



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

To,
 ARE – ADP Projects
 NESPAK
 Punjab Irrigation Department – Works Under Annual Development Program (ADP)
 Rehabilitation of Drainage Network in District Muzaffargarh

Reference # CED/TFL **35072** (Dr. M Rizwan Riaz)
 Reference of the request letter # 3158/13/CAA/09/1448

Dated: 02-07-2020
 Dated: 15-06-2020

Tension Test Report (Page -1/1)

Date of Test 07-07-2020
 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	0.378	3	0.376	0.11	0.111	3600	4800	72200	71350	96200	95200	0.90	11.3	A F Steel
2	0.381	3	0.377	0.11	0.112	3400	4700	68200	66980	94200	92600	1.00	12.5	
3	4.310	10	1.270	1.27	1.267	35200	52000	61100	61240	90300	90500	1.30	16.3	
4	4.271	10	1.264	1.27	1.255	36800	57600	63900	64620	100000	101200	1.40	17.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only four samples for tensile and two samples for bend test														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														
#10 Bar Bend Test Through 180° is Satisfactory														

I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

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STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
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Pakistan. Ph: 92-42-99029202

To,
Senior Resident Engineer
Associated Consultancy Centre (Pvt) Ltd. Jv Creative Engineering Consultants
Construction Supervision Consultant Dualization of Mardan-Swabi Road Project Peshawar

Reference # CED/TFL **35075** (Dr. M Rizwan Riaz)

Dated: 02-07-2020

Reference of the request letter # ACC-CEC(JV)/M-S/RE/2020/06/25

Dated: 25-06-2020

Tension Test Report (Page – 1/4)

Date of Test 07-07-2020

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)			
1	12.70 (1/2")	775.0	779.0	18600	182.47	19800	194.24	199	>3.50	
2	12.70 (1/2")	775.0	785.0	18500	181.49	19900	195.22	198	>3.50	
3	12.70 (1/2")	775.0	779.0	18500	181.49	19700	193.26	199	>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

I/C Testing Laboratoires
UET Lahore, Pakistan.

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To,
Senior Resident Engineer
Associated Consultancy Centre (Pvt) Ltd. Jv Creative Engineering Consultants
Construction Supervision Consultant Dualization of Mardan-Swabi Road Project Peshawar

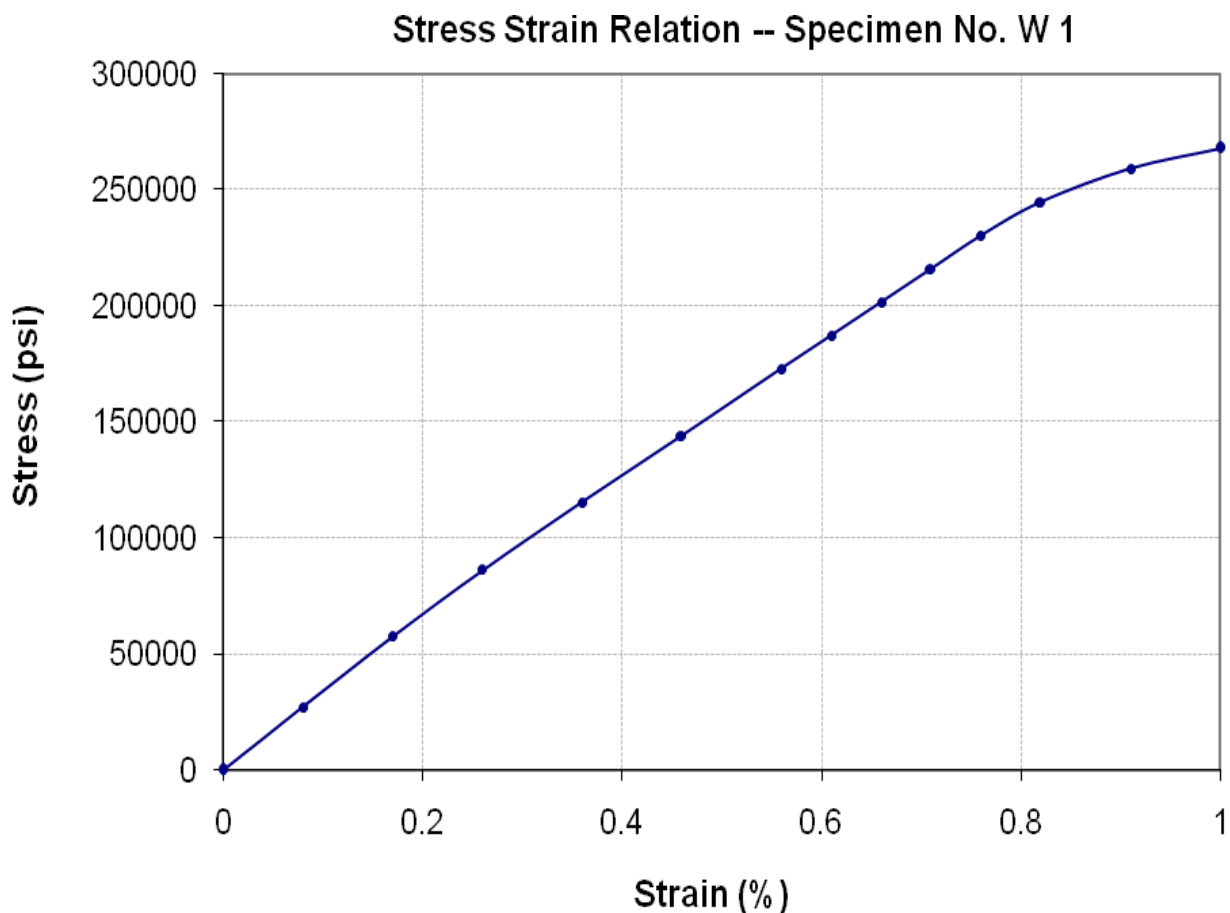
Reference # CED/TFL **35075** (Dr. M Rizwan Riaz)

Dated: 02-07-2020

Reference of the request letter # ACC-CEC(JV)/M-S/RE/2020/06/25

Dated: 25-06-2020

Graph (Page – 2/4)



I/C Testing Laboratories
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To,
Senior Resident Engineer
Associated Consultancy Centre (Pvt) Ltd. Jv Creative Engineering Consultants
Construction Supervision Consultant Dualization of Mardan-Swabi Road Project Peshawar

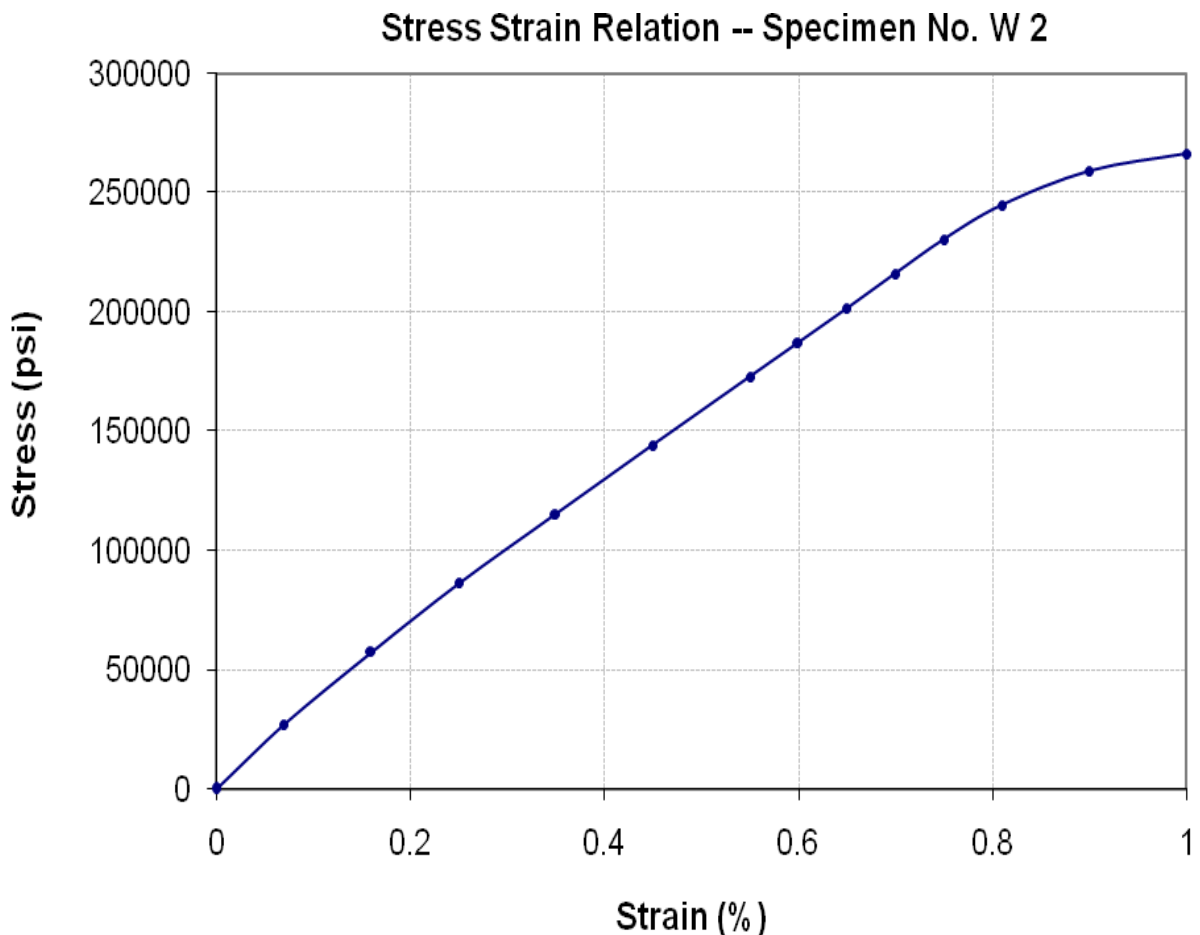
Reference # CED/TFL **35075** (Dr. M Rizwan Riaz)

Dated: 02-07-2020

Reference of the request letter # ACC-CEC(JV)/M-S/RE/2020/06/25

Dated: 25-06-2020

Graph (Page – 3/4)



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To,
Senior Resident Engineer
Associated Consultancy Centre (Pvt) Ltd. Jv Creative Engineering Consultants
Construction Supervision Consultant Dualization of Mardan-Swabi Road Project Peshawar

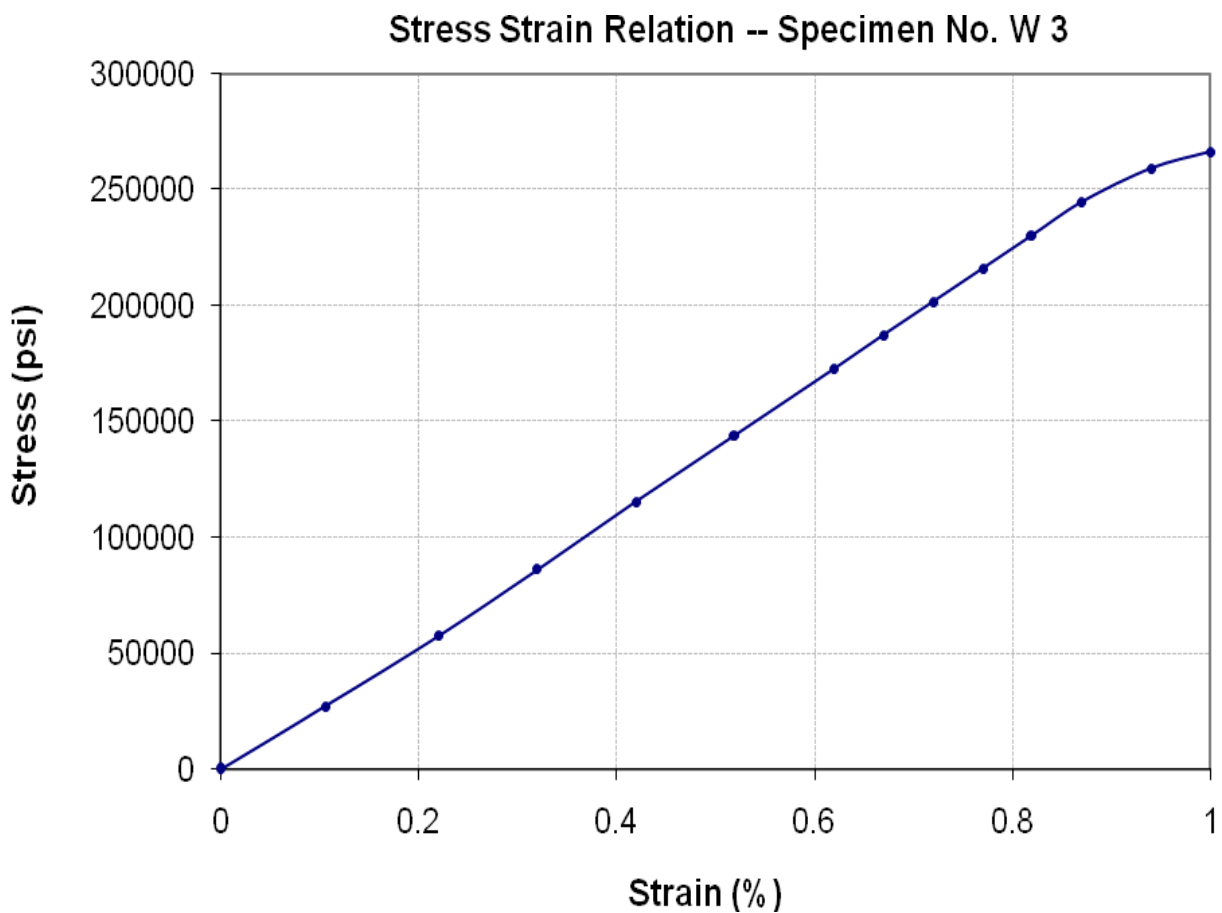
Reference # CED/TFL **35075** (Dr. M Rizwan Riaz)

Dated: 02-07-2020

Reference of the request letter # ACC-CEC(JV)/M-S/RE/2020/06/25

Dated: 25-06-2020

Graph (Page – 4/4)



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,
M/S Mughal Iron & Steel Industries Limited
Lahore

Reference # CED/TFL **35082** (Dr. M Rizwan Riaz)
Reference of the request letter # Nil

Dated: 03-07-2020
Dated: 03-07-2020

Tension Test Report (Page -1/1)

Date of Test 07-07-2020
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	4.268	32	32.10	1.25	1.254	42200	55600	74427	74150	98061	97700	1.50	18.8	Mughal Steel
2	4.267	32	32.10	1.25	1.254	41400	55200	73016	72760	97355	97100	1.40	17.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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.

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

To,
 Resident Engineer
 Metroplan-Asian Jv
 Resident Construction Supervision for Establishment of 200 Bedded Mother & Child Hospital
 and Nursing College, District Mianwali

Reference # CED/TFL **35086** (Dr. M Rizwan Riaz) Dated: 03-07-2020
 Reference of the request letter # Metroplan Asian Jv-Nexus-MMCH-RE-272zated: 28-06-2020

Tension Test Report (Page -1/1)

Date of Test 07-07-2020

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	4.149	10	1.246	1.27	1.220	40200	52800	69800	72660	91700	95500	1.50	18.8	SJ Steel
2	4.248	10	1.261	1.27	1.249	38600	53000	67000	68140	92000	93600	1.50	18.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	

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

Bend Test

#10 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
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To,
 Resident Engineer
 Osmani & Company (Pvt) Ltd
 Infrastructure Development Works of Phase-II (Including Construction of UG, OH Tank, Water Supply and Sewerage System) at M-3 Industrial City Near Sahianwala Interchange M-3 Motorway, Faisalabad

Reference # CED/TFL **35087** (Dr. M Rizwan Riaz) Dated: 06-07-2020
 Reference of the request letter # CRE/M3IC/FIC-040/Lab/469 Dated: 04-07-2020

Tension Test Report (Page -1/1)

Date of Test 07-07-2020
 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	0.385	3	0.380	0.11	0.113	3920	5150	78600	76330	103200	100300	1.10	13.8	FF Steel
2	0.386	3	0.380	0.11	0.113	3790	5070	76000	73680	101600	98600	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.

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To,
M/S Shahid Builders (Pvt) Ltd
Lahore
Construction of Labard Rehabilitation & Vocational Training Centre, Harbanspura, Lahore

Reference # CED/TFL **35088** (Dr. M Rizwan Riaz)
Reference of the request letter # SBL/2020/3

Dated: 06-07-2020
Dated: 06-07-2020

Tension Test Report (Page -1/1)

Date of Test 07-07-2020
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	0.398	3	0.386	0.11	0.117	4130	5610	82800	77890	112500	105800	1.20	15.0	
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Note: only one sample for tensile test														
Bend Test														

I/C Testing Laboratoires
UET Lahore, Pakistan.

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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 **35090** (Dr. M Rizwan Riaz)
Reference of the request letter # 408/241/E/Lab/938/5359

Dated: 06-07-2020
Dated: 03-07-2020

Tension Test Report (Page -1/1)

Date of Test 07-07-2020
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	0.368	3	0.371	0.11	0.108	3790	5020	76000	77200	100600	102300	1.00	12.5	Kamran Steel
2	0.365	3	0.370	0.11	0.107	3720	4910	74600	76460	98400	101000	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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Pakistan. Ph: 92-42-99029202

To,
 Project Manager
 Dupak Properties (Pvt) Ltd
 Defence view Apartments at Shanghai Road, Lahore

Reference # CED/TFL **35091** (Dr. M Rizwan Riaz)
 Reference of the request letter # Dupak/DVA/046

Dated: 07-07-2020
 Dated: 07-07-2020

Tension Test Report (Page -1/1)

Date of Test 07-07-2020
 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	0.383	3	0.379	0.11	0.113	3620	5150	72600	70800	103200	100800	1.30	16.3	
2	0.381	3	0.377	0.11	0.112	3590	5120	72000	70730	102600	100900	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														

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