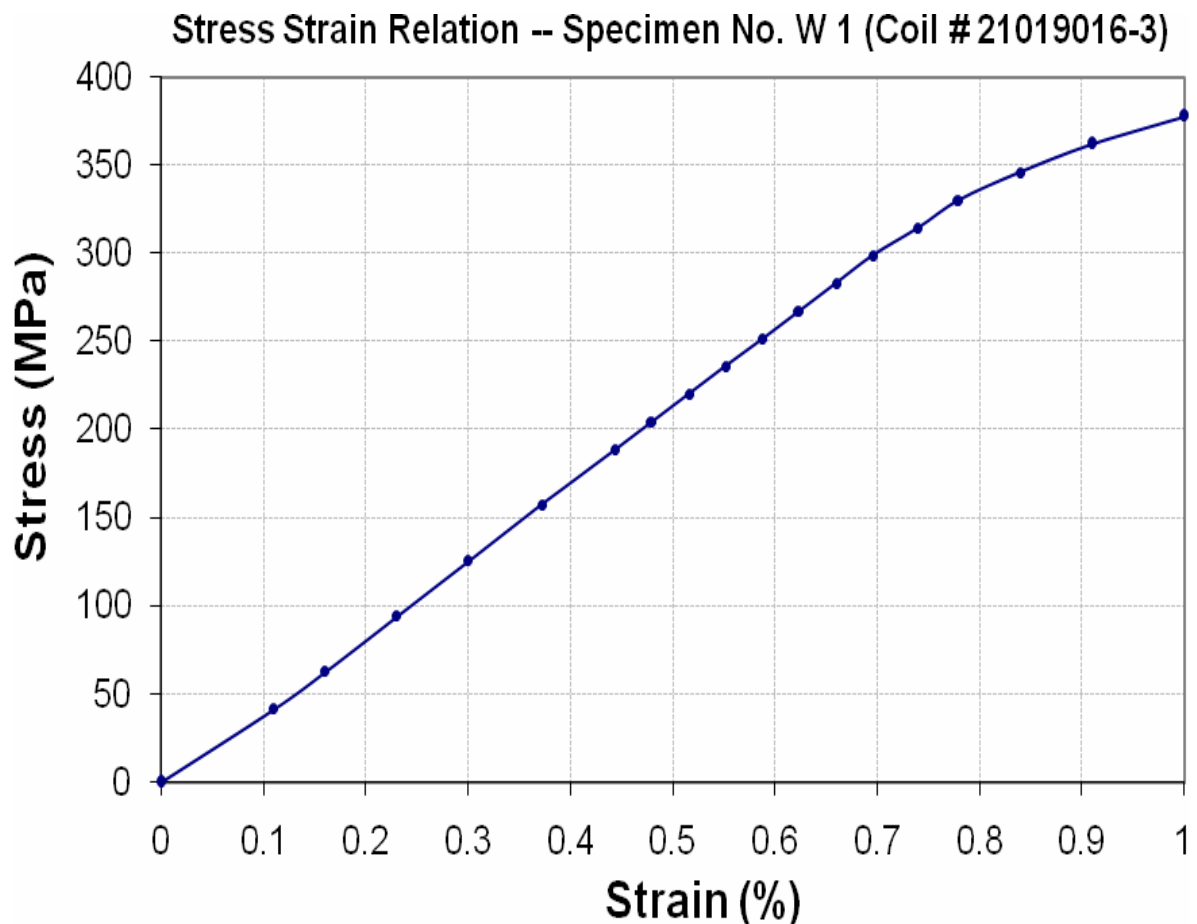
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Reference # CED/TFL 36687 (Dr. Ali Ahmed)
Reference of the request letter # BPL/UET/202107031

Dated: 05-07-2021
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Graph (Page – 2/4)



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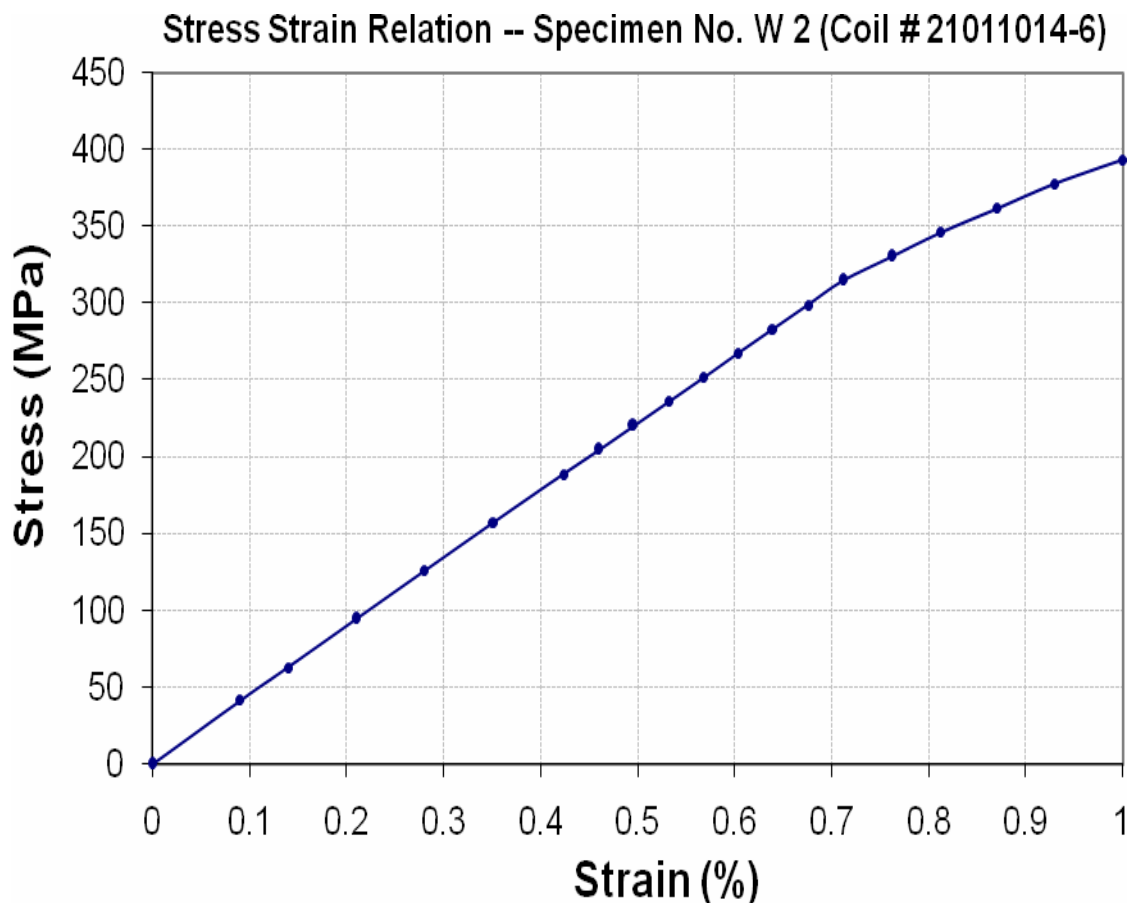
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CEO
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Reference # CED/TFL 36687 (Dr. Ali Ahmed)
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Dated: 05-07-2021
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Graph (Page – 3/4)



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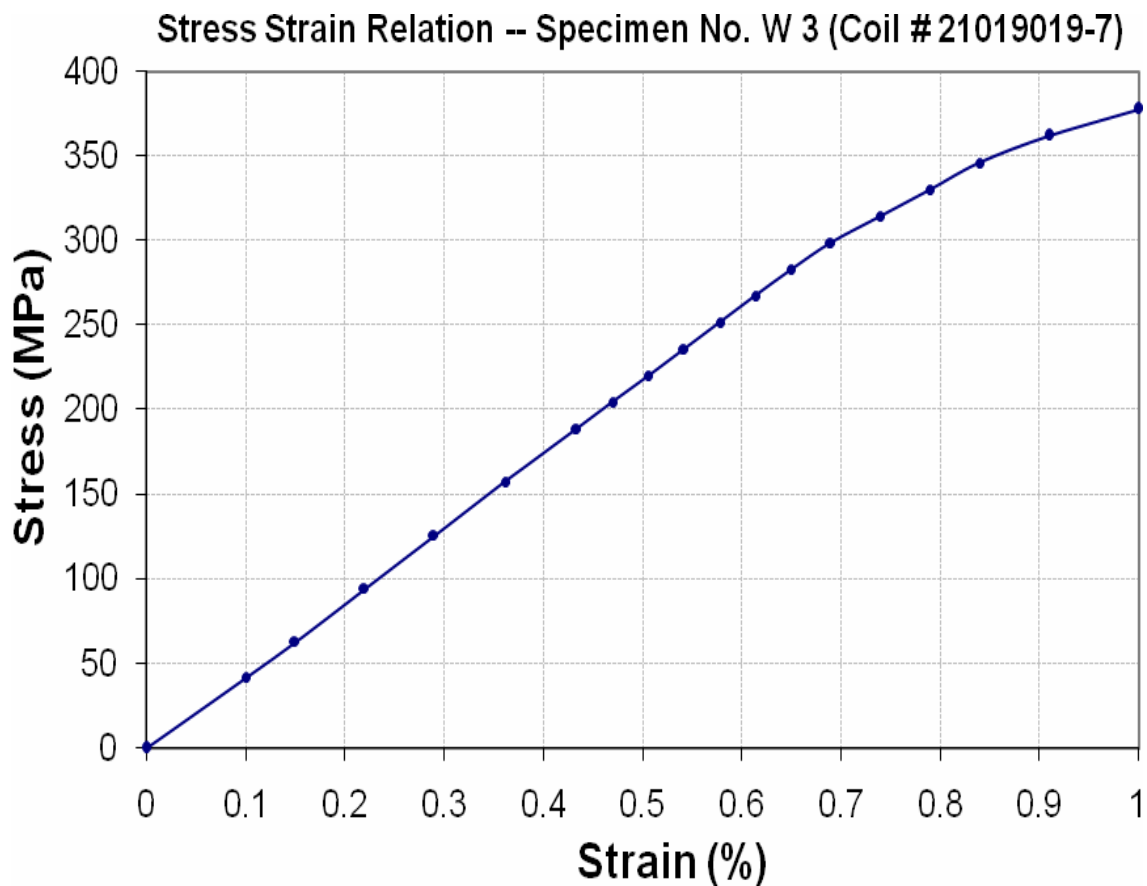
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Reference # CED/TFL 36687 (Dr. Ali Ahmed)
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Dated: 05-07-2021
Dated: 003-07-2021

Graph (Page – 4/4)



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UET Lahore, Pakistan.

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To,
 Manager Construction
 Orient Electronics (Pvt) Ltd
 Construction of Orient Square Hotel Tower Johar Town

Reference # CED/TFL 36697 (Dr. Ali Ahmed) Dated: 06-07-2021
 Reference of the request letter # OSH-SO/UET/KamranTest/050721-27 Dated: 05-07-2021

Tension Test Report (Page -1/1)

Date of Test 07-07-2021
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight (lbs/ft)	Diameter/ Size (mm)		Area (in ²)		Yield load (kg)	Breaking Load (kg)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
		Nominal	Actual	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.372	10	9.48	0.12	0.109	2800	4500	51441	56410	82673	90700	1.00	12.5	
2	0.372	10	9.47	0.12	0.109	3000	4500	55115	60540	82673	90800	1.10	13.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
10mm Dia Bar Bend Test Through 180° is Satisfactory														

I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

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STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

Ref: CED/TFL/07/36698
Dated of Test: 07-07-2021

Dated: 06-07-2021

To,
M/S Amjad Engineering Services
Lahore

Subject: - CALIBRATION OF PRESSURE GAUGE (MARK: TFL/07/36698) (Page -1/2)

Reference to your Letter No. 2727B, Dated: 06/07/2021 on the subject cited above. One Pressure Gauge No. AES-1501 as received by us has been calibrated. The results are tabulated as under:

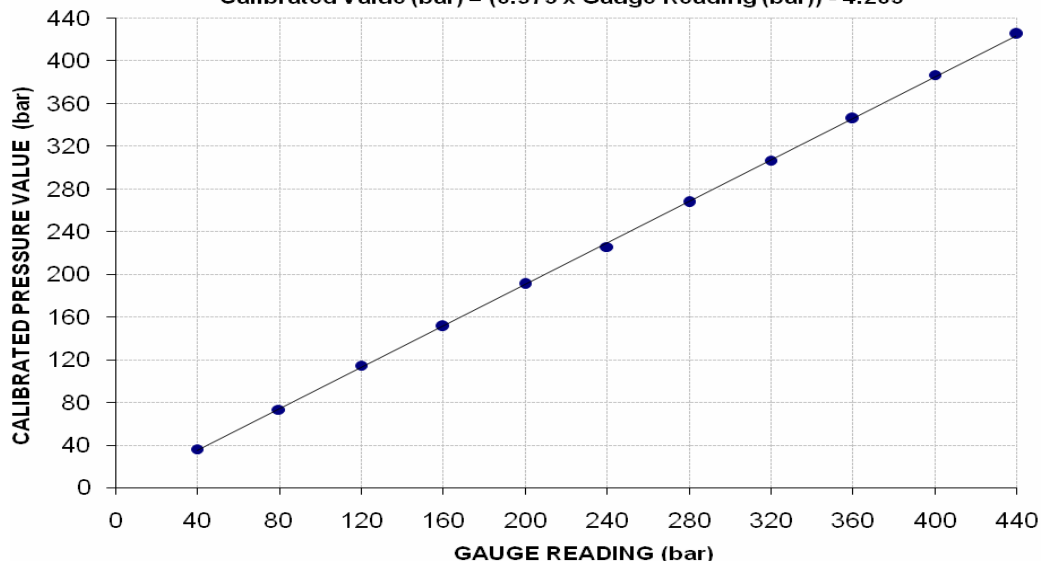
Total Range : Zero - 1000 (bar)
Calibrated Range : Zero - 440 (bar)

Pressure Gauge Reading (bar)	40	80	120	160	200	240	280	320	360	400	440
Calibrated Load (kg)	7300	14800	23100	30500	38500	45600	54000	61900	69900	78100	85900
Calibrated Pressure (bar)	36.16	73.30	114.42	151.07	190.69	225.86	267.46	306.59	346.22	386.83	425.47

The Ram Area use for Calibration = 198 cm^2

Calibration Curve for Pressure Gauge No. AES-1501

Calibrated Value (bar) = $(0.973 \times \text{Gauge Reading (bar)}) - 4.205$



I/C Testing Laboratories
UET Lahore, Pakistan.

Note:

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STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

Ref: CED/TFL/07/36698
Dated of Test: 07-07-2021

Dated: 06-07-2021

To,
M/S Amjad Engineering Services
Lahore

Subject: - CALIBRATION OF PRESSURE GAUGE (MARK: TFL/07/36698) (Page -2/2)

Reference to your Letter No. 2727B, Dated: 06/07/2021 on the subject cited above. One Pressure Gauge No. AES-1502 as received by us has been calibrated. The results are tabulated as under:

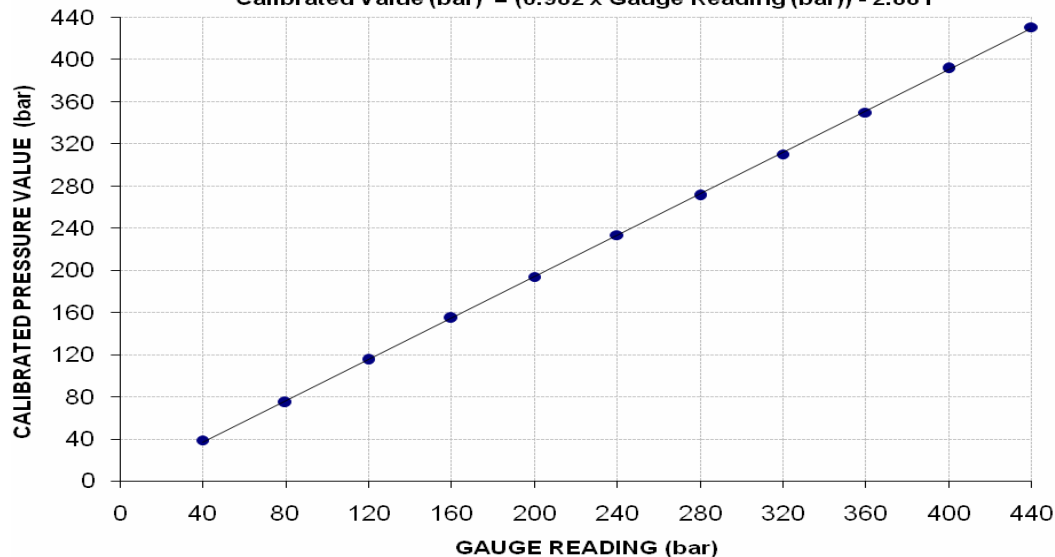
Total Range : Zero - 1000 (bar)
Calibrated Range : Zero - 440 (bar)

Pressure Gauge Reading (bar)	40	80	120	160	200	240	280	320	360	400	440
Calibrated Load (kg)	7800	15000	23200	31200	39100	47100	54700	62600	70600	79100	87000
Calibrated Pressure (bar)	38.63	74.30	114.91	154.53	193.66	233.29	270.93	310.06	349.68	391.78	430.91

The Ram Area use for Calibration = 198 cm^2

Calibration Curve for Pressure Gauge No. AES-1502

Calibrated Value (bar) = $(0.982 \times \text{Gauge Reading (bar)}) - 2.881$



I/C Testing Laboratories
UET Lahore, Pakistan.

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STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
 Sub Divisional Officer
 Lahore Canal Sub Division
 Lahore
 (Construction of Irrigation Engineering Academy Lahore)

Reference # CED/TFL **36699** (Dr. Ali Ahmed)
 Reference of the request letter # 338/28-W

Dated: 06-07-2021
 Dated: 17-03-2021

Tension Test Report (Page -1/1)

Date of Test 07-07-2021
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight (lbs/ft)	Diameter/ size		Area (in ²)		Yield load (kg)	Breaking Load (kg)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
		Nominal (#)	Actual (inch)	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.375	3	0.375	0.11	0.110	3100	4800	62200	61960	96200	96000	1.40	17.5	Kamran Steel
2	0.371	3	0.373	0.11	0.109	3300	4700	66200	66640	94200	95000	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														

I/C Testing Laboratoires
UET Lahore, Pakistan.

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STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
M/S Building Standar Ltd
Lahpore
(Shahzad Textile Mills, Sheikhpura Road, Lahore)

Reference # CED/TFL **36700** (Dr. Ali Ahmed)
Reference of the request letter # GT/LTR/210705-071

Dated: 06-07-2021
Dated: 05-07-2021

Tension Test Report (Page -1/2)

Date of Test 07-07-2021
Gauge length 8 inches
Description Deformed Steel Bar Tensile Test as per ASTM-A615

Sr. No.	Weight (lbs/ft)	Diameter/ size		Area (in ²)		Yield load (kg)	Breaking Load (kg)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
		Nominal (#)	Actual (inch)	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.383	3	0.378	0.11	0.112	3800	5400	76200	74470	108200	105900	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only one sample for tensile test														
Bend Test														

I/C Testing Laboratoires
UET Lahore, Pakistan.

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Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
M/S Building Standar Ltd
Lahpore
(Shahzad Textile Mills, sheikhupura Road, Lahore)(Power Roof Slab (Old))

Reference # CED/TFL **36700** (Dr. Ali Ahmed)
Reference of the request letter # GT/LTR/210705-070

Dated: 06-07-2021
Dated: 05-07-2021

Tension Test Report (Page -2/2)

Date of Test 07-07-2021
Gauge length 8 inches
Description Tor Steel Bar Tensile Test as per BS-4461

Sr. No.	Weight (lbs/ft)	Diameter/ size		Area (in ²)		Yield load (kg)	Breaking Load (kg)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
		Nominal (#)	Actual (inch)	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.377	3	0.376	0.11	0.111	3360	4200	67400	66820	84200	83600	0.10	5.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile test														
Bend Test														

I/C Testing Laboratoires
UET Lahore, Pakistan.

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Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
M/S Salman Developers
Gulberg III, Lahore
(Grand Square Mall)

Reference # CED/TFL **36701** (Dr. Ali Ahmed)
Reference of the request letter # Nil

Dated: 06-07-2021
Dated: 02-07-2021

Tension Test Report (Page -1/1)

Date of Test 07-07-2021
Gauge length 8 inches
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight (lbs/ft)	Diameter/ Size (inch)		Area (in ²)		Yield load (kg)	Breaking Load (kg)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
		Nominal	Actual	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.381	3/8	0.377	0.11	0.112	3100	4300	62200	61090	86200	84800	1.50	18.8	
2	0.384	3/8	0.379	0.11	0.113	3500	5000	70200	68350	100200	97700	1.00	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
3/8" Dia Bar Bend Test Through 180° is Satisfactory														

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To,
 M/S Defence Housing Authority.
 Lahore Cantt
 (Construction of Infrastructure Works Overseas Enclave Sector –T, Phase-VII DHA Lahore) –
 (M/s DHA C)

Reference # CED/TFL **36703** (Dr. Ali Ahmed) Dated: 06-07-2021
 Reference of the request letter # 408/241/E/Lab/101/09T/OHWT Dated: 06-07-2021

Tension Test Report (Page -1/1)

Date of Test 07-07-2021
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight (lbs/ft)	Diameter/ size		Area (in ²)		Yield load (kg)	Breaking Load (kg)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
		Nominal (#)	Actual (inch)	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.371	3	0.373	0.11	0.109	2500	3900	50100	50540	78200	78900	1.70	21.3	SJ Steel
2	0.369	3	0.372	0.11	0.108	2500	3800	50100	50810	76200	77300	1.60	20.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														

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UET Lahore, Pakistan.

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Department of Civil Engineering
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To,
CE/Engineer's Representative
NESPAK
Infrastructure Development of Federal Govt Employees Housing Scheme, Green Enclave 1,
Barakhahu Islamabad

Reference # CED/TFL **36709** (Dr. Ali Ahmed)
Reference of the request letter # 3690/321/04/OU/11/(a)/56

Dated: 07-07-2021
Dated: 05-07-2021

Tension Test Report (Page -1/1)

Date of Test 07-07-2021
Gauge length 8 inches
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight (lbs/ft)	Diameter/ Size		Area (in ²)		Yield load (kg)	Breaking Load (kg)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
		Nominal (#)	Actual (inch)	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.406	3	0.390	0.11	0.119	3300	5000	66200	60890	100200	92300	1.30	16.3	
2	4.028	10	1.228	1.27	1.184	37200	49200	64600	69250	85400	91600	1.50	18.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and two samples for bend test														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														
#10 Bar Bend Test Through 180° is Satisfactory														

Witness by Shoaib Khaliq (Associate Engineer, NESPAK)

I/C Testing Laboratoires
UET Lahore, Pakistan.

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