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 / Q.C Engineer
PRSWSSP, TAUNSA
NESPAk
Punjab Rural Municipal Services Company
Procurement of Civil Works, South-III, Tehsil Taunsa Package TAU-04
(Villages: Tube & Basti Buzdar)

Reference # CED/TFL **4533** (Dr. Ali Ahmed) Dated: 23-01-2024
Reference of the request letter # NESPAK/PRSWSSP/TAUNSA/ME/77 Dated: 09-01-2024

Tension Test Report (Page -1/1)

Date of Test 24-01-2024
Gauge length 8 inches
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight	Diameter/ Size		Area (in^2)		Yield load	Breaking Load	Yield Stress (psi)		Ultimate Stress (psi)		Elongation	% Elongation	Remarks
	(lbs/ft)	Nominal (#)	Actual (inch)	Nominal	Actual	(kg)	(kg)	Nominal	Actual	Nominal	Actual	(inch)		
1	0.381	3	0.378	0.11	0.112	3800	5400	76200	74690	108200	106200	1.00	12.5	AF Steel
2	0.383	3	0.379	0.11	0.113	3800	5400	76200	74420	108200	105800	1.00	12.5	
3	4.309	10	1.270	1.27	1.267	41400	55000	71900	72040	95500	95700	1.70	21.3	
4	4.321	10	1.272	1.27	1.270	41200	51900	71500	71500	90100	90100	1.60	20.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Note: only four samples for tensile and two samples for bend test

Bend Test

#3 Bar Bend Test Through 180º is Satisfactory

#10 Bar Bend Test Through 180º 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

To,

Resident Engineer
Diamer Basha Consultants Group (DBCG)
NESPAK - ACE -MMP - MWH - ROYRY - DOLSAR Jv
Diamer Basha Dam Project

Reference # CED/TFL **4534** (Dr. Ali Ahmed) Dated: 23-01-2024
Reference of the request letter # DBCG/Lab/PF JV/2024/002 Dated: 18-01-2024

Tension Test Report (Page -1/2)

Date of Test 24-01-2024
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 "E"	% Elongation	Remarks / Coil No.
	(mm)	(kg/km)	(kg/km)	(kg)	(kN)	(kg)	(kN)	GPa		
1	**15.24 (0.6")**	**1102.0**	**1115.0**	**25000**	**245.25**	**27500**	**269.78**	**199**	**>3.50**	**WS-S4-2024-01**
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
Only one sample 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

I/C Testing Laboratoires
UET Lahore, Pakistan.

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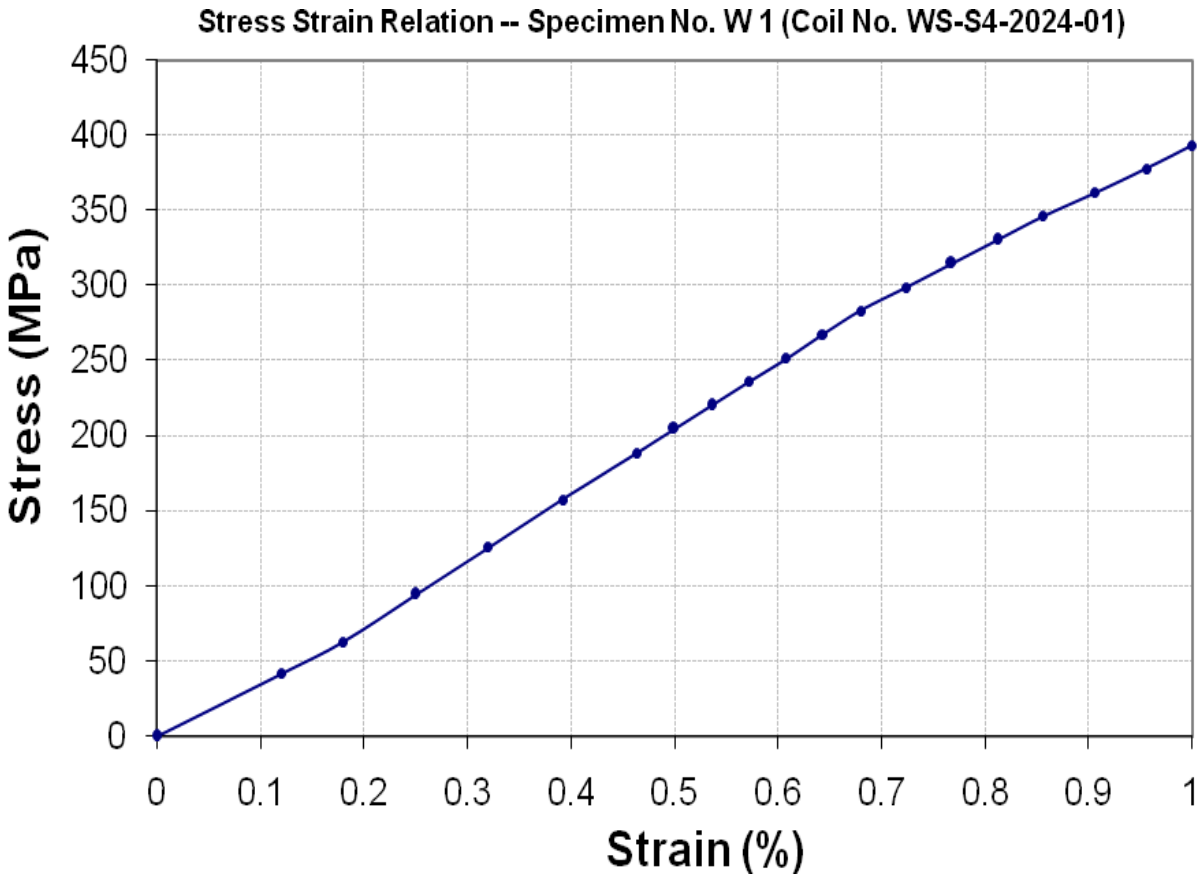
STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,

Resident Engineer
Diamer Basha Consultants Group (DBCG)
NESPAK - ACE -MMP - MWH - ROYRY - DOLSAR Jv
Diamer Basha Dam Project

Reference # CED/TFL **4534** (Dr. Ali Ahmed) Dated: 23-01-2024
Reference of the request letter # DBCG/Lab/PF JV/2024/002 Dated: 18-01-2024

Graph (Page – 2/3)



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,

Sub Divisional Officer
Buildings Sub Division No. 6
Lahore
(Rehabilitation / Renovation Existing Office Buildings and Construction of New Office Block of Commissioner Office, Lahore.)(Group No. 3)

Reference # CED/TFL **4535** (Dr. Ali Ahmed) Dated: 23-01-2024
Reference of the request letter # 576/Sd-6th Dated: 16-01-2024

Tension Test Report (Page -1/1)

Date of Test 24-01-2024
Gauge length 8 inches
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight	Diameter/ Size (inch)		Area (in^2)		Yield load	Breaking Load	Yield Stress (psi)		Ultimate Stress (psi)		Elongation	% Elongation	Remarks
	(lbs/ft)	Nominal	Actual	Nominal	Actual	(kg)	(kg)	Nominal	Actual	Nominal	Actual	(inch)		
1	0.372	3/8	0.373	0.11	0.109	3400	5000	68200	68610	100200	100900	1.40	17.5	
2	0.375	3/8	0.375	0.11	0.110	3500	5100	70200	69980	102200	102000	1.40	17.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
3/8" Dia Bar Bend Test Through 180º 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

To,

Sub Divisional Officer
Buildings Sub Division No. 2
Gujranwala
(Program for The Strategic Transformation / Revamping of Old Blocks of Ex-DHQs One at DHQ Gujranwala.)

Reference # CED/TFL **4536** (Dr. Ali Ahmed) Dated: 23-01-2024
Reference of the request letter # 3147/G-,21 Dated: 23-12-2023

Tension Test Report (Page -1/1)

Date of Test 24-01-2024
Gauge length 8 inches
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight	Diameter/ Size (inch)		Area (in^2)		Yield load	Breaking Load	Yield Stress (psi)		Ultimate Stress (psi)		Elongation	% Elongation	Remarks
	(lbs/ft)	Nominal	Actual	Nominal	Actual	(kg)	(kg)	Nominal	Actual	Nominal	Actual	(inch)		
1	0.378	3/8	0.376	0.11	0.111	3400	5000	68200	67470	100200	99300	1.30	16.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only one sample for tensile and one sample for bend test														
Bend Test														
3/8" Dia Bar Bend Test Through 180º 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/01/4539 Dated: 23-01-2024

Dated of Test: 24-01-2024

To

Material Engineer
NESPAK
Punjab Rural Sustainable Water Supply & Sanitation Project (PRSWSSP)
Engineering Design & Construction Supervision (EDCS)
Cluster South-I, Tehsil Bhowana.

Subject: **TESTING OF R.C.C. PIPE [ASTM-C76 – 08a]**

Reference to your letter No. NESPAK/PRSWSSP/BHOWANA/RE/47, dated 19.01.2024 on the subject cited above. Two R.C.C. Pipes as received by us have been tested. The results are tabulated as under.

Sr. No.	Nominal Size	Total Length	Loaded Length	External Diameter	Internal Diameter	Wall Thickness	Proof load	Ultimate Load	Proof Stress	Ultimate Stress
	(inch)	(foot)	(foot)	(inch)	(inch)	(inch)	(kg)	(kg)	Pound/Linear foot/foot	Pound/Linear foot/foot
1	12	7.72	7.33	16.06	12.00	2.03	12500	15700	3758	4720
2	12	7.76	7.29	16.14	12.13	2.01	11500	14500	3443	4341

I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

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3- Sealed sample / Unsealed sample / Marked sample/Signed Samples

STRUCTURAL ENGINEERING DIVISION

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

To,

Resident Engineer
NESPAK
Kotla Mosa Khan to Kachi Mor Ans Flyover at Firdus Cinema Phatak, District Bahawalpur.

Reference # CED/TFL **4540** (Dr. Ali Ahmed) Dated: 23-01-2024
Reference of the request letter # RE/MSA/A.D.P/25 Dated: 08-05-2023

Tension Test Report (Page -1/4)

Date of Test 24-01-2024
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 "E"	% Elongation	Remarks / Coil No.
	(mm)	(kg/km)	(kg/km)	(kg)	(kN)	(kg)	(kN)	GPa		
1	12.70 (1/2")	780.0	784.0	17500	171.68	18800	184.43	199	>3.50	xx
2	12.70 (1/2")	780.0	782.0	17500	171.68	19000	186.39	198	>3.50	xx
3	12.70 (1/2")	780.0	785.0	17400	170.69	19100	187.37	199	>3.50	xx
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
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

I/C Testing Laboratoires
UET Lahore, Pakistan.

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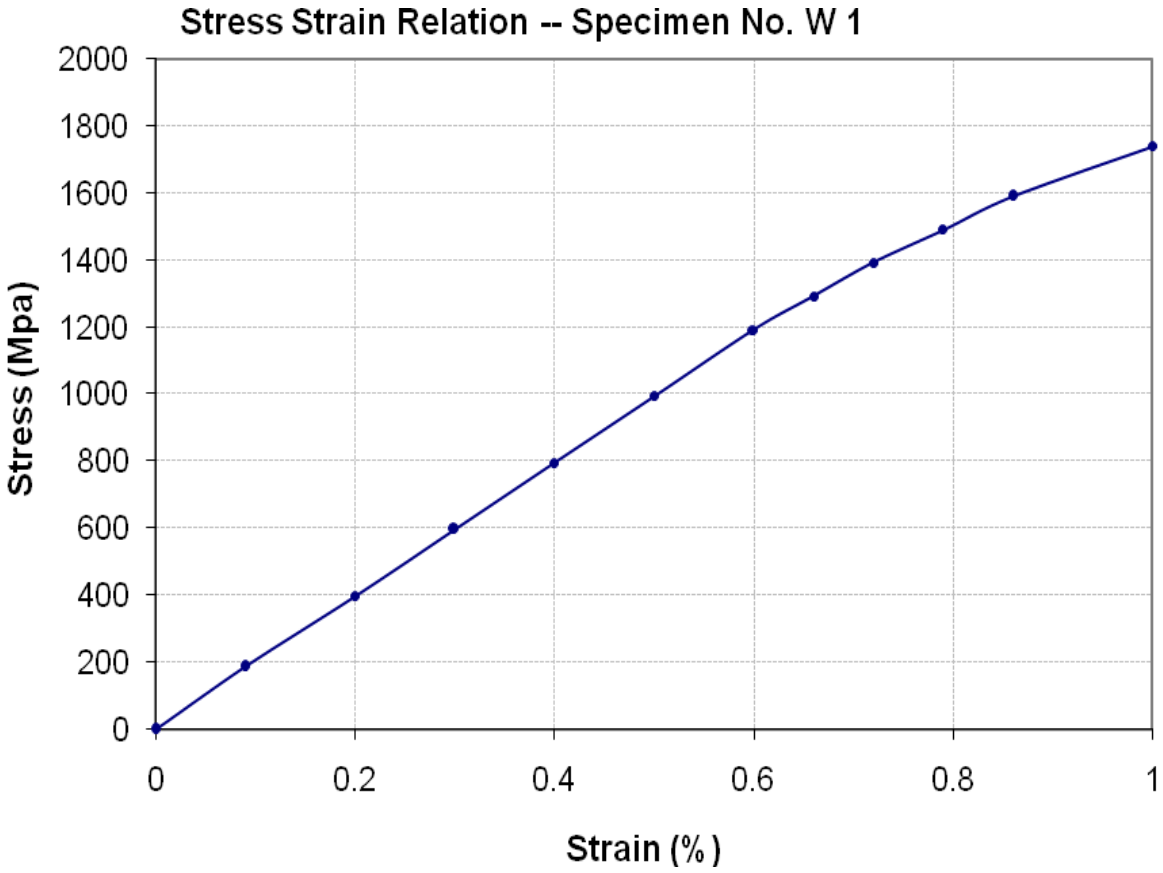
STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,

Resident Engineer
NESPAK
Kotla Mosa Khan to Kachi Mor Ans Flyover at Firdus Cinema Phatak, District Bahawalpur.

Reference # CED/TFL **4540** (Dr. Ali Ahmed) Dated: 23-01-2024
Reference of the request letter # RE/MSA/A.D.P/25 Dated: 08-05-2023

Graph (Page – 2/4)



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UET Lahore, Pakistan.

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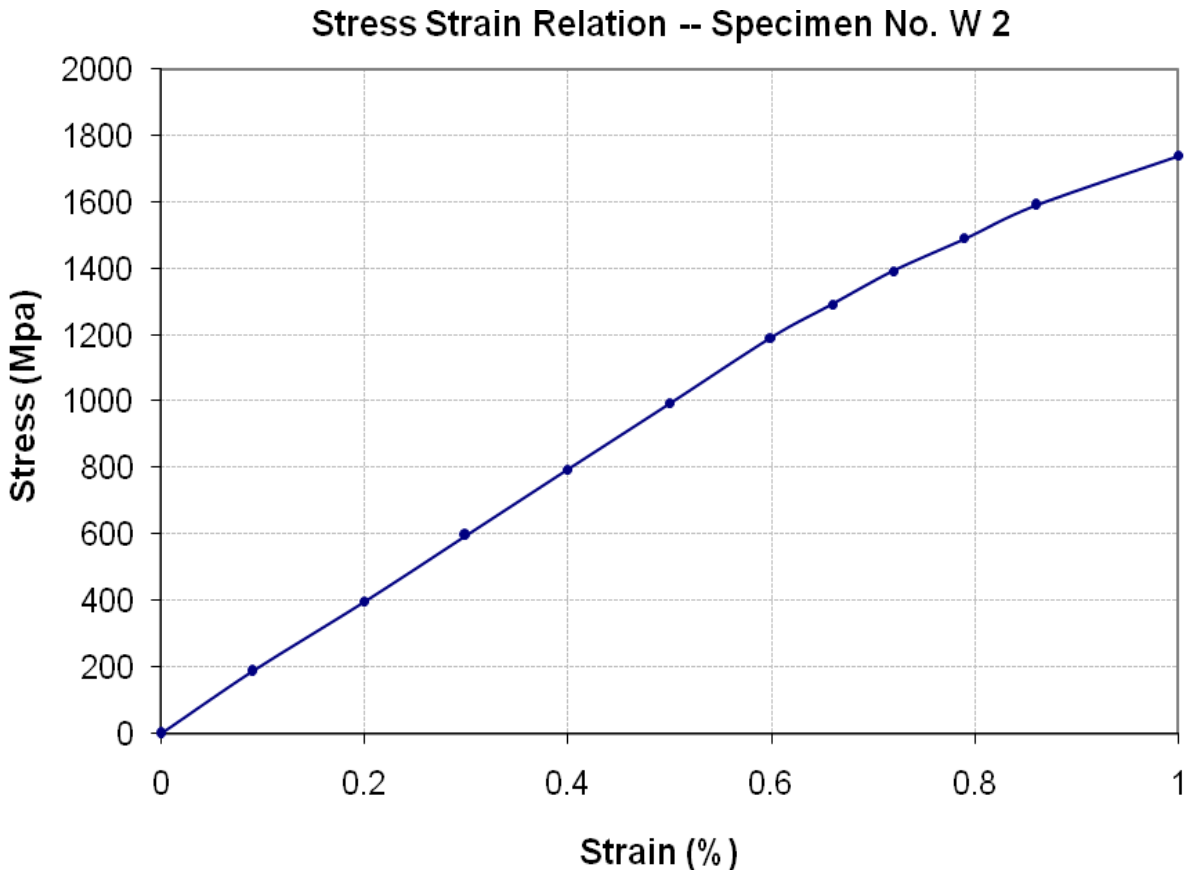
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,

Resident Engineer
NESPAK
Kotla Mosa Khan to Kachi Mor Ans Flyover at Firdus Cinema Phatak, District Bahawalpur.

Reference # CED/TFL **4540** (Dr. Ali Ahmed) Dated: 23-01-2024
Reference of the request letter # RE/MSA/A.D.P/25 Dated: 08-05-2023

Graph (Page – 3/4)



I/C Testing Laboratoires
UET Lahore, Pakistan.

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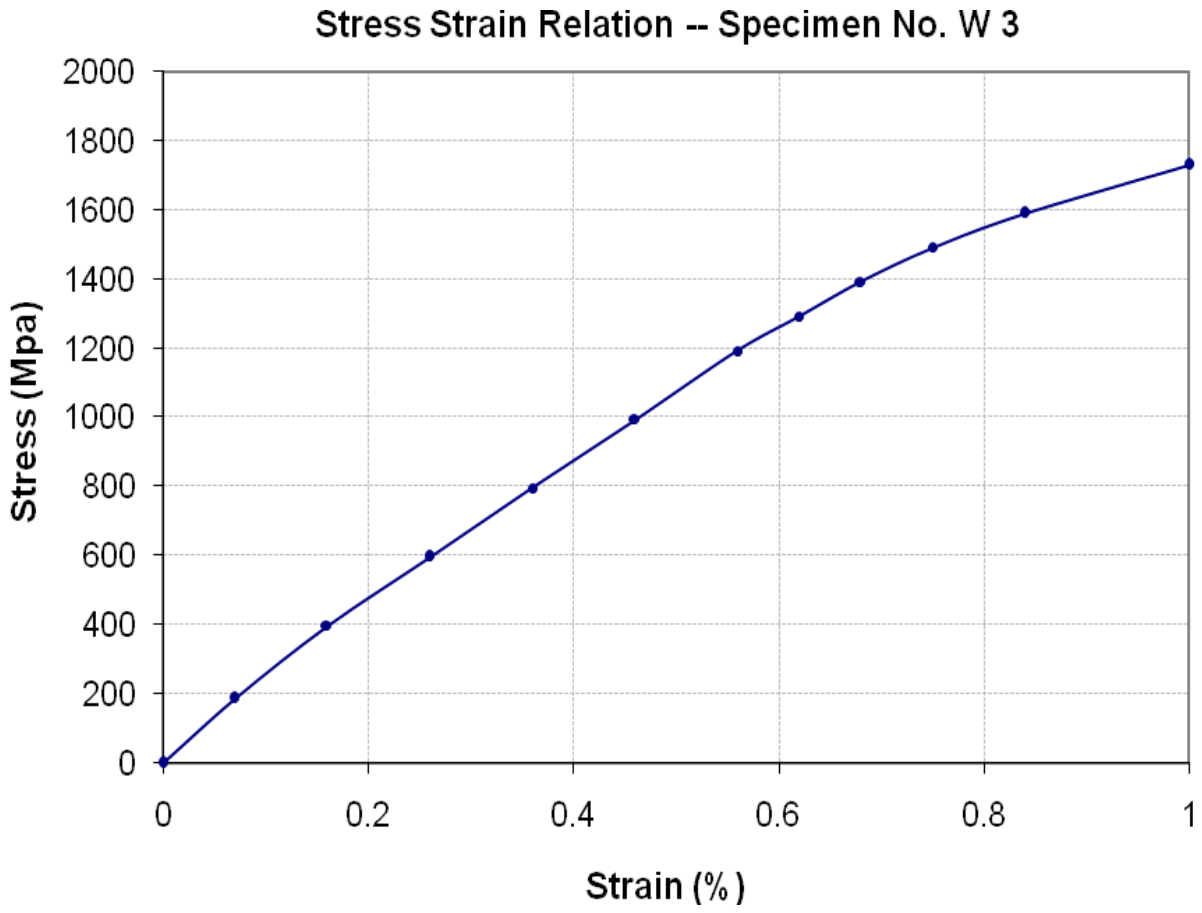
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,

Resident Engineer
NESPAK
Kotla Mosa Khan to Kachi Mor Ans Flyover at Firdus Cinema Phatak, District Bahawalpur.

Reference # CED/TFL **4540** (Dr. Ali Ahmed) Dated: 23-01-2024
Reference of the request letter # RE/MSA/A.D.P/25 Dated: 08-05-2023

Graph (Page – 4/4)



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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,

Resident Engineer
NESPAK
Emergency Flood Assistance Project
Restoration of Washed Away Span of Existing Munda Head Works Bridge (WMI)

Reference # CED/TFL **4541** (Dr. Ali Ahmed) Dated: 23-01-2024
Reference of the request letter # 4593/02/ZK/28 Dated: 16-01-2024

Tension Test Report (Page -1/2)

Date of Test 24-01-2024
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 "E"	% Elongation	Remarks / Coil No.
	(mm)	(kg/km)	(kg/km)	(kg)	(kN)	(kg)	(kN)	GPa		
1	**12.70 (1/2")**	**780.0**	**788.0**	**18200**	**178.54**	**19900**	**195.22**	**198**	**>3.50**	**xx**
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
Only one sample 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

I/C Testing Laboratoires
UET Lahore, Pakistan.

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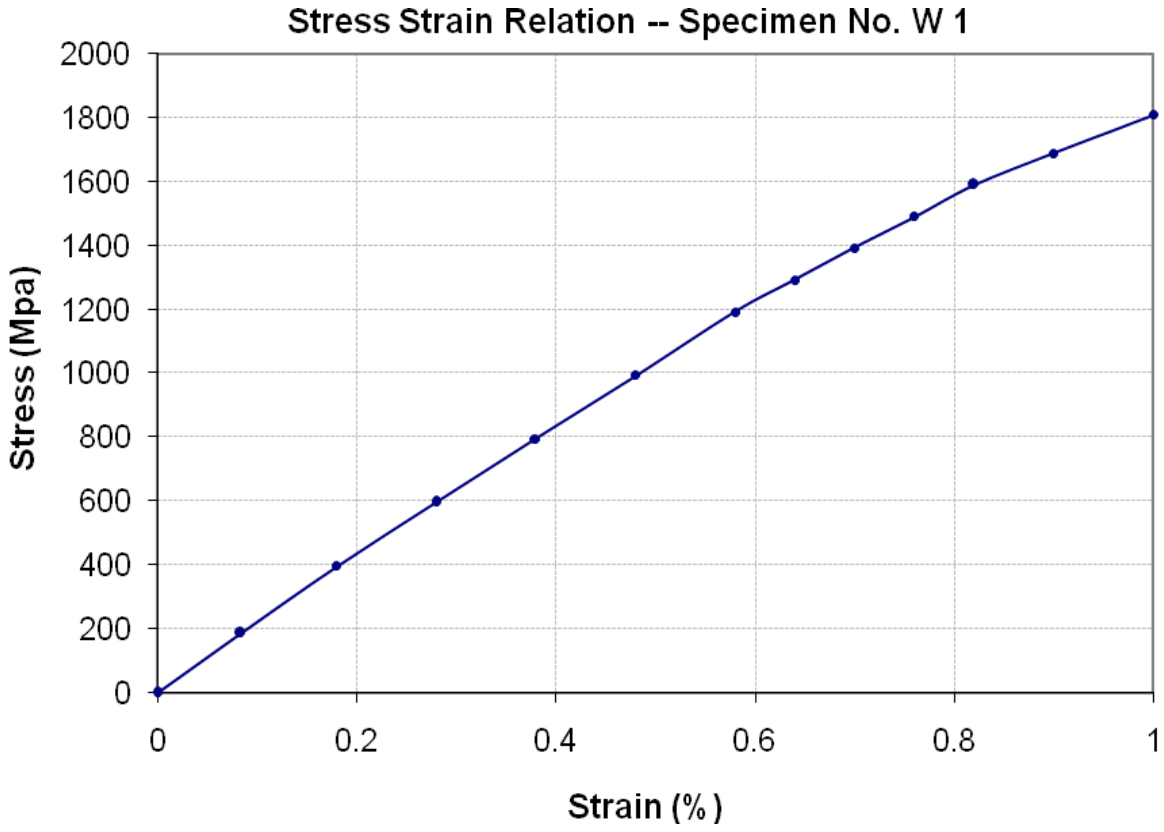
To,

Resident Engineer
NESPAK
Emergency Flood Assistance Project
Restoration of Washed Away Span of Existing Munda Head Works Bridge (WMI)

Reference # CED/TFL **4541** (Dr. Ali Ahmed) Dated: 23-01-2024
Reference of the request letter # 4593/02/ZK/28 Dated: 16-01-2024

Graph (Page – 2/2)



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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,

Resident Engineer
NESPAK
Development of Infrastructure of CBD Walton (Phase 2 & 3) & Flyover Connecting Bab-e- Pakistan to Walton. (United Wire)

Reference # CED/TFL **4544** (Dr. Ali Ahmed) Dated: 23-01-2024
Reference of the request letter # 4322/13/DAK/02/116 Dated: 23-01-2024

Tension Test Report (Page -1/2)

Date of Test 24-01-2024
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 "E"	% Elongation	Remarks / Coil No.
	(mm)	(kg/km)	(kg/km)	(kg)	(kN)	(kg)	(kN)	GPa		
1	**12.70 (1/2")**	**780.0**	**783.0**	**18000**	**176.58**	**19300**	**189.33**	**199**	**>3.50**	**4241**
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
Only one sample for Test										

Witness by Shahid Butt (CM Div. NESPAK) & Engr. Ishtiaq (NLC)

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

I/C Testing Laboratoires
UET Lahore, Pakistan.

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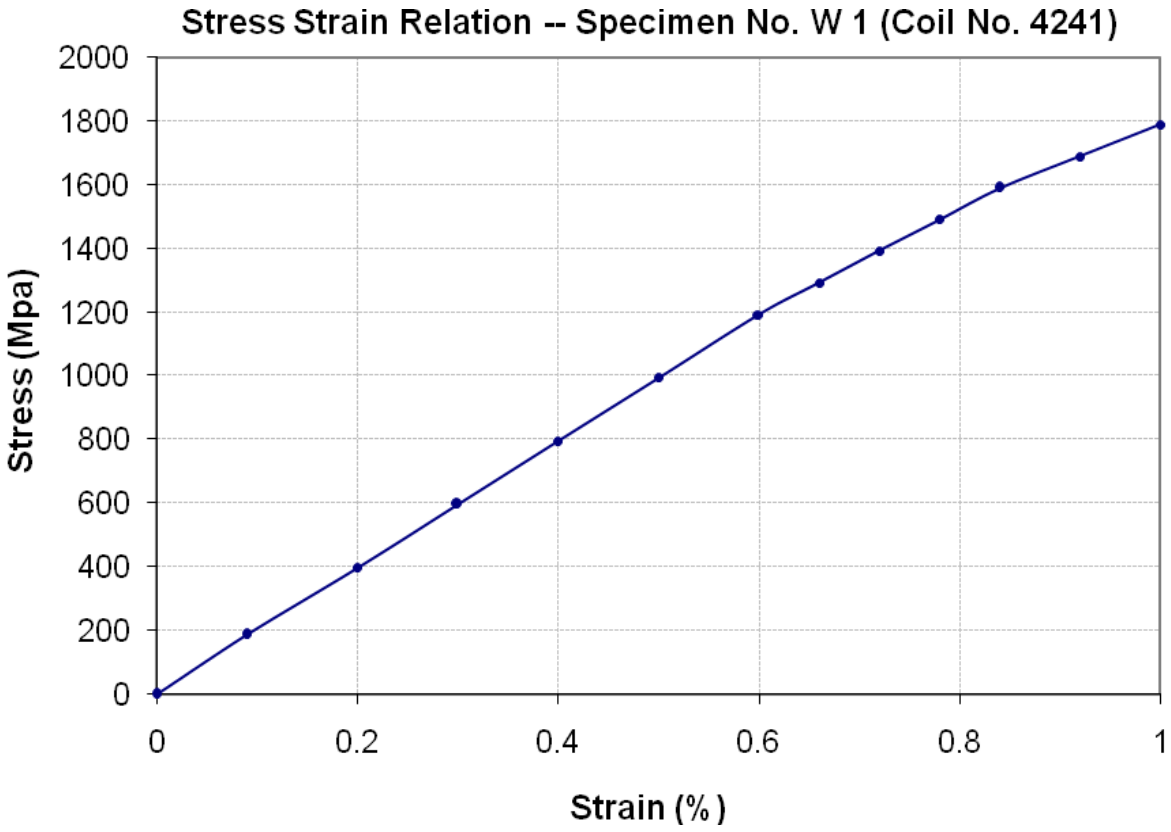
STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,

Resident Engineer
NESPAK
Development of Infrastructure of CBD Walton (Phase 2 & 3) & Flyover Connecting Bab-e-Pakistan to Walton. (United Wire)

Reference # CED/TFL **4544** (Dr. Ali Ahmed) Dated: 23-01-2024
Reference of the request letter # 4322/13/DAK/02/116 Dated: 23-01-2024

Graph (Page – 2/2)



I/C Testing Laboratoires
UET Lahore, Pakistan.

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