

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

Ref: <u>CED/TFL/05/33193, 239</u> Dated: <u>08-05-2019</u>

To
M/S Defence Housing Authority.
Lahore Cantt
(Infra Dev Works of Sector-M at DHA Ph-V)(M/s AAJ Enggrs)

Subject: - CALIBRATION OF HYDRAULIC JACK (MARK: TFL/05/33193)

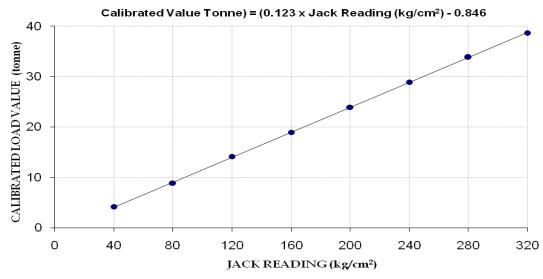
Reference to your Letter No. 408/241/E/Lab/558/11, Dated: 06/05/2019 on the subject cited above. One Hydraulic Jack as received by us has been calibrated. The results are tabulated as under:

Total Range : Zero - 600 (kg/cm²) Calibrated Range : Zero - 320 (kg/cm²)

Hydraulic Jack Readin	ng (kg/cm²)	40	80	120	160	200	240	280	320
Calibrated Load	alibrated Load (kg)				18900	23900	28900	33800	38650
	Tonne		8.85	14.15	18.90	23.90	28.90	33.80	38.65

1 Tonne = 1000 Kg

Calibration Curve For Jack



I/C Testing Laboratoires UET Lahore, Pakistan.

- 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



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

Ref: <u>CED/TFL/05/33196</u> Dated: <u>08-05-19</u>

To Assistant Resident Engineer NESPAK Development of Kartarpur Corridor

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

Reference to your letter No. SA-394/11/A/01, dated 06.05.2019 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	381.0 (15")	2.347	2.220	495.00	380.06	57.47	12900	18600	149.99	216.26

I/C Testing Laboratoires UET Lahore, Pakistan.

- 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



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

To. Dy Proj Mangr Project Management Unit NLC Infra Dev Works DHA Phase-IX Prism (Pkg-II, II & IV)

Reference # CED/TFL **33199** (Dr. Ali Ahmed) Dated: 08-05-2019 Reference of the request letter # 60701/NLC//Ph-IX Dated: 08-05-2019

Tension Test Report (Page - 1/2)

Date of Test 15-05-2019 Gauge length 2 inches

Description MS Pipe Steel Strip Tensile and Bend Test

Sr. No.	Decimation		Size of Strip	X Section Area	Yield load	Breaking Load	Yield Stress	Ultimate Stress	Elongation	% Elongation	Remarks
	(inc	ch)	(mm)	(mm ²)	(kg)	(kg)	(MPa)	(MPa)	(in)		
1	MS Pipe	15	29.90x5.90	176.41	5900	8100	328.09	450.43	0.30	15.00	
2	MS Pipe	15	29.90x5.90	176.41	5800	8000	322.53	444.87	0.35	17.50	
-	-	-	-	_	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	_	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	
	I	0	nly Two Samp	les for To	ensile and	One Samp	le for Be	nd Test	I		
					Bend Test	<u>l</u> t					

Strip Taken from MS Pipe (15") Bend Test Through 180° is Satisfactory

I/C Testing Laboratoires **UET Lahore, Pakistan.**

- 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.
- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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

To,
Dy Proj Mangr
Project Management Unit NLC
Infra Dev Works DHA Phase-IX Prism (Pkg-II, II & IV)

Reference # CED/TFL **33199** (Dr. Ali Ahmed)

Reference of the request letter # 60701/NLC//Ph-IX

Dated: 08-05-2019

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

Date of Test 15-05-2019

Gauge length -----

Description M.S Pipe Weight and Size Test

Sr. No.	Designation	Weight	Length	Weight per Unit Length	External Diameter	Internal Diameter	Thickness (t)	Remark
	(inch)	(g)	(mm)	(kg/m)	(mm)	(mm)	(mm)	
1	15	4633	81.10	57.13	394.00	382.20	5.90	
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	
			Only On	e Sample 1	for Test			
	_							

I/C Testing Laboratoires UET Lahore, Pakistan.

- 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



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

To, Chief Resident Engineer Osmani & Company (Pvt) Ltd Swat Motorway Project

Reference # CED/TFL **33210** (Dr. Ali Ahmed)

Reference of the request letter # 286/CRE/QAT/SMP/2019

Dated: 10-05-2019

Dated: 09-05-2019

Tension Test Report (Page – 1/7)

Date of Test 15-05-2019 Gauge length 640 mm

Description Steel Strand Tensile Test as per ASTM A-416-94a

Sr. No.	Nominal Diameter	Nominal Weight	Measured weight	Yield st clause	_	stre	king ngth e (6.2)	Young's Modulus of Elasticity "E"	% Elongation	Remarks / Coil No.
	(mm)	(kg/km)	(kg/km)	(kg)	(kN)	(kg)	(kN)	GPa	%	Rema
1	12.70 (1/2")	775.0	784.0	17900	175.60	20300	199.14	199	>3.50	137
2	12.70 (1/2")	775.0	781.0	17900	175.60	20400	200.12	199	>3.50	141
3	12.70 (1/2")	775.0	791.0	17700	173.64	19500	191.30	198	>3.50	143
4	12.70 (1/2")	775.0	787.0	18200	178.54	19800	194.24	199	>3.50	149
5	12.70 (1/2")	775.0	788.0	18500	181.49	20200	198.16	198	>3.50	153
6	12.70 (1/2")	775.0	793.0	17100	167.75	19700	193.26	199	>3.50	157

Only six 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.

- 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



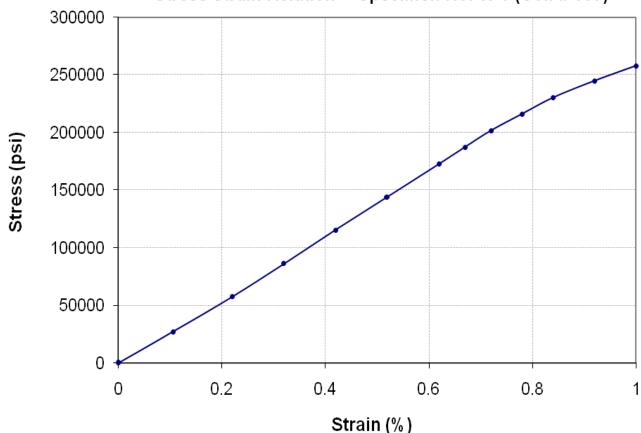
Test Floor Laboratory Department of Civil Engineering University of Engineering and Technology Lahore, 54890 Pakistan, Ph: 92-42-99029202

To, Chief Resident Engineer Osmani & Company (Pvt) Ltd Swat Motorway Project

Reference # CED/TFL **33210** (Dr. Ali Ahmed) Reference of the request letter # 286/CRE/QAT/SMP/2019

Graph (Page – 2/7)

Stress Strain Relation -- Specimen No. W 1 (Coil #137)



I/C Testing Laboratoires UET Lahore, Pakistan.

Dated: 10-05-2019

Dated: 09-05-2019

- 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



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

To, Chief Resident Engineer Osmani & Company (Pvt) Ltd Swat Motorway Project

Reference # CED/TFL **33210** (Dr. Ali Ahmed)
Reference of the request letter # 286/CRE/QAT/SMP/2019

Graph (Page – 3/7)

300000 250000 200000 150000 50000

0.4

Strain (%)

0.6

Stress Strain Relation -- Specimen No. W 2 (Coil #141)

I/C Testing Laboratoires UET Lahore, Pakistan.

8.0

Dated: 10-05-2019

Dated: 09-05-2019

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

0.2

- 2. The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples

0

0



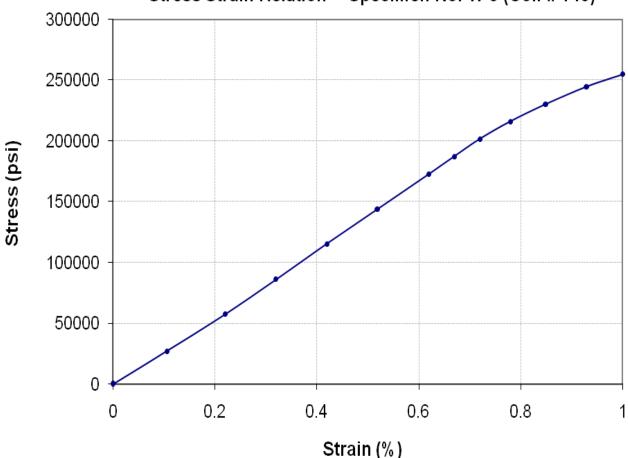
Test Floor Laboratory Department of Civil Engineering University of Engineering and Technology Lahore, 54890 Pakistan. Ph: 92-42-99029202

To, Chief Resident Engineer Osmani & Company (Pvt) Ltd Swat Motorway Project

Reference # CED/TFL **33210** (Dr. Ali Ahmed)
Reference of the request letter # 286/CRE/QAT/SMP/2019

 $Graph \; (Page-4/7)$

Stress Strain Relation -- Specimen No. W 3 (Coil #143)



I/C Testing Laboratoires UET Lahore, Pakistan.

Dated: 10-05-2019

Dated: 09-05-2019

- 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



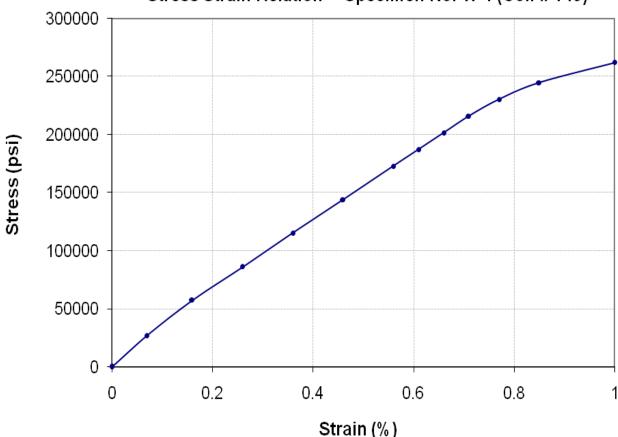
Test Floor Laboratory Department of Civil Engineering University of Engineering and Technology Lahore, 54890 Pakistan, Ph: 92-42-99029202

To, Chief Resident Engineer Osmani & Company (Pvt) Ltd Swat Motorway Project

Reference # CED/TFL **33210** (Dr. Ali Ahmed) Reference of the request letter # 286/CRE/QAT/SMP/2019

 $Graph \; (Page-5/7)$

Stress Strain Relation -- Specimen No. W 4 (Coil #149)



I/C Testing Laboratoires UET Lahore, Pakistan.

Dated: 10-05-2019

Dated: 09-05-2019

- 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



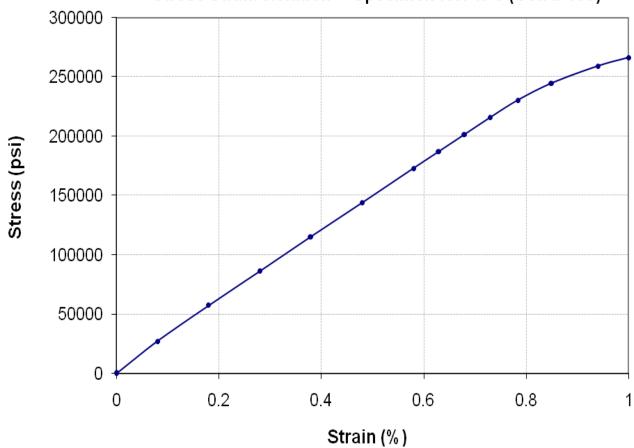
Test Floor Laboratory Department of Civil Engineering University of Engineering and Technology Lahore, 54890 Pakistan. Ph: 92-42-99029202

To, Chief Resident Engineer Osmani & Company (Pvt) Ltd Swat Motorway Project

Reference # CED/TFL **33210** (Dr. Ali Ahmed) Reference of the request letter # 286/CRE/QAT/SMP/2019

Graph (Page – 6/7)

Stress Strain Relation -- Specimen No. W 5 (Coil #153)



I/C Testing Laboratoires UET Lahore, Pakistan.

Dated: 10-05-2019

Dated: 09-05-2019

- 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



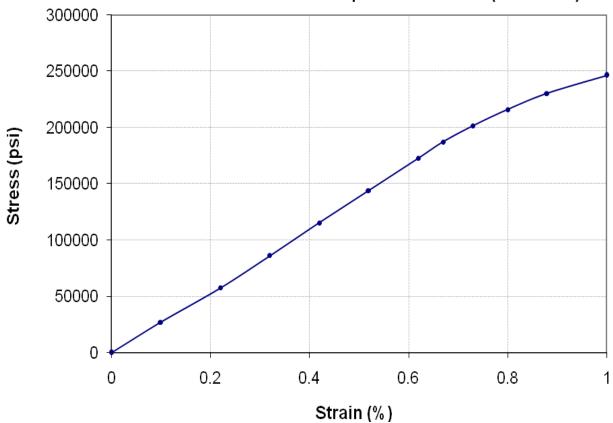
Test Floor Laboratory Department of Civil Engineering University of Engineering and Technology Lahore, 54890 Pakistan. Ph: 92-42-99029202

To, Chief Resident Engineer Osmani & Company (Pvt) Ltd Swat Motorway Project

Reference # CED/TFL **33210** (Dr. Ali Ahmed) Reference of the request letter # 286/CRE/QAT/SMP/2019

Graph (Page – 7/7)

Stress Strain Relation -- Specimen No. W 6 (Coil #157)



I/C Testing Laboratoires UET Lahore, Pakistan.

Dated: 10-05-2019

Dated: 09-05-2019

- 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



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

To, M/S Unze Trading (Pvt) Limited Lahore

(Leasing out MEPCO PC Pole Plant Lodhran for Manufacturing & Providing of Pre-Stressed Cement Concrete Spun Hollow LT & HT Poles)

Reference # CED/TFL **33211** (Dr. Ali Ahmed)

Reference of the request letter # UNZE/291/2019

Dated: 13-05-2019

Dated: 05-05-2019

Tension Test Report (Page -1/2)

Date of Test 16-06-2019 Gauge length 8 inches

Description MS Wire Tensile Test

Sr. No.	Weight		neter/ ize	At (m)	rea m²)	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	
1	0.151		4.95		19.3		1100		560	0.4	5.0		
	-	-	-	-	-	-	-	-	-	-	-		
-	-	-	-	-	-	-	-	-	-	-	-		
-	-	-	-	-	-	-	-	-	-	-	-		
-	-	-	-	-	-	-	-	-	-	-	-		
	Note: only one sample for tensile test												
	Bend Test												

I/C Testing Laboratoires UET Lahore, Pakistan.

- 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



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

To, M/S Unze Trading (Pvt) Limited Lahore

(Leasing out MEPCO PC Pole Plant Lodhran for Manufacturing & Providing of Pre-Stressed Cement Concrete Spun Hollow LT & HT Poles)

Reference # CED/TFL **33211** (Dr. Ali Ahmed)

Reference of the request letter # UNZE/289/2019

Dated: 13-05-2019

Dated: 05-05-2019

Tension Test Report (Page - 2/2)

Date of Test 15-05-2019 Gauge length 640 mm

Description Steel Strand Tensile Test as per ASTM A-416-94a

Sr. No.	Nominal Diameter	Nominal Weight	Measured weight	Yield st clause		Breal strength (6.2	clause	% Elongation	Remarks / Coil No.
	(mm)	(kg/km)	(kg/km)	(kg)	(kN)	(kg)	(kN)		Rema
1	9.53 (3/8")	432.0	436.0	9300	91.23	10500	103.01	>3.50	xx
-	-	-	-	-	-	-	-	-	-
-	-	-	-	1	-	-	-	-	-
-	-	-	-	1	-	-	-	-	-
_	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-

Only one sample for Test

I/C Testing Laboratoires UET Lahore, Pakistan.

- 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



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

To, Junior Research Officer-I Building Research Station Lahore (Moiz Steel)

Reference # CED/TFL **33221** (Dr. Ali Ahmed)

Reference of the request letter # 154-R/1144

Dated: 13-05-2019

Dated: 06-05-2019

Tension Test Report (Page -1/1)

Date of Test 15-05-2019 Gauge length 8 inches

Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

ir. No.	Sr. No. ft) Weight		neter/ ze		rea 1 ²)	Yield load	Breaking Load		Stress si)		e Stress si)	Elongation	% Elongation	Remarks
	(lbs/ft)	Nominal (#)	Actual (inch)	Nominal	Actual	(kg)	(kg)	Nominal	Actual	Nominal	Actual	(inch)	,	R
1	0.372	3	0.373	0.11	0.109	3000	4900	60200	60440	98200	98800	1.40	17.5	
2	0.368	3	0.371	0.11	0.108	3100	4900	62200	63200	98200	99900	1.20	15.0	
3	5.275	11	1.405	1.56	1.550	47800	66000	67600	67950	93300	93900	1.80	22.5	
4	5.248	11	1.401	1.56	1.543	47600	66200	67300	68020	93600	94600	1.60	20.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			No	te: only	four s	amples fo	or tensile	and two	samples	for bend	test	ı		
							L							
							Bend T	est						

#3 Bar Bend Test Through 180° is Satisfactory

#11 Bar Bend Test Through 180° is Satisfactory

I/C Testing Laboratoires UET Lahore, Pakistan.

- 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



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

To, Project Manager Midland Developers

Project1, 2, 3, 25, 26 and 27 Commercial, Canal Valley, Main Canal Bank Road, near Bahria

Town, Lahore

Reference # CED/TFL **33222** (Dr. Ali Ahmed)

Reference of the request letter # Nil

Dated: 13-05-2019 Dated: 03-05-2019

Tension Test Report (Page -1/1)

Date of Test 15-05-2019 Gauge length 8 inches

Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight	, ,			rea n²)	Yield load	Breaking Load		Stress si)		e Stress si)	Elongation	% Elongation	Remarks
S	(lbs/ft)	Nominal	Actual	Nominal	Actual	(kg)	(kg)	Nominal	Actual	Nominal	Actual	(inch)	3 %	R
1	0.389	3/8	0.381	0.11	0.114	3000	4900	60200	57900	98200	94600	1.30	16.3	
2	0.392	3/8	0.383	0.11	0.115	3100	5000	62200	59320	100200	95700	1.20	15.0	
-	1	ı	-	ı	-	1	-	-	-	-	1	-	1	
-	1	1	-	1	-	ı	-	-	-	-	1	-	1	
-	1	1	-	1	-	ī	-	-	-	-	1	-	1	
-	ı	1	-	1	-	ī	-	-	-	-	1	-	ı	
			N	ote: on	ly two s	amples f	or tensile	and one	sample f	or bend t	test			
							Bend T	<u>'est</u>						
3/8	" Dia Ba	ar Bend	Test Th	nrough	180° is \$	Satisfacto	ry							

I/C Testing Laboratoires UET Lahore, Pakistan.

- 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

MERRY PARTY AND THE PARTY AND

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
(Infra Dev Works Sector-M (Extension), DHA PH-V)(M/s AAJ Engrs)

Reference # CED/TFL **33223** (Dr. Ali Ahmed) Dated: 13-05-2019 Reference of the request letter # 408/241/E/Lab/567/23 Dated: 10-05-2019

Tension Test Report (Page -1/1)

Date of Test 15-04-2019

Gauge length

Description Deformed Steel Bar Tensile Test as per ASTM-A496

Sr. No.	Weight	Diam siz			rea m²)	Yield load	Breaking Load		Stress pa)		e Stress pa)	Remarks
S	(Kg/m)	Nominal (in)	Actual (mm)	Nominal	Actual	(kg)	(kg)	Nominal Actual Actual		Nominal	Actual	R
1	0.270	1/4	6.62	32.26	34.39	2700	3500	821	770	1064	998	
2	0.272	1/4	6.65	32.26	34.70	2800	3600	851	792	1095	1018	
-	Ī	-	1	-	-	1	-	1	ı	-	-	
-	Ī	-	1	-	-	1	-	ı	ı	-	•	
-	Ī	-	1	-	-	1	-	ı	ı	-	•	
-	Ī	1	ı	-	-	ı	-	ı	•	-	•	
		I		No	te: only	y two san	nples for	tensile te	st	T	Г	
							1.00					
-						Beno	d Test					

I/C Testing Laboratoires UET Lahore, Pakistan.

- 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



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

(Construction of 1-Kanal Villas at DRGCC Club House DHA Ph-6)(M/s Linker Developers

(Pvt) Ltd)

Reference # CED/TFL **33224** (Dr. Ali Ahmed) Dated: 14-05-2019 Reference of the request letter # 408/241/E/Lab/569/123 Dated: 14-05-2019

Tension Test Report (Page -1/1)

Date of Test 15-05-2019
Gauge length 8 inches

Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight		neter/ ze		rea n²)	Yield load	Breaking Load		Stress si)		e Stress si)	Elongation	% Elongation	Remarks
S	(lbs/ft)	Nominal (#)	Actual (inch)	Nominal	Actual	(kg)	(kg)	Nominal	Actual	Nominal	Actual	(inch)	% E	R
1	0.378	3	0.376	0.11	0.111	3100	5200	62200	61490	104200	103200	1.10	13.8	T
2	0.381	3	0.377	0.11	0.112	3000	5100	60200	59110	102200	100500	1.10	13.8	Ittefaq Steel
-	-	1	ı	ı	-	-	-	-	-	-	1	-	1	
-	-	ı	ı	ı	-	-	-	-	-	-	ı	-	ı	
-	-	-	1	-	-	-	-	-	-	_	-	-	-	
-	-	-	-	-	-	-	-	-	-	_	-	-	-	
			N	ote: on	ly two s	amples f	or tensile	and one	sample f	or bend t	est	1		
що	Bend Test #3 Bar Bend Test Through 180° is Satisfactory													
#3	Bar Ben	d Test	hrough	1 180° 18	s Satisfa	ctory								

I/C Testing Laboratoires UET Lahore, Pakistan.

- 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



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

To, M/S Banu Mukhtar Contracting (Pvt) Ltd Lahore (Interloop Green Denim Factor)

Reference # CED/TFL **33225** (Dr. Ali Ahmed)

Reference of the request letter # BML/10891/004

Dated: 15-05-2019

Dated: 13-05-2019

Tension Test Report (Page -1/1)

Date of Test 15-05-2019 Gauge length 8 inches

Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight		neter/ ze		rea n²)	Yield load	Breaking Load		Stress si)	Ultimat (p	e Stress si)	Elongation	% Elongation	Remarks
S	(lbs/ft)	Nominal (#)	Actual (inch)	Nominal	Actual	(kg)	(kg)	Nominal	Actual	Nominal	Actual	(inch)	% E	Re
1	0.445	3	0.408	0.11	0.131	4200	5400	84200	70740	108200	91000	0.90	11.3	
2	0.449	3	0.410	0.11	0.132	4100	5500	82200	68480	110200	91900	1.30	16.3	
-	1	-	-	ı	-	1	-	-	-	_	1	-	-	
-	-	-	-	-	-	-	-	-	-	_	-	-	-	
-	-	-	-	-	-	-	-	-	-	_	-	-	-	
-	-	-	-	-	-	-	-	-	-	_	-	-	-	
		T	No	ote: on	ly two s	amples f	or tensile	and one	sample f	for bend t	est	1		
							D 1 77	74						
щ2	Don Don	d Test 7	ГI 1-	1000:	. Catiaf-		Bend T	est						
#3	Bar Ben	a rest	nrougn	1 180° 18	s Sausta	ictory								

I/C Testing Laboratoires UET Lahore, Pakistan.

- 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



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

To, Project Manager Icon Valley Icon Residencia

Reference # CED/TFL **33226** (Dr. Ali Ahmed)

Reference of the request letter # IV-03

Dated: 15-05-2019

Dated: 11-05-2019

Tension Test Report (Page -1/1)

Date of Test 15-05-2019 Gauge length 8 inches

Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight	Diameter/ size		Area (in²)		Yield load	Breaking Load	Yield Stress (psi)		Ultimate Stress (psi)		Elongation	% Elongation	Remarks
S	(lbs/ft)	Nominal (#)	Actual (inch)	Nominal	Actual	(kg)	(kg)	Nominal	Actual	Nominal	Actual	(inch)	% E	Re
1	0.364	3	0.369	0.11	0.107	3300	5000	66200	68060	100200	103200	1.20	15.0	
2	0.374	3	0.374	0.11	0.110	3500	5200	70200	70140	104200	104300	1.10	13.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	1	1	-	-	-	-	-	-	-	-	1	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Note: only two samples for tensile and one sample for bend test													
	Bend Test													
#3	#3 Bar Bend Test Through 180° is Satisfactory													

I/C Testing Laboratoires UET Lahore, Pakistan.

- 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



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

To, Resident Engineer NESPAK

China – Pakistan Economic Corridor (CPEC), Western Route Hakla (on M1) – Yarak (.I. Khan) Motorway, Package-3 (Trap to Kot Belian)

Reference # CED/TFL **33227** (Dr. Ali Ahmed) Dated: 14-05-2019 Reference of the request letter # CPEC/NESPAK/CS/RE/PKG3/19/938 Dated: 02-05-2019

Tension Test Report (Page -1/1)

Date of Test 15-05-2019 Gauge length 2 inches

Description W-Shape Beam Strip Tensile Test as per AASHTO M-180

Sr. No.	Designation	Size of Strip	X Section Area	Yield load	Breaking Load	Yield Stress	Ultimate Stress	Elongation	% Elongation	Remarks
		(cm)	(cm ²)	(kg)	(kg)	(kg/cm ²)	(kg/cm ²)	(in)	%	
1	W-Shape Beam	2.81x0.30	0.84	3200	4200	3795.97	4982.21	0.45	22.50	
2	W- Shape Beam	2.82x0.30	0.85	3500	4100	4137.12	4846.34	0.50	25.00	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
_	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
	Only Two Samples for Tensile Test									
	Rend Test									

Bend Test

I/C Testing Laboratoires UET Lahore, Pakistan.

- 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



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

Ref: CED/TFL/05/33229 Dated: 14-05-19

To CRE/Team Leader NESPAK Construction of Kakezai Cooperative Housing Society - Lahore (M/s Afzaal BRothers & Co)

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

Reference to your letter No. 3405/14/AGH/KCHS/06/8443, dated 07.05.2019 on the subject cited above. Two R.C.C. Pipes as received by us have 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")	2.375	2.236	280.00	217.40	31.30	9300	10900	187.68	219.97
2	304.8 (12")	2.359	2.222	408.00	316.54	45.73	7900	9400	110.19	131.11

I/C Testing Laboratoires UET Lahore, Pakistan.

- 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

SONER MAN AND SONE AN

STRUCTURAL ENGINEERING DIVISION

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

To, Material Engineer (Sec-II & III) Zeeruk International (Pvt) Ltd LSM

Reference # CED/TFL **33234** (Dr. Ali Ahmed)

Reference of the request letter # LSM/M.E sec-II

Dated: 15-05-2019

Dated: 29-04-2019

Tension Test Report (Page – 1/1)

Date of Test 15-05-2019

Gauge length -----

Description Galvanized Fence Wire Tensile Test as per AASHTO-M-181

Sr. No.	Diameter of Wire	Breakin	Remarks						
	(mm)	(kg)	(kN)						
1	3.10	520	5.10						
2	3.10	500	4.91						
-	-	-	-						
-	-	-	-						
-	-	-	-						
-	-	-	-						
-	-	-	-						
	Only Two Samples for Test								

I/C Testing Laboratoires UET Lahore, Pakistan.

- 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