



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

To,
 Executive Engineer Buildings
 Public Health Engineering Division
 Muzaffarabad
 (Construction of Remaining Works/ Rehabilitation Water Supply System, Muzaffarabad (Package-III))
 Reference # CED/TFL **37652** (Dr. M Rizwan Riaz) Dated: 04-01-2022
 Reference of the request letter # 1328-30/PHE/Sub Division/City-II/2021 Dated: 20-11-2021

Tension Test Report (Page – 1/2)

Date of Test 11-01-2022
 Gauge length 2 inches
 Description G.I Pipe Steel Strip Tensile and Bend Test

Sr. No.	Designation		Size of Strip	X Section Area	Yield load	Breaking Load	Yield Stress	Ultimate Stress	Elongation	% Elongation	Remarks
	(inch)		(mm)	(mm ²)	(kg)	(kg)	(MPa)	(MPa)	(in)		
1	G.I Pipe	1	25.00x3.00	75.00	2700	3100	353	405	0.40	20.00	
2			24.60x3.00	73.80	2700	3000	359	399	0.50	25.00	
3	G.I Pipe	1½	24.80x3.00	74.40	2600	2900	343	382	0.50	25.00	
4			24.50x3.00	73.50	2500	2800	334	374	0.60	30.00	
5	G.I Pipe	2	24.80x3.70	91.76	3300	4600	353	492	0.60	30.00	
6			24.80x3.70	91.76	3600	4600	385	492	0.50	25.00	
7	G.I Pipe	3	24.70x3.80	93.86	2700	3700	282	387	0.60	30.00	
8			24.60x3.80	93.48	2700	3700	283	388	0.60	30.00	
Only Eight Samples for Tensile and Four Samples for Bend Test											
Bend Test											
Strip Taken from G.I Pipe (1½") Bend Test Through 180° is Satisfactory											
Strip Taken from G.I Pipe (1") Bend Test Through 180° is Satisfactory											
Strip Taken from G.I Pipe (2") Bend Test Through 180° is Satisfactory											
Strip Taken from G.I Pipe (3") Bend Test Through 180° is Satisfactory											

I/C Testing Laboratories
UET Lahore, Pakistan.

Note:

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To,
Executive Engineer Buildings
Public Health Engineering Division
Muzaffarabad
(Construction of Remaining Works/ Rehabilitation Water Supply System, Muzaffarabad (Package-III))
Reference # CED/TFL **37652** (Dr. M Rizwan Riaz) Dated: 04-01-2022
Reference of the request letter # 1328-30/PHE/Sub Division/City-II/202 Dated: 20-11-2021

Weight & Size Test Report (Page – 2/2)

Date of Test 11-01-2022
Description G.I Pipe Weight and Size Test

Sr. No.	Designation	Weight	Length	Weight per Unit Length	External Diameter	Internal Diameter	Wall Thickness	Remark
	(inch)	(g)	(mm)	(kg/m)	(mm)	(mm)	(mm)	
1	1	351	153.00	2.29	33.70	27.10	3.30	
2	1½	507	151.50	3.35	48.00	41.80	3.10	
3	2	789	153.50	5.14	60.90	53.50	3.70	
4	3	1219	152.70	7.98	88.40	80.60	3.90	
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	
Only Four Samples for Test								

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To,
 Resident Engineer - 2
 ACES
 Sector- H,
 Civil Infrastructure Development Works DHA Multan

Reference # CED/TFL **37679** (Dr. M Rizwan Riaz)
 Reference of the request letter # ACES-DHAM-NLC-097

Dated: 10-01-2022
 Dated: 08-01-2022

Tension Test Report (Page -1/1)

Date of Test 11-01-2022
 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	0.421	10	10.08	0.12	0.124	4800	6000	88184	85560	110230	107000	0.90	11.3	Amreli steel
2	0.420	10	10.07	0.12	0.124	4800	5800	88184	85650	106556	103500	0.80	10.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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
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To,
 Sub Divisional Officer
 The Punjab Employees Social Security Institution
 Construction of Social security Health Facility at Taunsa

Reference # CED/TFL **37680** (Dr. Rizwan Riaz)
 Reference of the request letter # SS.DC(/)379

Dated: 10-01-2022
 Dated: 03-01-2022

Tension Test Report (Page -1/1)

Date of Test 11-01-2022
 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	0.371	3/8	0.373	0.11	0.109	3600	4900	72200	72740	98200	99000	1.00	12.5	
2	0.364	3/8	0.369	0.11	0.107	3500	4800	70200	72010	96200	98800	1.10	13.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile test														
Bend Test														

I/C Testing Laboratoires
UET Lahore, Pakistan.

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STRUCTURAL ENGINEERING DIVISION
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To,
M/S CGGC Suki Kinari Project Management in Pakistan
874 MW Suki Kinari Power Project – N15 Relocation Highway Material

Reference # CED/TFL **37681** (Dr. M Rizwan Riaz)
Reference of the request letter # Nil

Dated: 10-01-2022

Dated: 27-12-2021

Tension Test Report (Page – 1/3)

Date of Test 11-01-2022
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, GPa	% Elongation	Remarks / Coil No.
	(mm)	(kg/km)	(kg/km)	(kg)	(kN)	(kg)	(kN)			
1	15.24 (0.6")	1102.0	1114.0	23600	231.52	27800	272.72	199	>3.50	YPW115-SJ-21104
1	15.24 (0.6")	1102.0	1110.0	24300	238.38	27900	273.70	199	>3.50	YPW115-SJ-21104
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
Only two 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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UET Lahore, Pakistan.

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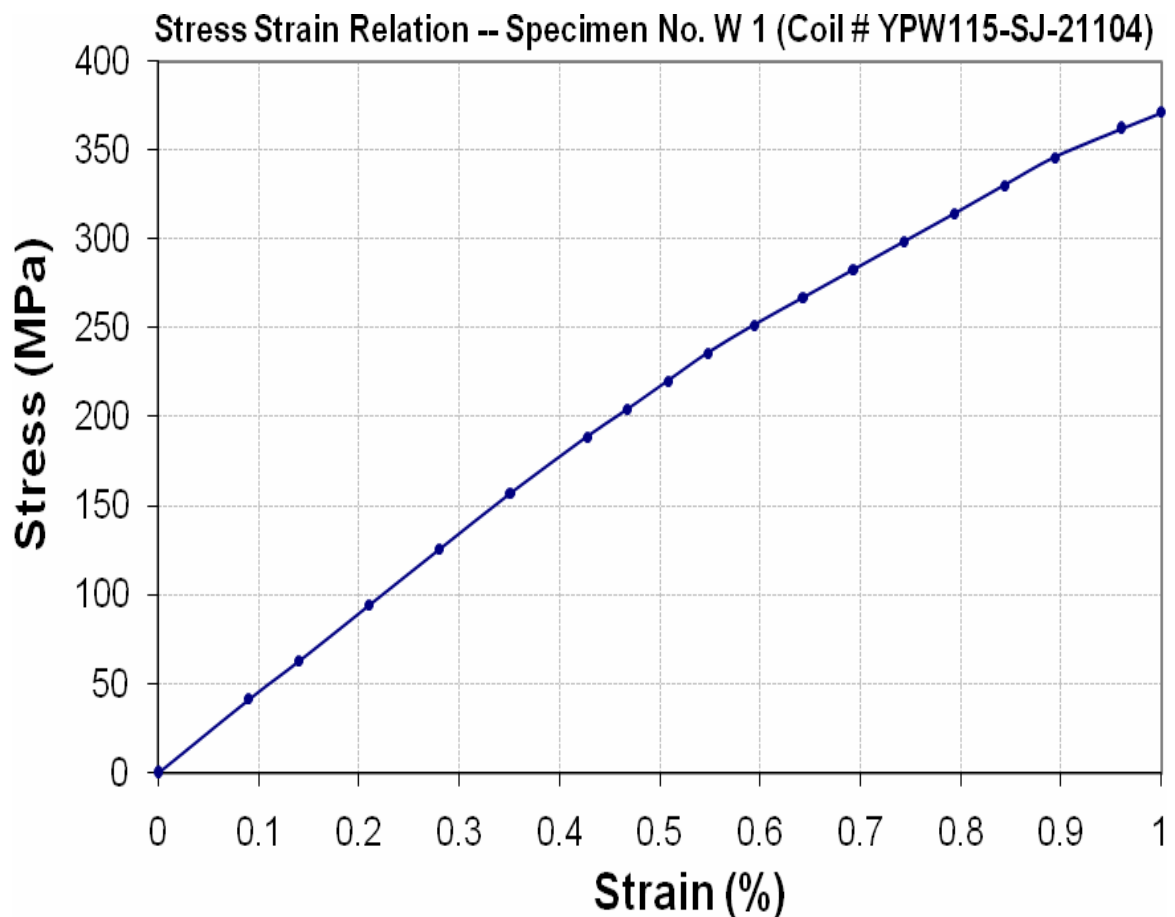
To,
M/S CGGC Suki Kinari Project Management in Pakistan
874 MW Suki Kinari Power Project – N15 Relocation Highway Material

Reference # CED/TFL **37681** (Dr. M Rizwan Riaz)
Reference of the request letter # Nil

Dated: 10-01-2022

Dated: 27-12-2021

Graph (Page – 2/3)



I/C Testing Laboratoires
UET Lahore, Pakistan.

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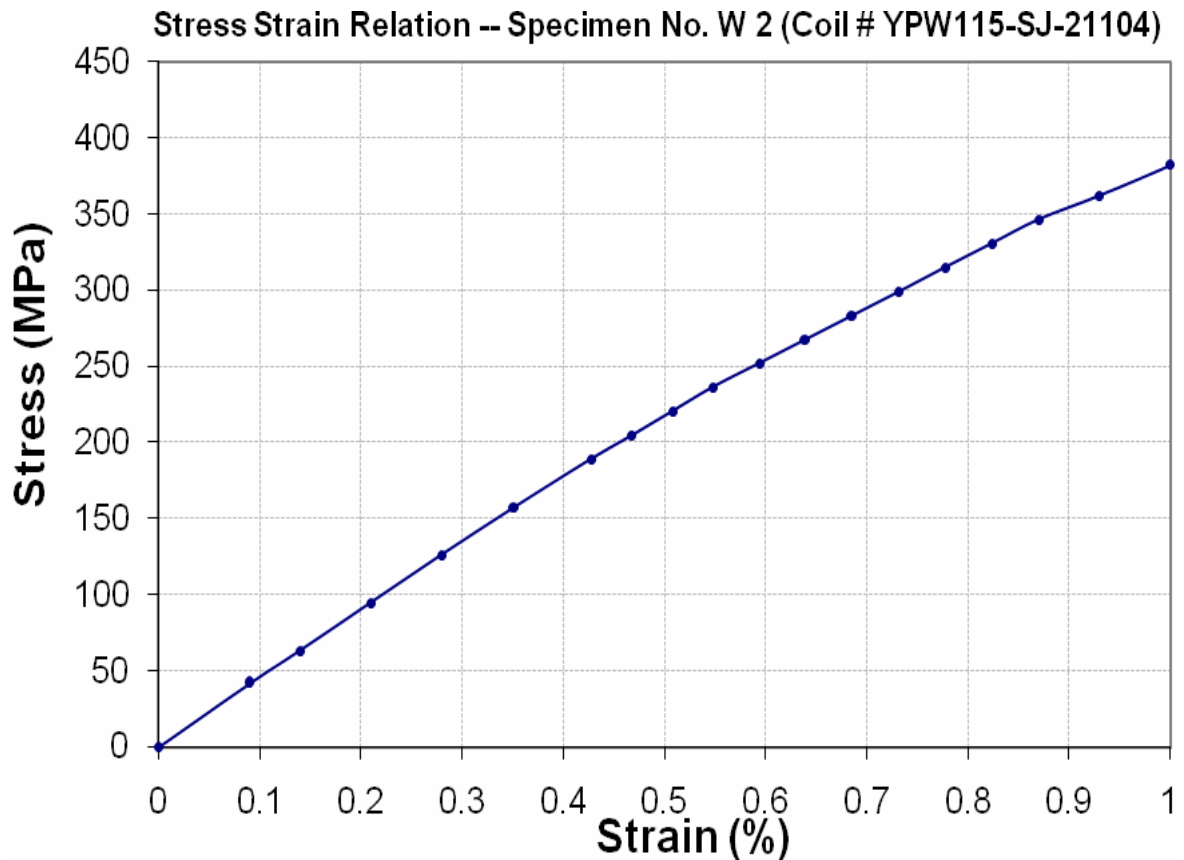
To,
M/S CGGC Suki Kinari Project Management in Pakistan
874 MW Suki Kinari Power Project – N15 Relocation Highway Material

Reference # CED/TFL **37681** (Dr. M Rizwan Riaz)
Reference of the request letter # Nil

Dated: 10-01-2022

Dated: 27-12-2021

Graph (Page – 3/3)



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Pakistan. Ph: 92-42-99029202

To,
M/S Altec International
Lahore

Reference # CED/TFL **37682** (Dr. M Rizwan Riaz)
Reference of the request letter # Nil

Dated: 10-01-2022
Dated: 24-12-2022

Tension Test Report (Page – 1/1)

Date of Test 11-01-2022
Description Steel Wire Rope Tensile Test

Sr. No.	Nominal Diameter	Measured weight	Breaking Load	Remarks / Coil No.
	(mm)	(kg/m)	(kg)	
1	8.3	0.357	5400	
-	-	-	-	
-	-	-	-	
-	-	-	-	
-	-	-	-	
Only one sample for Test				

I/C Testing Laboratoires
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STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
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To,
 Sub Divisional Officer
 Highway Sub Division
 Sheikhpura
 (Rehabilitation / Construction of Road from Paddianwala to Ajniawala via Gujiana Nau, Length = 18.00km)
 Reference # CED/TFL **37683** (Dr. Rizwan Riaz) Dated: 10-01-2022
 Reference of the request letter # 506/SKP Dated: 29-11-2021

Tension Test Report (Page -1/1)

Date of Test 11-01-2022
 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	0.364	3	0.369	0.11	0.107	3400	5200	68200	70010	104200	107100	1.20	15.0	
2	0.364	3	0.369	0.11	0.107	3500	5200	70200	72050	104200	107100	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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Test Floor Laboratory
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To,
M Naveed

Reference # CED/TFL **37684** (Dr. Rizwan Riaz)
 Reference of the request letter # Nil

Dated: 10-01-2022
 Dated: 10-01-2022

Tension Test Report (Page -1/1)

Date of Test 11-01-2022
 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	0.372	3	0.373	0.11	0.109	3400	5000	68200	68620	100200	101000	1.40	17.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only one sample for tensile and one sample for bend test														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														

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
 Buildings Sub Division No. 22
 Lahore

(Construction of Building for E-Library & Research Facilities in Board for Advancement of Literature, Lahore ADP No. 6940 for The Year 2021-22)

Reference # CED/TFL **37685** (Dr. Rizwan Riaz)
 Reference of the request letter # 277/22nd

Dated: 10-01-2022
 Dated: 28-12-2021

Tension Test Report (Page -1/1)

Date of Test 11-01-2022
 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	0.368	3	0.371	0.11	0.108	3500	5000	70200	71240	100200	101800	1.30	16.3	
2	0.365	3	0.370	0.11	0.107	3300	4900	66200	67760	98200	100700	1.30	16.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile test														
Bend Test														

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STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
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To,
 Construction Manager
 Zameen Aurum
 Construction of Zameen Aurum at Plot No. 15 Block L, Gulberg-III, Main Feroze Pur Road,
 Lahore
 Reference # CED/TFL **37686** (Dr. M Rizwan Riaz) Dated: 11-01-2022
 Reference of the request letter # ZD/ZA/STR022 Dated: 10-01-2022

Tension Test Report (Page -1/1)

Date of Test 11-01-2022
 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	0.357	3	0.366	0.11	0.105	3100	4600	62200	65060	92200	96600	1.50	18.8	SJ Steel
2	0.367	3	0.371	0.11	0.108	3400	4800	68200	69410	96200	98000	1.30	16.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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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