Ref: CED/TFL/05/6939 Dated: 12-05-2025

Dated of Test: 15-05-2025

To

Mr. Aamir Shahzad
Material Engineer
Fazaia Housing Scheme Gujranwala.
Development Works Phase-I (Eagle Block) Fazaia Housing Scheme Gujranwala

Subject: **TESTING OF R.C.C. PIPE**

Reference to your letter no: FHSG/PMO/6015/Dev on dated 12.05.2025 on the subject cited above. Three R.C.C. Pipes as received by us has 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	D-Load (0.01 inch)	D-Load Ultimate
	(inch)	(inch)	(inch)	(inch)	(inch)	(inch)	(kg)	(kg)	Lbs/Linear foot/foot	Lbs/Linear foot/foot
1	12	93.1	87.3	16	11.88	2.06	7700	13000	2357	3979
2	15	93.4	88.1	19.5	15.18	2.16	5700	7000	1353	1662
3	18	93.6	86.5	23.1	18.38	2.36	8500	14000	1697	2795

Test Performed and Verified by:

To,

Mr. Manohar Lal (Resident Engineer)
NESPAK (Pvt.) Ltd.
Dualization of Road from Gujranwala to M-2 Interchange at Kot Sarwar via Hafizabad Km 6.20 to Km 80.35 Length 74.15 Km in District Gujranwala & Hafizabad

Reference # CED/TFL **6942** (Dr. Ali Ahmed) Dated: 12-05-2025
Reference of the request letter # SA-466F/103/GH/ML/Lab/108 Dated: 28-04-2025

Tension Test Report (Page -1/4)

Date of Test 15-05-2025
Gauge length 600 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/1000m)	(kg/1000m)	(kg)	(kN)	(kg)	(kN)	GPa		
1	**12.70 (1/2")**	**780.0**	**777.0**	**17700**	**173.64**	**19600**	**192.28**	**199**	**>3.50**	**-**
2	**12.70 (1/2")**	**780.0**	**778.0**	**17700**	**173.64**	**19300**	**189.33**	**198**	**>3.50**	**-**
3	**12.70 (1/2")**	**780.0**	**779.0**	**17600**	**172.66**	**20000**	**196.20**	**198**	**>3.50**	**-**
-	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
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

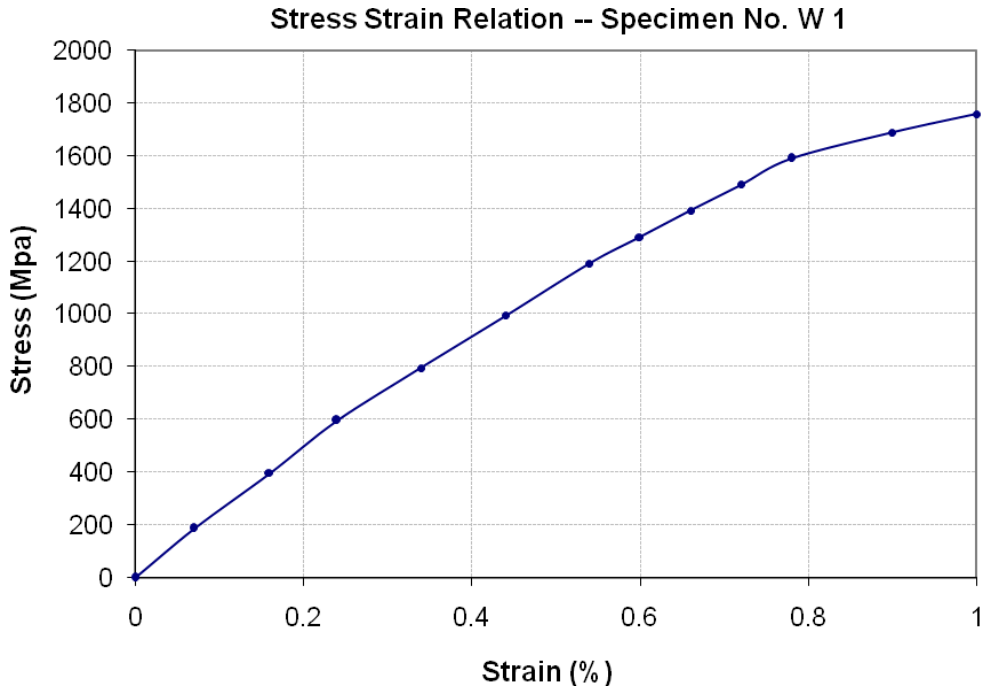
Test Performed and Verified by:

To,

Mr. Manohar Lal (Resident Engineer)
NESPAK (Pvt.) Ltd.
Dualization of Road from Gujranwala to M-2 Interchange at Kot Sarwar via Hafizabad Km 6.20 to Km 80.35 Length 74.15 Km in District Gujranwala & Hafizabad

Reference # CED/TFL **6942** (Dr. Ali Ahmed) Dated: 12-05-2025
Reference of the request letter # SA-466F/103/GH/ML/Lab/108 Dated: 28-04-2025

Graph (Page – 2/4)



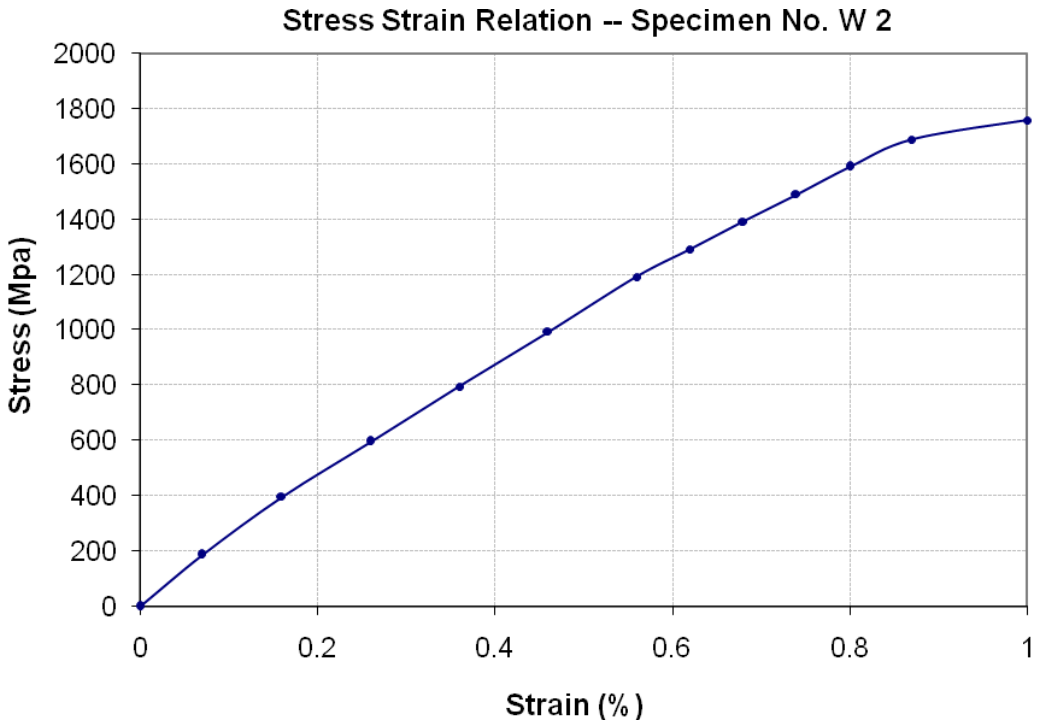
Test Performed and Verified by:

To,

Mr. Manohar Lal (Resident Engineer)
NESPAK (Pvt.) Ltd.
Dualization of Road from Gujranwala to M-2 Interchange at Kot Sarwar via Hafizabad Km 6.20 to Km 80.35 Length 74.15 Km in District Gujranwala & Hafizabad

Reference # CED/TFL **6942** (Dr. Ali Ahmed) Dated: 12-05-2025
Reference of the request letter # SA-466F/103/GH/ML/Lab/108 Dated: 28-04-2025

Graph (Page – 3/4)



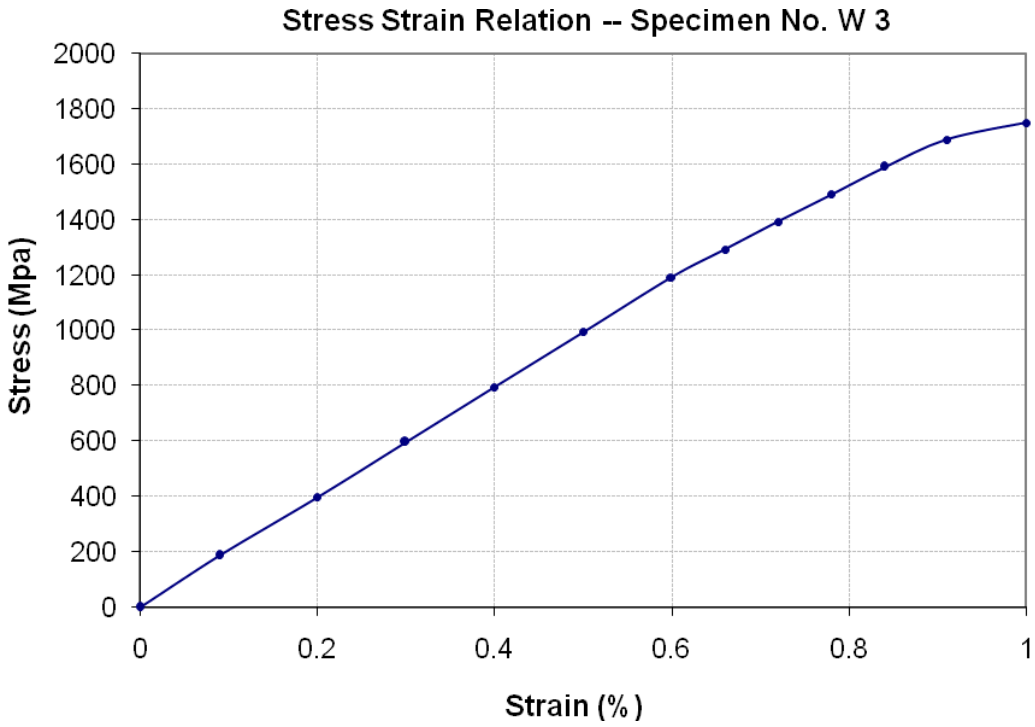
Test Performed and Verified by:

To,

Mr. Manohar Lal (Resident Engineer)
NESPAK (Pvt.) Ltd.
Dualization of Road from Gujranwala to M-2 Interchange at Kot Sarwar via Hafizabad Km 6.20 to Km 80.35 Length 74.15 Km in District Gujranwala & Hafizabad

Reference # CED/TFL **6942** (Dr. Ali Ahmed) Dated: 12-05-2025
Reference of the request letter # SA-466F/103/GH/ML/Lab/108 Dated: 28-04-2025

Graph (Page – 4/4)



Test Performed and Verified by:

Ref: CED/TFL/05/6951 Dated: 13-05-2025

Dated of Test: 15-05-2025

To

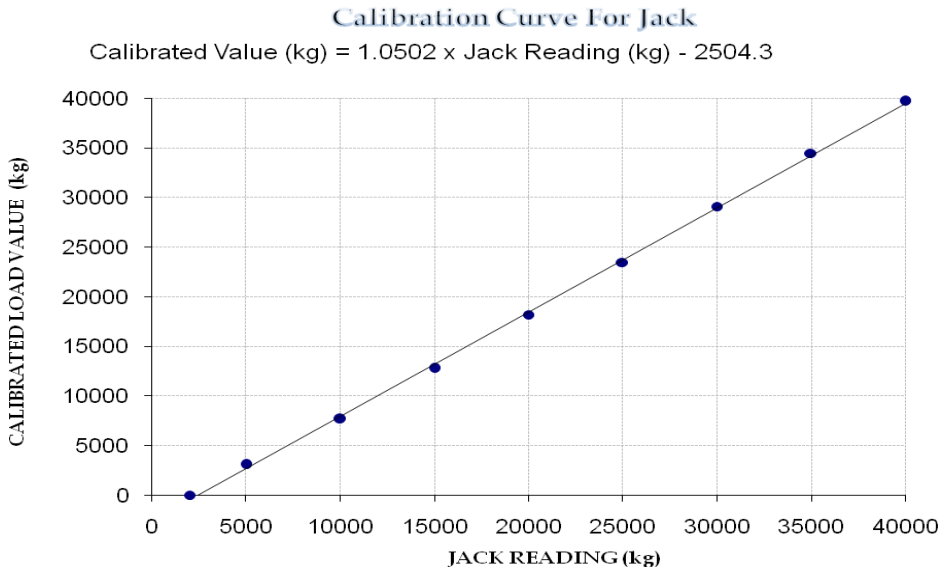
Assistant Director (QCD)
WASA, Lahore

Subject: **- CALIBRATION OF HYDRAULIC JACK (MARK: TFL/05/6951)** (Page -1/1)

Reference to your Letter No. QCD/2082, dated: 12/05/2025 on the subject cited above. One Hydraulic Jack with gauge as received by us has been calibrated. The results are tabulated as under:

Total Range : Zero - 40000 (kg)
Calibrated Range : Zero - 40000 (kg)

Hydraulic Jack Reading (kg)	**2000**	**5000**	**10000**	**15000**	**20000**	**25000**	**30000**	**35000**	**40000**
Calibrated Load (kg)	**0**	**3100**	**7700**	**12800**	**18200**	**23500**	**29100**	**34500**	**39700**



Test Performed and Verified by:

To,

Mr. Muhammad Yasin (Project Manager)
Hassan Construction Company
Geniteam Head Office on Plot No. 30-B Zahoor Gulberg-2

Reference # CED/TFL **6955** (Dr. Ali Ahmad) Dated: 14-05-2025
Reference of the request letter # HC/Const-30B/25/145 Dated: 14-05-2025

Tension Test Report (Page-1/1)

Date of Test 15-05-2025
Gauge Length 8 inches
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Actual Weight Per Unit Length (lb/ft)	Nominal Size (#)	Actual Diameter (inch)	Area (in^2)		Yield Load	Breaking Load	Yield Stress (psi)		Ultimate Stress (psi)		Elongation	% Elongation	Remarks
				Nominal	Actual	(kN)	(kN)	Nominal	Actual	Nominal	Actual	(inch)		
1	**0.363**	**3**	**0.368**	**0.110**	**0.107**	**37.50**	**47.00**	**76609**	**79080**	**96016**	**99113**	**0.9**	**11.3**	-
2	**0.368**	**3**	**0.371**	**0.110**	**0.108**	**39.00**	**48.70**	**79673**	**81136**	**99489**	**101316**	**0.9**	**11.3**	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Note: Only 2 Samples for Tensile and 1 Samples for Bend test														

Bend Test
3 Bar Bend Test Through 180 Degree is Satisfactory

Test Performed and Verified by:

To,

Engr. Arfan Ullah (Assistant Engineer Civil)
National Skills University Islamabad
Construction of Administration Block at National Skills University Islamabad Muridke Campus
(Ground Floor Beam & Slab)

Reference # CED/TFL **6956** (Dr. Ali Ahmad) Dated: 14-05-2025
Reference of the request letter # NSU/AdminBlock/2023/MC/17 Dated: 17-03-2025

Tension Test Report

Date of Test 15-05-2025
Gauge Length 8 inches
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Actual Weight Per Unit Length (lb/ft)	Nominal Size (#)	Actual Diameter (inch)	Area (in^2)		Yield Load	Breaking Load	Yield Stress (psi)		Ultimate Stress (psi)		Elongation	% Elongation	Remarks
				Nominal	Actual	(kN)	(kN)	Nominal	Actual	Nominal	Actual	(inch)		
1	0.370	3	0.372	0.110	0.109	34.50	53.70	70480	71310	109704	110996	0.8	10.0	-
2	0.366	3	0.370	0.110	0.107	32.20	50.00	65781	67332	102145	104553	0.9	11.3	-
3	0.368	3	0.371	0.110	0.108	31.7	50.7	64760	65798	103575	105235	0.9	11.3	-
4	0.366	3	0.370	0.110	0.108	33.5	50.2	68437	69939	102554	104805	0.9	11.3	-
5	0.369	3	0.372	0.110	0.108	34.5	52	70480	71455	106231	107700	1.1	13.75	-
6	0.369	3	0.371	0.110	0.108	35.5	53.5	72523	73610	109295	110933	0.9	11.25	-
Note: Only 6 Samples for Tensile and 0 Samples for Bend test														

Bend Test

Test Performed and Verified by:

To,

Mr. Hammad Ur Rehman (A/Project Manager)
PMU NLC DHA Multan
NLC Pulp Factory OHWT
(FF Steel)

Reference # CED/TFL **6957** (Dr. Ali Ahmad) Dated: 14-05-2025
Reference of the request letter # 607/Proj/PulpFactory/NLC Dated: 06-05-2025

Tension Test Report (Page-1/1)

Date of Test 15-05-2025
Gauge Length 8 inches
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Actual Weight Per Unit Length (lb/ft)	Nominal Size (mm)	Actual Diameter (inch)	Area (in^2)		Yield Load	Breaking Load	Yield Stress (psi)		Ultimate Stress (psi)		Elongation	% Elongation	Remarks
				Nominal	Actual	(kN)	(kN)	Nominal	Actual	Nominal	Actual	(inch)		
1	**0.376**	**10**	**0.375**	**0.120**	**0.11**	**37.20**	**49.00**	**69663**	**75753**	**91760**	**99782**	**1.0**	**12.5**	**FF Steel**
2	**0.374**	**10**	**0.374**	**0.120**	**0.11**	**36.00**	**48.20**	**67416**	**73578**	**90262**	**98513**	**1.1**	**13.8**	**FF Steel**
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Note: Only 2 Samples for Tensile and 1 Samples for Bend test														

Bend Test
10mm Bar Bend Test Through 180 Degree is Not Satisfactory

Test Performed and Verified by:

To,

Senior Portfolio Manager
IK Associates
Construction of HMB Building Jail Road Faisalabad

Reference # CED/TFL **6959** (Dr. Ali Ahmad) Dated: 14-05-2025
Reference of the request letter # IKA/HMB/S.T/03/2025 Dated: 14-05-2025

Tension Test Report

(Page-1/1)

Date of Test 15-05-2025
Gauge Length 8 inches
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Actual Weight Per Unit Length (lb/ft)	Nominal Size (#)	Actual Diameter (inch)	Area (in^2)		Yield Load	Breaking Load	Yield Stress (psi)		Ultimate Stress (psi)		Elongation	% Elongation	Remarks
				Nominal	Actual	(kN)	(kN)	Nominal	Actual	Nominal	Actual	(inch)		
1	**0.373**	**3**	**0.374**	**0.110**	**0.11**	**36.00**	**48.20**	**73544**	**73773**	**98468**	**98774**	**0.9**	**11.3**	**3"/8**
2	**0.373**	**3**	**0.373**	**0.110**	**0.11**	**35.70**	**48.00**	**72932**	**73254**	**98059**	**98493**	**1.2**	**15.0**	**3"/8**
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Note: Only 2 Samples for Tensile and 1 Samples for Bend test														

Bend Test
3 Bar Bend Test Through 180 Degree is Satisfactory

Test Performed and Verified by:

To,

Mr. Muhammad Ateeque
Landview Property Management Company
-

Reference # CED/TFL **6960** (Dr. Ali Ahmad) Dated: 14-05-2025
Reference of the request letter # Nil Dated: 14-05-2025

Tension Test Report (Page-1/1)

Date of Test 15-05-2025
Gauge Length 8 inches
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Actual Weight Per Unit Length (lb/ft)	Nominal Size (#)	Actual Diameter (inch)	Area (in^2)		Yield Load	Breaking Load	Yield Stress (psi)		Ultimate Stress (psi)		Elongation	% Elongation	Remarks
				Nominal	Actual	(kN)	(kN)	Nominal	Actual	Nominal	Actual	(inch)		
1	**0.368**	**3**	**0.371**	**0.110**	**0.108**	**33.50**	**51.00**	**68437**	**69710**	**104188**	**106125**	**1.0**	**12.5**	-
2	**0.368**	**3**	**0.371**	**0.110**	**0.108**	**33.20**	**50.00**	**67824**	**68991**	**102145**	**103902**	**1.3**	**16.3**	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Note: Only 2 Samples for Tensile and 1 Samples for Bend test														

Bend Test
3 Bar Bend Test Through 180 Degree is Satisfactory

Test Performed and Verified by:

To,

Mr. Saleem Tahir (Project Manager ICPL)
Izhar Construction (Pvt.) Ltd.
OMBe' Holdings Pvt Ltd. Raiwind, Lahore
(Mughal Steel)

Reference # CED/TFL **6962** (Dr. Ali Ahmad) Dated: 14-05-2025
Reference of the request letter # OMBRe'/Mughal/Steel/018a Dated: 14-05-2025

Tension Test Report

(Page-1/2)

Date of Test 15-05-2025
Gauge Length 8 inches
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Actual Weight Per Unit Length (lb/ft)	Nominal Size (mm)	Actual Diameter (inch)	Area (in^2)		Yield Load	Breaking Load	Yield Stress (psi)		Ultimate Stress (psi)		Elongation	% Elongation	Remarks
				Nominal	Actual	(kN)	(kN)	Nominal	Actual	Nominal	Actual	(inch)		
1	**0.409**	**10**	**0.391**	**0.120**	**0.12**	**40.00**	**52.00**	**74906**	**74875**	**97378**	**97338**	**1.1**	**13.8**	-
2	**0.414**	**10**	**0.394**	**0.120**	**0.122**	**42.50**	**53.00**	**79588**	**78417**	**99251**	**97791**	**0.8**	**10.0**	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Note: Only 2 Samples for Tensile and 1 Samples for Bend test														

Bend Test
10mm Bar Bend Test Through 180 Degree is Not Satisfactory

Test Performed and Verified by:

To,

Mr. Saleem Tahir (Project Manager ICPL)
Izhar Construction (Pvt.) Ltd.
OMBe' Holdings Pvt Ltd. Raiwind, Lahore
(Sheikhoo Steel)

Reference # CED/TFL **6962** (Dr. Ali Ahmad) Dated: 14-05-2025
Reference of the request letter # OMBRe'/Sheikhoo/Steel/018 Dated: 14-05-2025

Tension Test Report

Date of Test 15-05-2025
Gauge Length 8 inches
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Actual Weight Per Unit Length (lb/ft)	Nominal Size (mm)	Actual Diameter (inch)	Area (in^2)		Yield Load	Breaking Load	Yield Stress (psi)		Ultimate Stress (psi)		Elongation	% Elongation	Remarks
				Nominal	Actual	(kN)	(kN)	Nominal	Actual	Nominal	Actual	(inch)		
1	**0.356**	**10**	**0.365**	**0.120**	**0.105**	**32.00**	**43.50**	**59925**	**68702**	**81461**	**93391**	**1.2**	**15.0**	-
2	**0.362**	**10**	**0.368**	**0.120**	**0.106**	**32.00**	**44.00**	**59925**	**67658**	**82397**	**93029**	**1.2**	**15.0**	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Note: Only 2 Samples for Tensile and 1 Samples for Bend test														

Bend Test
10mm Bar Bend Test Through 180 Degree is Not Satisfactory

Test Performed and Verified by:

To,

Project Manager
Sunshine Health Care (Pvt.) Ltd.
Sunshine Medical Tower Shahdra

Reference # CED/TFL **6963** (Dr. Ali Ahmad) Dated: 14-05-2025
Reference of the request letter # Nil Dated: 14-05-2025

Tension Test Report (Page-1/1)

Date of Test 15-05-2025
Gauge Length 8 inches
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Actual Weight Per Unit Length (lb/ft)	Nominal Size (#)	Actual Diameter (inch)	Area (in^2)		Yield Load	Breaking Load	Yield Stress (psi)		Ultimate Stress (psi)		Elongation	% Elongation	Remarks
				Nominal	Actual	(kN)	(kN)	Nominal	Actual	Nominal	Actual	(inch)		
1	**0.361**	**3**	**0.367**	**0.110**	**0.106**	**30.70**	**46.20**	**62717**	**65074**	**94382**	**97929**	**1.5**	**18.8**	-
2	**0.358**	**3**	**0.366**	**0.110**	**0.105**	**30.70**	**45.70**	**62717**	**65586**	**93361**	**97631**	**1.5**	**18.8**	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Note: Only 2 Samples for Tensile and 1 Samples for Bend test														

Bend Test
3 Bar Bend Test Through 180 Degree is Satisfactory

Test Performed and Verified by:

To,

Mr. Hammad Kamal (Resident Engineer)
NESPAK (Pvt.) Ltd.
Construction of R.C.C Bridge with Approach Road Near Thana District Malakand Subhead Repair and Rehabilitation of Thana Bridge due to Heavy Flood of Augest 2022 ADP 1239/060323 (2023-24)

Reference # CED/TFL **6964** (Dr. Ali Ahmed) Dated: 14-05-2025
Reference of the request letter # 42181/C&W/HK/32/2025 Dated: 07-05-2025

Tension Test Report (Page -1/2)

Date of Test 15-05-2025
Gauge length 600 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/1000m)	(kg/1000m)	(kg)	(kN)	(kg)	(kN)	GPa		
1	**12.70 (1/2")**	**780.0**	**784.0**	**17400**	**170.69**	**19300**	**189.33**	**198**	**>3.50**	**-**
2	**12.70 (1/2")**	**780.0**	**783.0**	**17400**	**170.69**	**19600**	**192.28**	**-**	**>3.50**	**-**
3	**12.70 (1/2")**	**780.0**	**784.0**	**17700**	**173.64**	**19500**	**191.30**	**-**	**>3.50**	**-**
-	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
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

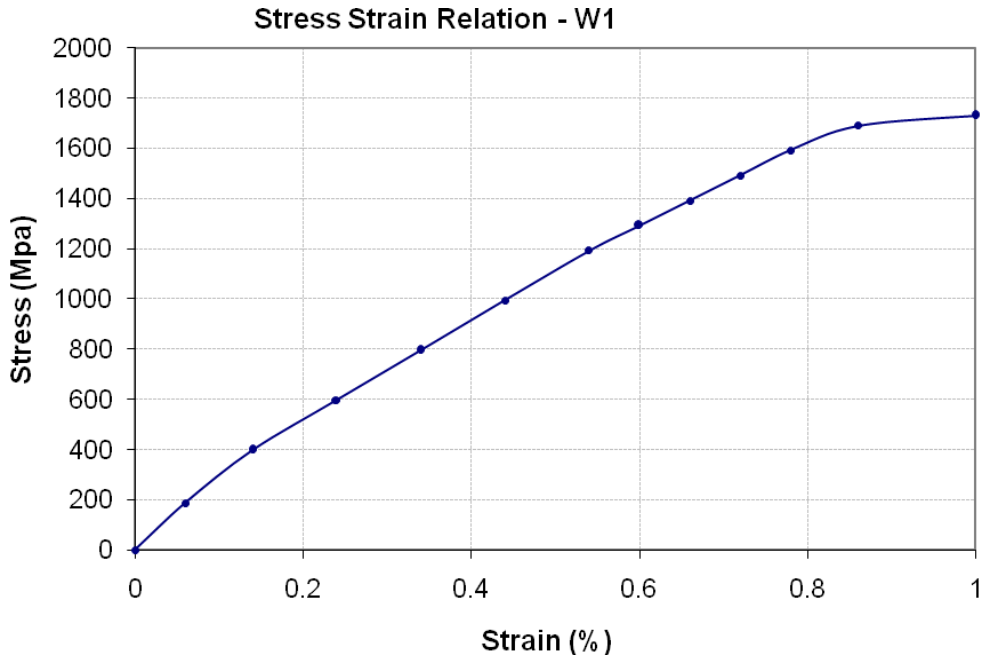
Test Performed and Verified by:

To,

Mr. Hammad Kamal (Resident Engineer)
NESPAK (Pvt.) Ltd.
Construction of R.C.C Bridge with Approach Road Near Thana District Malakand Subhead
Repair and Rehabilitation of Thana Bridge due to Heavy Flood of Augest 2022 ADP
1239/060323 (2023-24)

Reference # CED/TFL **6964** (Dr. Ali Ahmed) Dated: 14-05-2025
Reference of the request letter # 42181/C&W/HK/32/2025 Dated: 07-05-2025

Graph (Page – 2/2)



Test Performed and Verified by: