STRUCTURAL ENGINEERING DIVISION

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

To,

Construction Manager
Barqaab Consulting Services (Pvt) Limited
Procurement of Plant, Design, Supply, Installation, Testing and Commissioning of 500/220/132kV Lahore North Substation and Extension Works at 500/220/132kV Nokhar Substation Under ADB Loan-3677-Pak Second Power Transmission Enhancment Ivestment Program Trench-III.

Reference # CED/TFL **3881** (Dr. M Yousaf) Dated: 07-09-2023
Reference of the request letter # 500kV/SS/N-LHR/BQB/134 Dated: 02-09-2023

Tension Test Report (Page -1/1)

Date of Test 12-09-2023
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	0.370	3	0.372	0.11	0.109	3590	4940	72000	72830	99000	100300	1.00	12.5	FF Steel
2	0.368	3	0.371	0.11	0.108	3820	5100	76600	77940	102200	104100	0.90	11.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Note: only two samples for tensile and one sample for bend test

Bend Test

#3 Bar Bend Test Through 180º is Satisfactory

Witness by M Farhan (Barqaab) and Muhsin Bhatti (COS NTDC)

I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:
1- You can See your reports On Internet in the following web site
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
2. The above results pertain to sample /samples supplied to this laboratory.
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
Construction of Flyover / Underpass at Akbar Chowk Lahore.
(Revised: Signal Free Corridor)

Reference # CED/TFL **3889** (Dr. Usman Akmal) Dated: 11-09-2023
Reference of the request letter # 3772/103/ACF/SA/04/202 Dated: 29-08-2023

Tension Test Report (Page # 1/1)

Date of Test 12-09-2023
Gauge length 8 inches
Description Deformed Steel Bar Tensile 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	0.379	3	0.377	0.11	0.111	3400	5100	68200	67300	102200	101000	1.30	16.3	Batala Premium
2	0.376	3	0.375	0.11	0.110	3600	5200	72200	71850	104200	103800	1.30	16.3	
3	4.318	10	1.271	1.27	1.269	34700	52000	60300	60260	90300	90300	1.60	20.0	
4	4.315	10	1.271	1.27	1.268	34600	52200	60100	60130	90600	90800	1.30	16.3	
5	5.141	11	1.387	1.56	1.511	56000	72400	79200	81680	102300	105600	1.40	17.5	
6	5.154	11	1.389	1.56	1.515	56400	72200	79700	82060	102100	105100	1.40	17.5	

Note: only six samples for tensile and three samples for bend test

Bend Test

#3 Bar Bend Test Through 180º is Satisfactory

#10 Bar Bend Test Through 180º is Satisfactory

#11 Bar Bend Test Through 180º is Satisfactory

I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:
1- You can See your reports On Internet in the following web site
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
2. The above results pertain to sample /samples supplied to this laboratory.
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,

Manager QA/QC
BSM Gujar Khan
New Metro City Gujar Khan Rawalpindi (RCC Pipe Factorey)

Reference # CED/TFL **3891** (Dr. Usman Akmal) Dated: 11-09-2023
Reference of the request letter # NMC/158/2023 Dated: 05-09-2023

Tension Test Report (Page -1/1)

Date of Test 12-09-2023
Gauge length 8 inches
Description Plain Steel Bar Tensile and Bend Test

Sr. No.	Weight	Diameter/ size		Area (mm^2)		Yield load	Breaking Load	Yield Stress (MPa)	Ultimate Stress (MPa)	Elongation	% Elongation	Remarks
	(kg/m)	Nominal (mm)	Actual (mm)	Nominal	Actual	(kg)	(kg)	Actual	Actual	(inch)		
1	0.143	5	4.82	--------	18.3	980	1120	527	602	1.40	17.5	
2	0.143	5	4.82	--------	18.2	980	1120	527	603	1.40	17.5	
-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test												
Bend Test												
5mm Bar Bend Test Through 180º is Satisfactory												

I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:
1- You can See your reports On Internet in the following web site
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
2. The above results pertain to sample /samples supplied to this laboratory.
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,

M/S Altec International
Lahore

Reference # CED/TFL **3892** (Dr. Usman Akmal) Dated: 12-09-2023
Reference of the request letter # Nil Dated: 11-09-2023

Tension Test Report (Page – 1/1)

Date of Test 12-09-2023
Description Steel Wire Rope Tensile Test

Sr. No.	Nominal Diameter	Measured weight	Breaking Load	Remarks / Coil No.
	(mm)	(kg/m)	(kg)	
1	**8.3**	**0.25**	**4100**	
-	-	-	-	
-	-	-	-	
-	-	-	-	
-	-	-	-	
Only one sample for Test				

I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:
1- You can See your reports On Internet in the following web site
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
2. The above results pertain to sample /samples supplied to this laboratory.
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,

Sub Divisional Officer
Highway Sub Division No. 1
Lahore
(Construction of Metalled Road from Babu Sabu Interchange to Shamshan Ghat (100 ft Road) L= 2.50 km Lahore.)

Reference # CED/TFL **3893** (Dr. Usman Akmal) Dated: 12-09-2023
Reference of the request letter # 145/SDO-I Dated: 10-04-2023

Tension Test Report (Page -1/1)

Date of Test 12-09-2023
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	0.374	3	0.374	0.11	0.110	3600	5100	72200	72100	102200	102200	1.30	16.3	
2	0.375	3	0.375	0.11	0.110	3500	5100	70200	70030	102200	102100	1.30	16.3	
3	0.374	3	0.374	0.11	0.110	3500	5100	70200	70140	102200	102200	1.30	16.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only three samples for tensile and one sample for bend test														
Bend Test														
#3 Bar Bend Test Through 180º is Satisfactory														

I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:
1- You can See your reports On Internet in the following web site
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
2. The above results pertain to sample /samples supplied to this laboratory.
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

I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

1- You can See your reports On Internet in the following web site
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
2. The above results pertain to sample /samples supplied to this laboratory.
3- Sealed sample / Unsealed sample / Marked sample/Signed Samples