



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/09/33798
19

Dated: 05-09-

Date of Test: 27-09-19

To
Addl Dir Dev
DHA Phase-XI (Rahbar)
Development of Re-appropriated Area in Sector-II (Extension), DHA Phase-XI
(Rahbar)

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

Reference to your letter No. Dev/RAA/Sec-II(Extn)/2/19/2576, dated
28.08.2019 on the subject cited above. One R.C.C. Pipe 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	Proof Stress	Ultimate Stress
	(mm)	(m)	(m)	(mm)	(mm)	(mm)	(kg)	(kg)	N/m/mm	N/m/mm
1	228.6 (9")	2.390	2.233	324.00	223.94	50.03	10800	14400	211.87	282.50

I/C Testing Laboratories
UET Lahore, Pakistan.

Note:

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STRUCTURAL ENGINEERING DIVISION
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Pakistan. Ph: 92-42-99029202

To,
M/S Shahid & Co
Tibba Sultan Pur Vehari
(Construction of Shed PSC (Punjab Seed Corporation) Piplan)(Ishtiaq)

Reference # CED/TFL **33872** (Dr. Ali Ahmed)
Reference of the request letter # Nil

Dated: 23-09-2019
Dated: 23-09-2019

Tension Test Report (Page – 1/1)

Date of Test 27-09-2019
Gauge length 2 inches
Description Garder Steel Strip Tensile and Bend Test as per ASTM A36

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	10x5	26.00x8.10	210.60	7500	12000	349.36	558.97	0.60	30.00	
2	10x5	25.90x8.20	212.38	7600	12400	351.05	572.77	0.60	30.00	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
Only Two Samples for Tensile and One Sample for Bend Test										
Bend Test										
Strip Taken from Garder Bend Test Through 180° is Satisfactory										

I/C Testing Laboratoires
UET Lahore, Pakistan.

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To,
 Resident Engineer (CPEC Package-3)
 NESPAK
 China – Pakistan Economic Corridor (CPEC), Western Route Hakla (On M1) – Yarak (D.I Khan) Motorway, Package-3 (Tarap to kot Belian) (M/s Fabco)(M/s Victory Pipes)

Reference # CED/TFL **33881** (Dr. Ali Ahmed) Dated: 24-09-2019
 Reference of the request letter # CPEC/NESPAK/CS/RE/PKG3/19/1162 Dated: 17-09-2019

Tension Test Report (Page – 1/2)

Date of Test 27-09-2019
 Gauge length 2 inches
 Description Sign Post Tublar (Pipe) Steel Strip Tensile Test

Sr. No.	Designation	Size of Strip	X Section Area	Yield load	Breaking Load	Yield Stress	Ultimate Stress	Elongation	% Elongation	Remarks
1	Sign Post Tublar (Pipe)	25.60x3.40	87.04	3900	4300	439.56	484.64	0.40	20.00	
2		25.60x3.40	87.04	3800	4300	428.29	484.64	0.40	20.00	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
Only Two Samples for Tensile Test										
Bend Test										

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UET Lahore, Pakistan.

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o,
 Resident Engineer (CPEC Package-3)
 NESPAK
 China – Pakistan Economic Corridor (CPEC), Western Route Hakla (On M1) – Yarak (D.I Khan) Motorway, Package-3 (Tarap to kot Belian) (M/s Fabco)(M/s Victory Pipes)

Reference # CED/TFL **33881** (Dr. Ali Ahmed) Dated: 24-09-2019
 Reference of the request letter # CPEC/NESPAK/CS/RE/PKG3/19/1162 Dated: 17-09-2019

Tension Test Report (Page – 2/2)

Date of Test 27-09-2019
 Gauge length 2 inches
 Description Sign Board Panel (Aluminum Alloy) Steel Strip Tensile Test

Sr. No.	Designation	Size of Strip	X Section Area	Yield load	Breaking Load	Yield Stress	Ultimate Stress	Elongation	% Elongation	Remarks
1	Sign Board Panel	20.00x3.00	60.00	6.48	9.50	108.00	158.33	0.50	25.0	
2		20.00x3.00	60.00	6.96	9.50	116.00	158.33	0.50	25.0	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
Only Two Samples for Tensile Test										
Bend Test										

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UET Lahore, Pakistan.

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To
 Resident Engineer (CPEC Package-3)
 NESPAK
 China – Pakistan Economic Corridor (CPEC), Western Route Hakla (On M1) – Yarak (D.I
 Khan) Motorway, Package-3 (Tarap to kot Belian)
 Reference # CED/TFL 33882 (Dr. Qasim Khan) Dated: 24-09-2019
 Reference of the request letter # CPEC/NESPAK/RE/PKG3/19/1176 Dated: 21-09-2019

Tension Test Report (Page -1/1)

Date of Test 27-09-2019
 Gauge length -----
 Description Stirrups (Plain Steel bar) Tensile Test as per ASTM-A82

Sr. No.	Weight	Diameter/ Size (mm)		Area (mm ²)	Yield load	Breaking Load	Yield Stress (MPa)	Ultimate Stress (MPa)	Reduced Area	% Reduction of Area	Remarks
	(lbs/ft)	Nominal	Actual	Actual	(kg)	(kg)	Actual	Actual	(mm ²)		
1	0.282	6	6.77	36.0	1800	2700	491	737	24.19	32.7	
2	0.288	6	6.83	36.6	1850	2750	495	736	23.33	36.3	
-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile test											
Bend Test											

I/C Testing Laboratoires
UET Lahore, Pakistan.

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To
 Resident Engineer (CPEC Package-3)
 NESPAK
 China – Pakistan Economic Corridor (CPEC), Western Route Hakla (On M1) – Yarak (D.I Khan) Motorway, Package-3 (Tarap to kot Belian)
 Reference # CED/TFL **33883** (Dr. Ali Ahmed) Dated: 24-09-2019
 Reference of the request letter # CPEC/NESPAK/CS/RE/PKG3/19/1161 Dated: 19-09-2019

Tension Test Report (Page -1/3)

Date of Test 27-09-2019
 Gauge length -----
 Description Stirrups (Plain Steel bar) Tensile Test as per ASTM-A82

Sr. No.	Weight	Diameter/ Size (mm)		Area (mm ²)	Yield load	Breaking Load	Yield Stress (MPa)	Ultimate Stress (MPa)	Reduced Area	% Reduction of Area	Remarks
	(lbs/ft)	Nominal	Actual	Actual	(kg)	(kg)	Actual	Actual	(mm ²)		
1	0.282	6	6.76	35.9	1800	2500	492	683	23.76	33.8	
2	0.266	6	6.57	33.9	1700	2400	492	695	21.65	36.1	
-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile test											
Bend Test											

I/C Testing Laboratoires
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To,
Resident Engineer (CPEC Package-3)
NESPAK
China – Pakistan Economic Corridor (CPEC), Western Route Hakla (On M1) – Yarak (D.I
Khan) Motorway, Package-3 (Tarap to kot Belian)

Reference # CED/TFL **33883** (Dr. Ali Ahmed) Dated: 24-09-2019
Reference of the request letter # CPEC/NESPAK/CS/RE/PKG3/19/1161 Dated: 19-09-2019

Tension Test Report (Page – 2/3)

Date of Test 27-09-2019
Gauge length -----
Description Chain Link Wire & Tension Wire Tensile Test

Sr. No.	Diameter of Single Wire	Breaking Load	Remarks
	(mm)	(kN)	
1	2.65	5.00	Chain Link
2	2.70	4.50	
3	3.15	7.00	Tension Wire
4	3.15	7.00	
-	-	-	-
-	-	-	
-	-	-	
-	-	-	
Only Four Samples for Test			

I/C Testing Laboratoires
UET Lahore, Pakistan.

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To,
Resident Engineer (CPEC Package-3)
NESPAK
China – Pakistan Economic Corridor (CPEC), Western Route Hakla (On M1) – Yarak (D.I
Khan) Motorway, Package-3 (Tarap to kot Belian)

Reference # CED/TFL **33883** (Dr. Ali Ahmed) Dated: 24-09-2019
Reference of the request letter # CPEC/NESPAK/CS/RE/PKG3/19/1161 Dated: 19-09-2019

Tension Test Report (Page – 3/3)

Date of Test 27-09-2019
Gauge length 2 inches
Description Base Plate 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
	(mm)	(mm)	(mm ²)	(kN)	(kN)	(MPa)	(MPa)	(in)		
1	210x50x5	14.40x4.80	69.12	25.50	30.50	368.92	441.26	0.60	30.00	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
Only One Sample for Tensile Test										
Bend Test										

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UET Lahore, Pakistan.

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STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
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Pakistan. Ph: 92-42-99029202

To,
Sub Divisional Officer
Buildings Sub Division No. 15
Lahore
(Construction of New Administration Block in the Premises of Lahore High Court Lahore)

Reference # CED/TFL **33897** (Dr. Qasim Khan)
Reference of the request letter # 2578

Dated: 26-09-2019
Dated: 16-09-2019

Tension Test Report (Page – 1/2)

Date of Test 27-09-2019
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	777.0	17500	171.68	19400	190.31	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.

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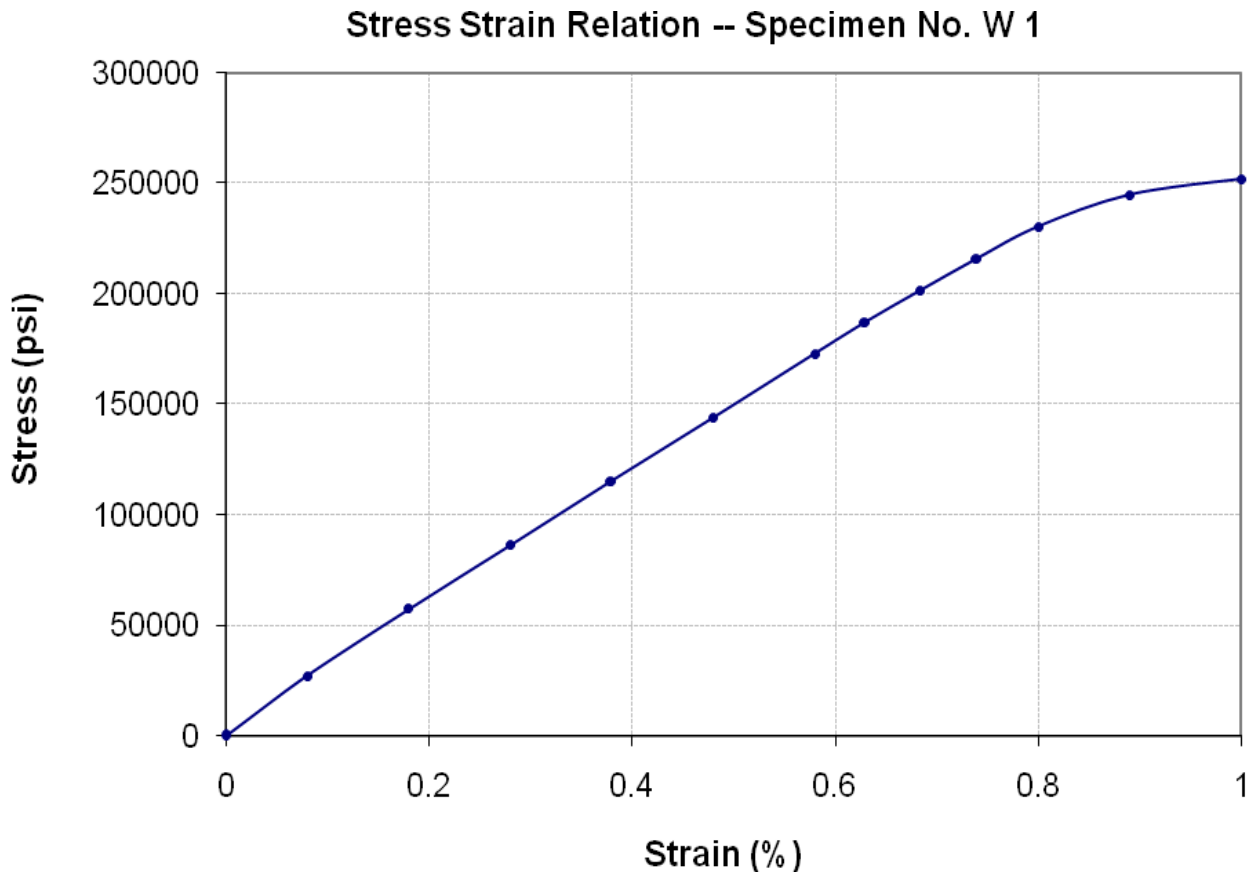
STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
Sub Divisional Officer
Buildings Sub Division No. 15
Lahore
(Construction of New Administration Block in the Premises of Lahore High Court Lahore)

Reference # CED/TFL **33897** (Dr. Qasim Khan)
Reference of the request letter # 2578

Dated: 26-09-2019
Dated: 16-09-2019

Graph (Page – 2/2)



I/C Testing Laboratories
UET Lahore, Pakistan.

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STRUCTURAL ENGINEERING DIVISION
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Pakistan. Ph: 92-42-99029202

To,
 Project Manager
 Izhar Group of Companies
 CCBL Ware House & Allied Works Phase-2

Reference # CED/TFL **33899** (Dr. Qasim Khan)
 Reference of the request letter # ICPL/CCBPL/LAB/07

Dated: 26-09-2019
 Dated: 26-09-2019

Tension Test Report (Page -1/1)

Date of Test 27-09-2019
 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	0.388	3	0.381	0.11	0.114	3200	5000	64200	61800	100200	96600	1.40	17.5	
2	0.374	3	0.374	0.11	0.110	3000	4800	60200	60200	96200	96400	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.

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To,
M/S H. Development's Construction
New Garden Town, Lahore

Reference # CED/TFL **33900** (Dr. Qasim Khan)
Reference of the request letter # Nil

Dated: 26-09-2019
Dated: 26-09-2019

Tension Test Report (Page -1/1)

Date of Test 27-09-2019
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	4.237	10/8	1.259	1.27	1.245	36000	56200	62500	63710	97600	99500	1.10	13.8	
2	4.214	10/8	1.256	1.27	1.239	36200	56200	62900	64420	97600	100000	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
10/8" Dia Bar Bend Test Through 180° is Satisfactory														

I/C Testing Laboratories
UET Lahore, Pakistan.

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STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
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To,
 PMCS Manager
 MAK Associates
 Golfers Lounge Project at Paf Skyview Golf and Country Club, Bedian Road, Lahore

Reference # CED/TFL **33901** (Dr. Qasim Khan) Dated: 26-09-2019
 Reference of the request letter # MAK/PAF/SV-GL/TB-037 Dated: 24-09-2019

Tension Test Report (Page -1/1)

Date of Test 27-09-2019
 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	0.376	3	0.375	0.11	0.111	4200	5400	84200	83650	108200	107600	0.90	11.3	
2	0.373	3	0.374	0.11	0.110	4200	5300	84200	84360	106200	106500	0.90	11.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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.

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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
 Arifwala
 (Rehabilitation of M/Road Tehsil Road from Arifwala – Qaboola road to Ansari Chowk
 Arifwala City Length: 1.22 km in District Pakpattan)

Reference # CED/TFL **33903** (Dr. Qasim Khan)
 Reference of the request letter # 387/SDO-A

Dated: 26-09-2019
 Dated: 31-08-2019

Tension Test Report (Page -1/1)

Date of Test 27-09-2019
 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	0.403	3/8	0.388	0.11	0.118	2600	3500	52100	48400	70200	65200	1.80	22.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only one sample 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:

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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
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To,
 M/S Defence Housing Authority.
 Lahore Cantt
 (Proposed Commercial Plaza, DRGCC Ph-III, DHA Ph-VI)(M/s Construct)

Reference # CED/TFL **33906** (Dr. Qasim Khan)
 Reference of the request letter # 408/241/E/Lab/719/3699

Dated: 27-09-2019
 Dated: 26-09-2019

Tension Test Report (Page -1/1)

Date of Test 27-09-2019
 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	0.364	3	0.369	0.11	0.107	3100	4600	62200	63790	92200	94700	1.20	15.0	Kamran Steel
2	0.362	3	0.368	0.11	0.106	3200	4600	64200	66320	92200	95400	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile test														
Bend Test														

I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

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