



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/12/34353

Dated: 20-12-19

Dated of Test: 16-01-2020

To
M/S ZHN Contracting Corporation (SMC+-Private) Limited
Lahore

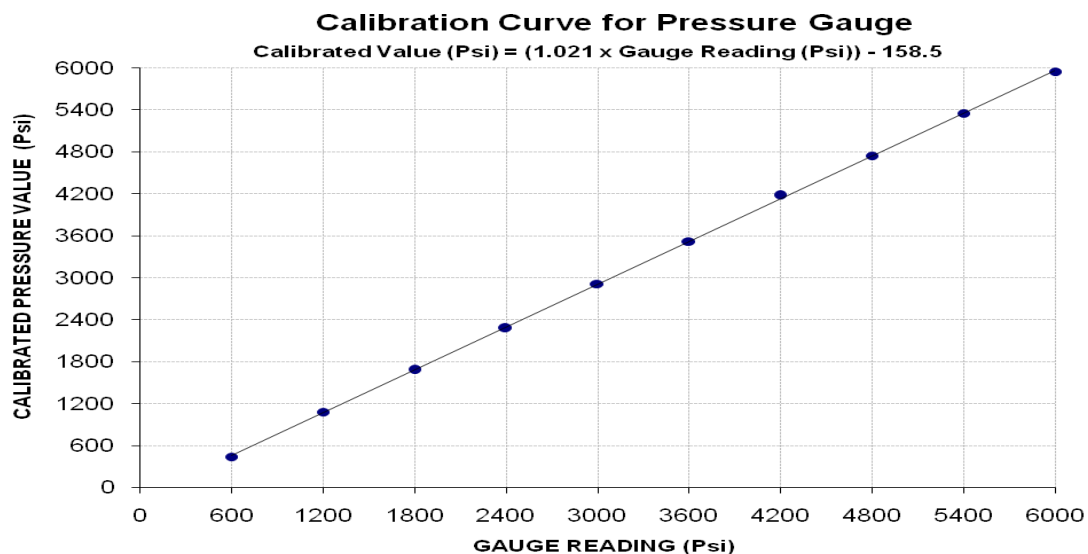
Subject: - CALIBRATION OF PRESSURE GAUGE (MARK: TFL/12/34358) (Page -1/2)

Reference to your Letter No. ZHN/035/2019, dated: 19/12/2019 on the subject cited above. One Pressure Gauge as received by us has been calibrated. The results are tabulated as under:

Total Range : Zero - 10000 (Psi)
Calibrated Range : Zero - 6000 (Psi)

Pressure Gauge Reading (Psi)	600	1200	1800	2400	3000	3600	4200	2800	5400	6000
Calibrated Load (kg)	6100	15000	23400	31700	40500	49000	58100	66000	74500	82800
Calibrated Pressure (Psi)	438	1078	1681	2277	2909	3520	4174	4741	5352	5948

The Ram Area of Calibration = 198 cm²



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

Ref: CED/TFL/12/34353

Dated: 20-12-19

Dated of Test: 16-01-2020

To
M/S ZHN Contracting Corporation (SMC+-Private) Limited
Lahore

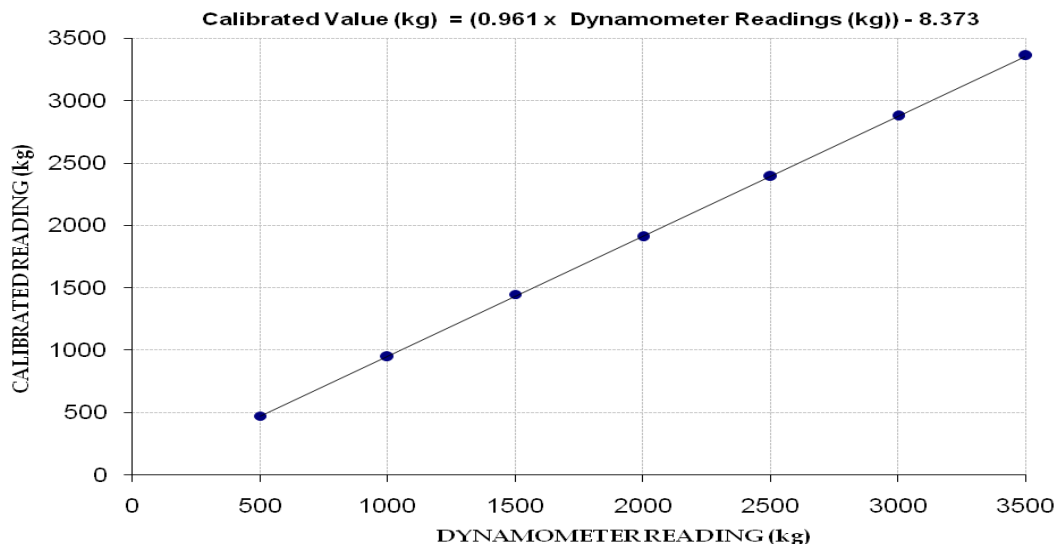
Subject: - **CALIBRATION OF DYNAMOMETER (MARK: TFL/12/34358)** (Page -2/2)

Ref: Your letter No. ZHN/035/2019, dated: 19/12/2019 on the subject cited above. One Dynamometer (Sr. No. D46288) as received by us has been calibrated. The results are tabulated as under:

Total Range : Zero - 4000 (kg)
Calibrated Range : Zero - 3500 (kg)

Dynamometer Readings (kg)	500	1000	1500	2000	2500	3000	3500	
Calibrated Readings	(kN)	4.65	9.28	14.20	18.73	23.48	28.23	32.95
	(kg)	474	945	1448	1909	2393	2877	3359

Calibration Curve for Dynamometer



I/C Testing Laboratories
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,
 Senior Resident Engineer
 ProMag Pvt Ltrd
 Main Truk Sewer DHA Multan

Reference # CED/TFL **34428** (Dr. Qasim Khan)
 Reference of the request letter # Sec-D/CT/MTS/405

Dated: 06-01-2020
 Dated: 04-01-2020

Tension Test Report (Page -1/1)

Date of Test 16-01-2020
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A496

Sr. No.	Weight (kg/m)	Diameter/ Size (mm)		Area (mm ²)		Yield load (kg)	Breaking Load (kg)	Yield Stress (Mpa)		Ultimate Stress (Mpa)		Remarks
		Nominal	Actual	Nominal	Actual			Nominal	Actual	Nominal	Actual	
1	0.163	5	5.14	19.40	20.75	1000	1400	506	473	708	662	
2	0.160	5	5.09	19.40	20.34	840	1080	425	405	546	521	
3	0.271	6	6.63	32.30	34.57	1640	2040	498	465	620	579	
4	0.237	6	6.21	32.30	30.25	1240	1720	377	402	522	558	
5	0.424	8	8.29	51.60	53.95	2040	2920	388	371	555	531	
6	0.416	8	8.22	51.60	53.04	2400	3600	456	444	684	666	
Note: only six samples for tensile and three samples for bend test												
Bend Test												
5mm Dia Bar Bend Test Through 180° is Satisfactory												
6mm Dia Bar Bend Test Through 180° is Satisfactory												
8mm Dia Bar Bend Test Through 180° 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 Ann Global Private Limited
Model Town, Lahore
(Manufacturing of PCC Poles at Sahiwal Pole Plant)

Reference # CED/TFL **34442** (Dr. Usman Akmal)
Reference of the request letter # ANN GLOBAL/UET/20/01

Dated: 08-01-2020
Dated: 08-01-2020

Tension Test Report (Page – 1/1)

Date of Test 16-01-2020
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)		% Elongation	Remarks / Coil No.
	(mm)	(kg/km)	(kg/km)	(kg)	(kN)	(kg)	(kN)		
1	9.53 (3/8")	432.0	443.0	10100	99.08	10900	106.93	>3.50	xx
2	9.53 (3/8")	432.0	443.0	10400	102.02	11000	107.91	>3.50	xx
3	11.11 (7/16")	582.0	598.0	13000	127.53	14400	141.26	>3.50	xx
4	11.11 (7/16")	582.0	593.0	13300	130.47	14500	142.25	>3.50	xx
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-

Only four samples 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,
Resident Engineer NESPAK
District Khyber
Permanent Reconstruction Plan Pinda China Bridge Project
(WMI)

Reference # CED/TFL **34462** (Dr. Usman Akmal)
Reference of the request letter # RE/DTS/10

Dated: 10-01-2020
Dated: 04-01-2020

Tension Test Report (Page – 1/2)

Date of Test 16-01-2020
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")	775.0	782.0	17000	166.77	19300	189.33	199	>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.

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



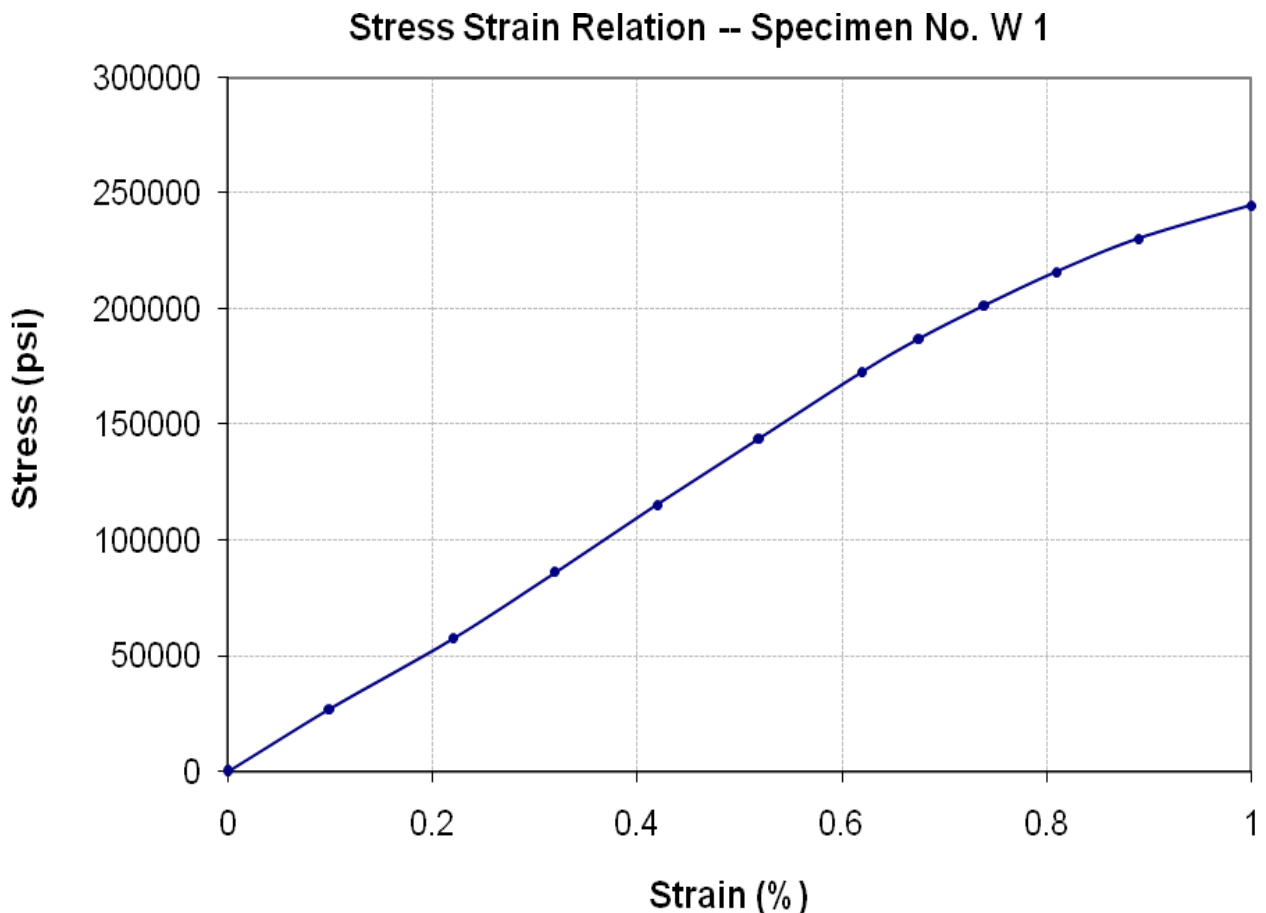
STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
Resident Engineer NESPAK
District Khyber
Permanent Reconstruction Plan Pinda China Bridge Project
(WMI)

Reference # CED/TFL **34462** (Dr. Usman Akmal)
Reference of the request letter # RE/DTS/10

Dated: 10-01-2020
Dated: 04-01-2020

Graph (Page – 2/2)



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
 Public Health Sub Division
 Raiwind
 (Providing PCC, and Drainage / Sewerage Facility in Mohalla Shokat Gujjar, Anwar Jutt and Feroze Park Baggrian Part-2 Lahore)(M/s Nawaz Trading Co (Pvt) Ltd)

Reference # CED/TFL **34471** (Dr. Usman Akmal)
 Reference of the request letter # 639/R

Dated: 14-01-2020
 Dated: 24-05-2019

Tension Test Report (Page -1/1)

Date of Test 16-01-2020
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile and Bend Test

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	0.218	3/16	0.286	-----	0.064	1900	2700	-----	65370	-----	92900	1.00	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only one sample for tensile and one sample for bend test														
Bend Test														
3/16" Dia Bar Bend Test Through 180° 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,
 Senior Manager Civil - OTL
 Orient
 Orient Sqaure Hostel Tower Johar Town, Lahore
 (Afco Steel)

Reference # CED/TFL **34472** (Dr. Usman Akmal) Dated: 14-01-2020
 Reference of the request letter # ORIENT/AFCO/Hostel Tower/Steel/030 Dated: 14-01-2020

Tension Test Report (Page -1/1)

Date of Test 16-01-2020
 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	4.050	32	31.27	1.25	1.190	32000	53000	56438	59250	93475	98200	1.50	18.8	
2	4.106	32	31.49	1.25	1.207	34200	53800	60318	62460	94886	98300	1.80	22.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
32mm Dia Bar Bend Test Through 180° 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 Mughals Engineering Complex (MEC)
Islamabad
(NADRA Data Gunj Bukhsh Town Lahore Project)

Reference # CED/TFL **34475** (Dr. Usman Akmal)
Reference of the request letter # NAD/NES-MEC-1401/19

Dated: 14-01-2020
Dated: 14-01-2020

Tension Test Report (Page -1/1)

Date of Test 16-01-2020
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	0.360	3	0.367	0.11	0.106	2800	4200	56200	58360	84200	87600	1.50	18.8	
2	0.365	3	0.369	0.11	0.107	2800	4200	56200	57590	84200	86400	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														

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 Engineering Design Bureau
 Model Town Extension, Lahore

Reference # CED/TFL **34476** (Dr. Usman Akmal)
 Reference of the request letter # EDB/08

Dated: 14-01-2020
 Dated: 14-01-2020

Tension Test Report (Page -1/1)

Date of Test 16-01-2020
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile 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	0.367	3/8	0.371	0.11	0.108	3600	4800	72200	73460	96200	98000	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only one sample for tensile test														
Bend Test														

To,

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

General Manager Operations
 Model Steel Enterprises (Pvt) Limited
 Lahore

Reference # CED/TFL **34478** (Dr. Usman Akmal)
 Reference of the request letter # Nil

Dated: 14-01-2020
 Dated: 14-01-2020

Tension Test Report (Page -1/1)

Date of Test 16-01-2020
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile 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	0.366	3/8	0.370	0.11	0.108	3200	4700	64200	65550	94200	96300	1.20	15.0	
2	0.350	3/8	0.362	0.11	0.103	3200	4600	64200	68510	92200	98500	1.10	13.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile test														
Bend 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,
 Project Manager
 Master Tiles, Kamoke
 (Master Dairy Farm, Pattoki)

Reference # CED/TFL **34479** (Dr. Usman Akmal)
 Reference of the request letter # Nil

Dated: 14-01-2020
 Dated: 14-01-2020

Tension Test Report (Page -1/1)

Date of Test 16-01-2020
 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	0.407	3	0.390	0.11	0.120	3600	5300	72200	66290	106200	97600	1.30	16.3	
2	0.407	3	0.390	0.11	0.120	3600	5300	72200	66260	106200	97600	1.10	13.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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.

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.E
M/S AS Enterprises
Style Textile Raiwind Road
(AA Associates)(Afce)

Reference # CED/TFL **34480** (Dr. Usman Akmal)
Reference of the request letter # USD/ASE/17

Dated: 15-01-2020
Dated: 10-01-2020

Tension Test Report (Page -1/1)

Date of Test 16-01-2020
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	0.406	10	9.90	0.12	0.119	3600	5200	66138	66540	95533	96100	1.30	16.3	
2	0.403	10	9.87	0.12	0.119	3700	5050	67975	68800	92777	93900	1.00	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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:

- 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,
 Chief Engineer (HVDC) NTDC
 National Transmission & Despatch Company Ltd
 +600 kV HVDC Matiari Lahore Transmission Project
 (Lot-04)(City Steel)
 Reference # CED/TFL **34481** (Dr. Usman Akmal)
 Reference of the request letter # 8761-646/CE/HVDC/LHR

Dated: 15-01-2020
 Dated: 14-01-2020

Tension Test Report (Page -1/2)

Date of Test 16-02-2020
 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	4.107	10	1.240	1.27	1.207	34200	56600	59400	62440	98300	103400	1.20	15.0	
2	4.270	10	1.264	1.27	1.255	36200	58600	62900	63570	101700	103000	1.30	16.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile test														
Bend Test														

Witness by Azzit Ali (Dy. Manager [(HVDC)(NTDC)], M. Bilal Butt (OE) & Zafar Iqbal (CET Lot 4)

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,
 Chief Engineer (HVDC) NTDC
 National Transmission & Despatch Company Ltd
 +600 kV HVDC Matiari Lahore Transmission Project
 (Lot-04)(Kamran Steel)
 Reference # CED/TFL **34481** (Dr. Usman Akmal)
 Reference of the request letter # 8761-646/CE/HVDC/LHR

Dated: 15-01-2020
 Dated: 14-01-2020

Tension Test Report (Page -2/2)

Date of Test 16-02-2020
 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	4.190	10	1.252	1.27	1.232	35200	55400	61100	63000	96200	99200	1.60	20.0	
2	4.193	10	1.253	1.27	1.232	35200	55000	61100	62960	95500	98400	1.50	18.8	
3	4.226	10	1.258	1.27	1.242	36800	56200	63900	65290	97600	99800	1.60	20.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only three samples for tensile and three samples for bend test														
Bend Test														
#10 Bar Bend Test Through 180° is Satisfactory														
#10 Bar Bend Test Through 180° is Satisfactory														
#10 Bar Bend Test Through 180° is Satisfactory														

Witness by Azzit Ali (Dy. Manager [(HVDC)(NTDC)], M. Bilal Butt (OE) & Zafar Iqbal (CET Lot 4)

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
 Phalia

(Construction of RCC Road from Al-Sdee Petrol Pump to Ghazali School Jogo Road Qadarabad
 Length = 0.99 kms Tehsil Phalia in District Mandi Bahauddin)

Reference # CED/TFL **34482** (Dr. Usman Akmal)
 Reference of the request letter # 208/P

Dated: 15-01-2020
 Dated: 13-12-2019

Tension Test Report (Page -1/1)

Date of Test 16-01-2020
 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	0.376	3/8	0.375	0.11	0.111	3200	4600	64200	63830	92200	91800	1.40	17.5	
2	0.373	3/8	0.374	0.11	0.110	3400	4700	68200	68340	94200	94500	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
3/8" Dia Bar Bend Test Through 180° 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 Defence Housing Authority.
Lahore Cantt
(Proposed Commercial Plaza, DRGCC Ph-III, DHA Ph-VI (M/s Construct))

Reference # CED/TFL **34483** (Dr. Usman Akmal)
Reference of the request letter # 408/241/E/Lab/824/4472

Dated: 15-01-2020
Dated: 15-01-2020

Tension Test Report (Page -1/1)

Date of Test 16-01-2020
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	0.369	3	0.372	0.11	0.108	3200	4900	64200	65040	98200	99600	1.60	20.0	Kamran Steel
2	0.364	3	0.369	0.11	0.107	3200	4850	64200	65870	97200	99900	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														

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,
 Project Manager
 Roots International Schools
 Roots International School Project Palm Tree Campus Sialkot

Reference # CED/TFL **34484** (Dr. Usman Akmal)
 Reference of the request letter # RIS/SB/SKT0231122019

Dated: 15-01-2020
 Dated: 14-01-2020

Tension Test Report (Page -1/1)

Date of Test 16-01-2020
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile 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	0.353	3/8	0.364	0.11	0.104	4000	4900	80200	84940	98200	104100	1.00	12.5	
2	0.372	3/8	0.373	0.11	0.109	3900	4900	78200	78700	98200	98900	1.10	13.8	
3	0.363	3/8	0.369	0.11	0.107	4000	4900	80200	82660	98200	101300	1.00	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only three samples for tensile test														
Bend 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,
M/S Ahmed Associates
New Garden Town, Lahore

Reference # CED/TFL **34486** (Dr. Usman Akmal)
Reference of the request letter # Khaadi Gujranwala

Dated: 15-01-2020
Dated: 15-01-2020

Tension Test Report (Page -1/1)

Date of Test 16-01-2020
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	0.373	3	0.374	0.11	0.110	2900	4400	58200	58290	88200	88500	1.30	16.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only one sample for tensile test														
Bend 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