



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

To,  
 Resident Head (Civil)  
 Jaggran-II Hydropower Consultants  
 EPC Contract for 48MW Jaggran-II Hydropower Project

Reference # CED/TFL **33492** (Dr. Qasim Khan)  
 Reference of the request letter # E314-L-JHC-RE-EPCC-OC-0117

Dated: 05-07-2019  
 Dated: 02-07-2019

**Tension Test Report** (Page – 1/2)

Date of Test 19-07-2019  
 Gauge length 2 inches  
 Description Lattice Girder 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
1	Lattice Girder	27.80x5.90	164.02	6600	9500	394.74	568.19	0.60	30.00	
2		27.80x5.90	164.02	6300	9200	376.80	550.25	0.60	30.00	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
<b>Only Two Samples for Tensile and One Sample for Bend Test</b>										
<b>Bend Test</b>										
Strip Taken from Lattice Girder 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  
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To,  
Resident Head (Civil)  
Jaggran-II Hydropower Consultants  
EPC Contract for 48MW Jaggran-II Hydropower Project

Reference # CED/TFL **33492** (Dr. Qasim Khan)  
Reference of the request letter # E314-L-JHC-RE-EPCC-OC-0117

Dated: 05-07-2019  
Dated: 02-07-2019

**Weight & Size Test Report** (Page – 3/8)

Date of Test 19-07-2019  
Gauge length -----  
Description Lattice Girder Weight and Size Test

Sr. No.	Designation	Weight	Length	Weight per Unit Length	Depth (d)	Flange Width (b <sub>f</sub> )	Flange Thickness (t <sub>f</sub> )	Web Thickness (t <sub>w</sub> )	Remark
	(mm)	(g)	(cm)	(kg/m)	mm	mm	mm	mm	
1	Lattice Girder	9628	62.5	15.40	150.00	78.20	8.20	6.00	
-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	
<b>Only One Sample for Test</b>									

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

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To,  
 Resident Head (Civil)  
 Jaggran-II Hydropower Consultants  
 EPC Contract for 48MW Jaggran-II Hydropower Project

Reference # CED/TFL **33493** (Dr. Qasim Khan)  
 Reference of the request letter # E314-L-JHC-RE-EPCC-OC-0113

Dated: 05-07-2019  
 Dated: 02-07-2019

**Tension Test Report** (Page – 1/2)

Date of Test 19-07-2019  
 Gauge length 2 inches  
 Description Rock Bolt 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
1	Rock Bolt Plate	27.90x10.00	279.00	8600	13100	302.39	460.61	0.80	40.00	
2		27.90x10.00	279.00	8900	13500	312.94	474.68	0.80	40.00	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
<b>Only Two Samples for Tensile and One Sample for Bend Test</b>										
<b>Bend Test</b>										
Strip Taken from Rock Bolt Plate Bend Test Through 180° is Satisfactory										

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

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To,  
Resident Head (Civil)  
Jaggran-II Hydropower Consultants  
EPC Contract for 48MW Jaggran-II Hydropower Project

Reference # CED/TFL **33493** (Dr. Qasim Khan)  
Reference of the request letter # E314-L-JHC-RE-EPCC-OC-0113

Dated: 05-07-2019  
Dated: 02-07-2019

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

Date of Test 19-07-2019  
Gauge length -----  
Description Rock Bolt Plate Weight and Size Test

Sr. No.	Designation	Weight	Length	Width (b)	Weight per Unit Area	Thickness	Remark
	(mm)	(g)	(cm)	(cm)	(kg/m <sup>2</sup> )	(mm)	
1	Rock Bolt Plate	15445	60.2	32.70	78.46	10.00	
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	
<b>Only One Samples for Test</b>							

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**UET Lahore, Pakistan.**

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**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 Halka (On M1) – Yarak  
(D.I.Khan) Motorway, Package-3 (Tarap to Kot Belian)(Steel Complex, Lahore)

Reference # CED/TFL **33572** (Dr. Qasim Khan) Dated: 17-07-2019  
Reference of the request letter # CPEC/NESPAK/CS/RE/PKG3/19/1059 Dated: 15-07-2019

**Tension Test Report** (Page – 1/4)

Date of Test 19-07-2019  
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	790.0	17500	171.68	19600	192.28	199	>3.50	127A
2	12.70 (1/2")	775.0	792.0	17600	172.66	19700	193.26	199	>3.50	129A
3	12.70 (1/2")	775.0	791.0	17400	170.69	19500	191.30	198	>3.50	134A
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
<b>Only three samples for Test</b>										

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 Laboratories**  
**UET Lahore, Pakistan.**

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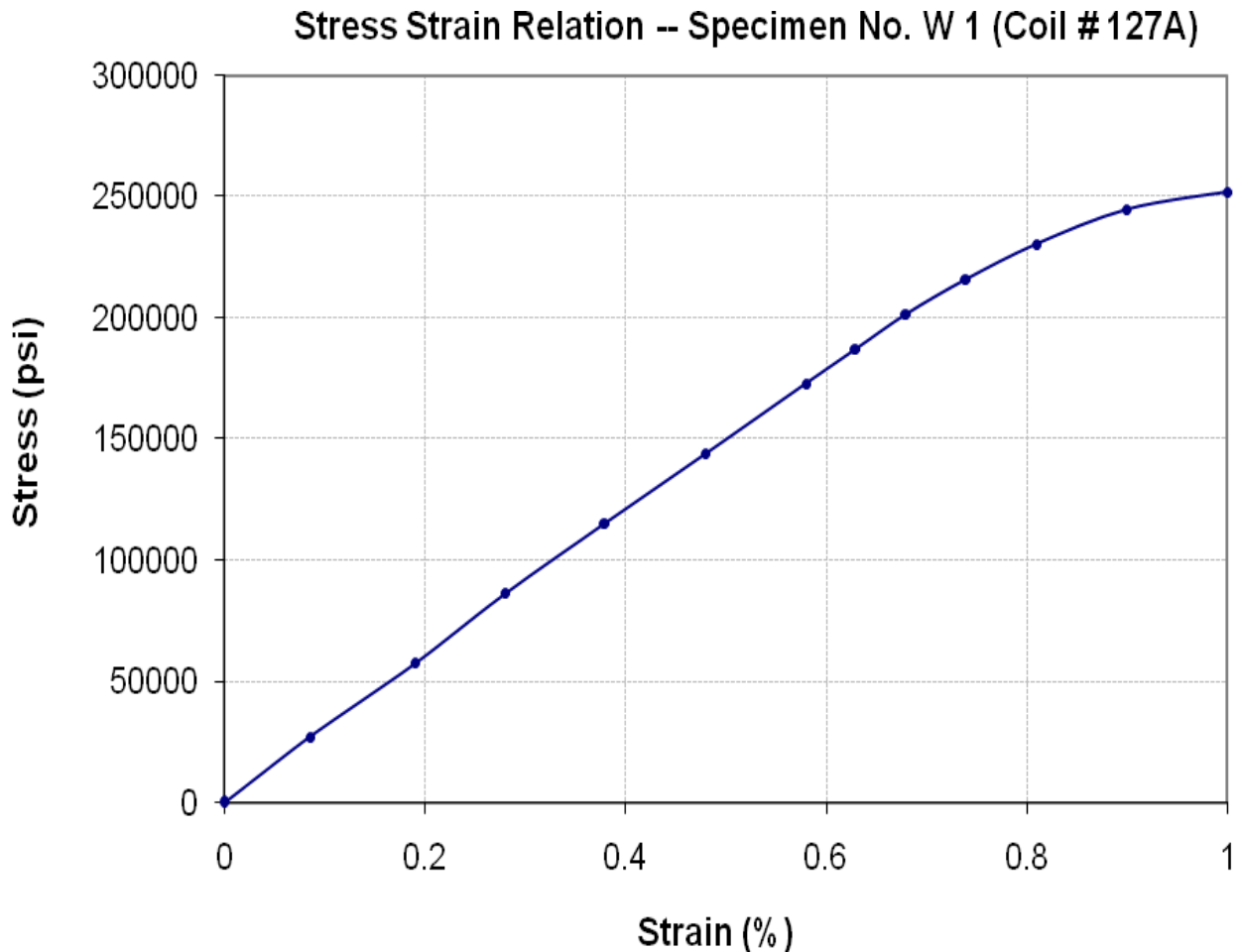


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**University of Engineering and Technology Lahore, 54890**  
**Pakistan. Ph: 92-42-99029202**

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

Reference # CED/TFL **33572** (Dr. Qasim Khan) Dated: 17-07-2019  
Reference of the request letter # CPEC/NESPAK/CS/RE/PKG3/19/1059 Dated: 15-07-2019

**Graph** (Page – 2/4)



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

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**University of Engineering and Technology Lahore, 54890**  
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To,  
Resident Engineer  
NESPAK  
China – Pakistan Economic Corridor (CPEC), Western Route Halka (On M1) – Yarak  
(D.I.Khan) Motorway, Package-3 (Tarap to Kot Belian)(Steel Complex, Lahore)

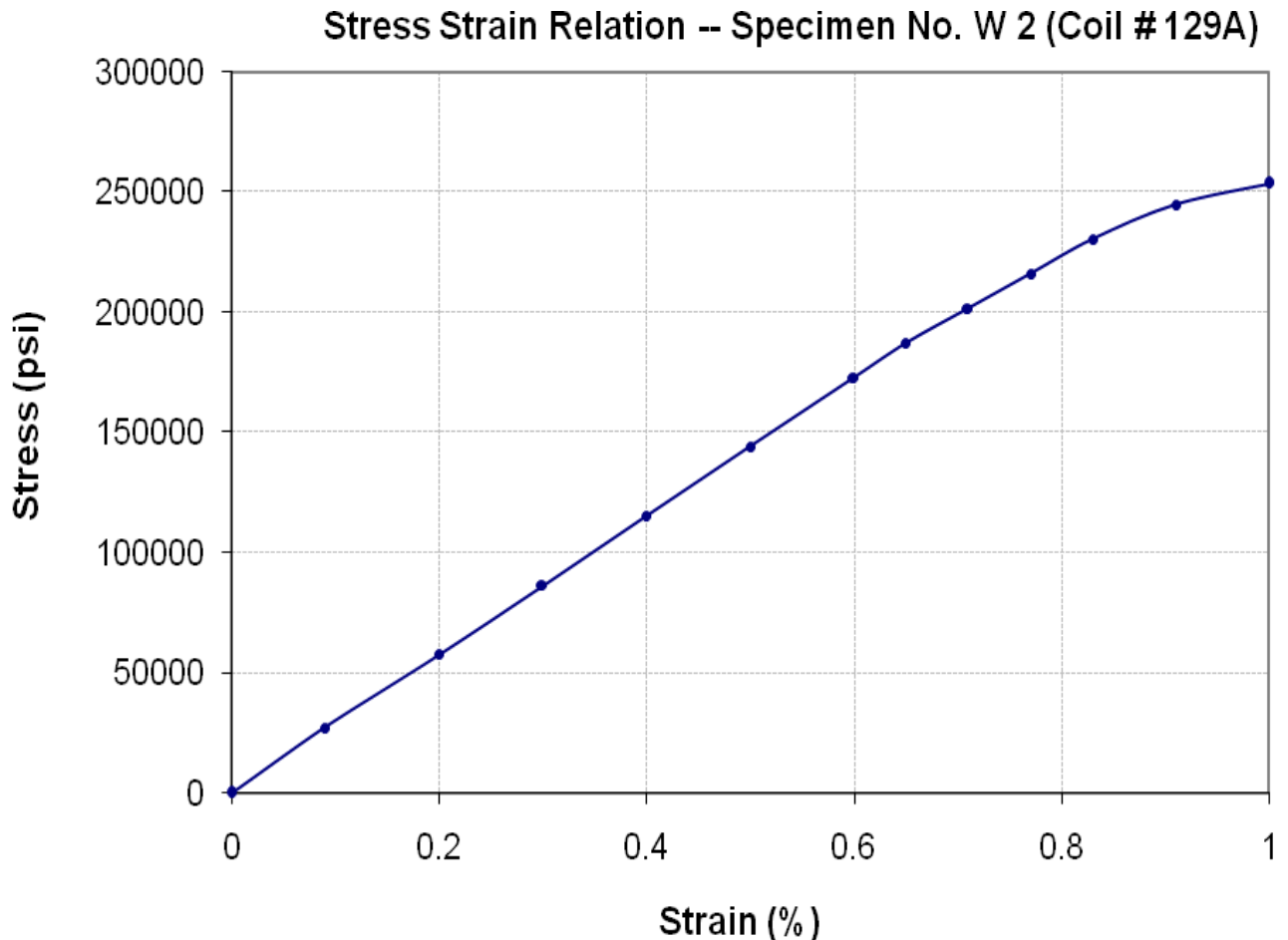
Reference # CED/TFL **33572** (Dr. Qasim Khan)

Dated: 17-07-2019

Reference of the request letter # CPEC/NESPAK/CS/RE/PKG3/19/1059

Dated: 15-07-2019

**Graph** (Page – 3/4)



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

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

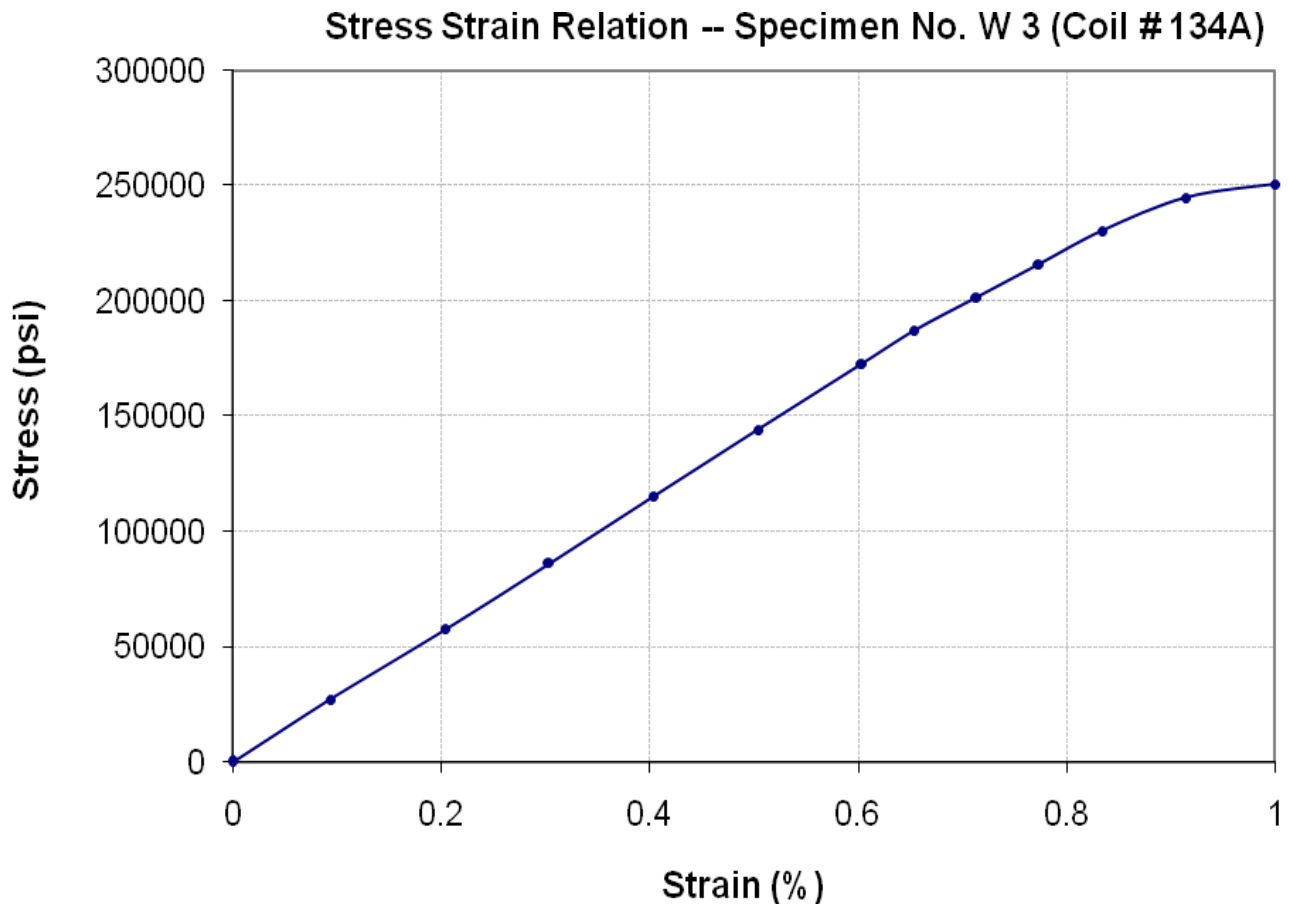
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Dated: 17-07-2019

Reference of the request letter # CPEC/NESPAK/CS/RE/PKG3/19/1059

Dated: 15-07-2019

**Graph** (Page – 4/4)



**I/C Testing Laboratoires**  
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**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 Retention Ponds at Package-III, Depot

Reference # CED/TFL **33520** (Dr. Qasim Khan)  
 Reference of the request letter # 4024/NESPAK/TEST/07

Dated: 09-07-2019  
 Dated: 09-07-2019

**Tension Test Report** (Page – 1/2)

Date of Test 19-07-2019  
 Gauge length 2 inches  
 Description MS Steel Angle 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
	(mm)	(mm)	(mm <sup>2</sup> )	(kg)	(kg)	(MPa)	(MPa)	(in)		
1	75x75x6	25.20x6.50	163.80	6500	9300	389.29	556.98	0.60	30.00	
2		25.20x6.50	163.80	6700	9500	401.26	568.96	0.60	30.00	
3	100x100x10	24.70x9.90	244.53	8300	12800	332.98	513.51	0.50	25.00	
4		24.70x9.90	244.53	8300	12900	332.98	517.52	0.60	30.00	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
<b>Only Four Samples for Tensile and Two Samples for Bend Test</b>										
<b>Bend Test</b>										
Strip Taken from MS Steel Angle (75x75x6mm) Bend Test Through 180° is Satisfactory										
Strip Taken from MS Steel Angle (100x100x10mm) Bend Test Through 180° is Satisfactory										

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

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**University of Engineering and Technology Lahore, 54890**  
**Pakistan. Ph: 92-42-99029202**

To,  
Resident Engineer  
NESPAK  
Construction of Retention Ponds at Package-III, Depot

Reference # CED/TFL **33520** (Dr. Qasim Khan)  
Reference of the request letter # 4024/NESPAK/TEST/07

Dated: 09-07-2019  
Dated: 09-07-2019

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

Date of Test 19-07-2019  
Gauge length -----  
Description MS Steel Angle Weight and Size Test

Sr. No.	Designation	Weight	Length	Weight per Unit Length	L-1	L-2	Thickness	Remark
	(mm)	(g)	(cm)	(kg/m)	(mm)	(mm)	(mm)	
1	75x75x6	7581	115.20	6.58	75.10	73.20	6.50	
2	100x100x10	15064	111.40	13.52	100.0	100.10	10.20	
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	
<b>Only Two Sample for Test</b>								

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**Pakistan. Ph: 92-42-99029202**

To,  
Laboratory Manager  
M/S CGGC Sukhi Kinari Project Management in Pakistan  
874 MW Sukhi Kinari Power Project (Liu Zhou Ovm Machinery Co. Ltd)

Reference # CED/TFL **33582** (Dr. Qasim Khan)  
Reference of the request letter # Nil

Dated: 18-07-2019  
Dated: 14-07-2019

**Tension Test Report** (Page – 1/2)

Date of Test 19-07-2019  
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	% Elongation	Remarks / Coil No.
	(mm)	(kg/km)	(kg/km)	(kg)	(kN)	(kg)	(kN)	E, GPa		
1	15.24 (0.6")	1102.0	1128.0	24800	243.29	27600	270.76	199	>3.50	YPW115-SJ-19083
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
<b>Only one sample for Test</b>										

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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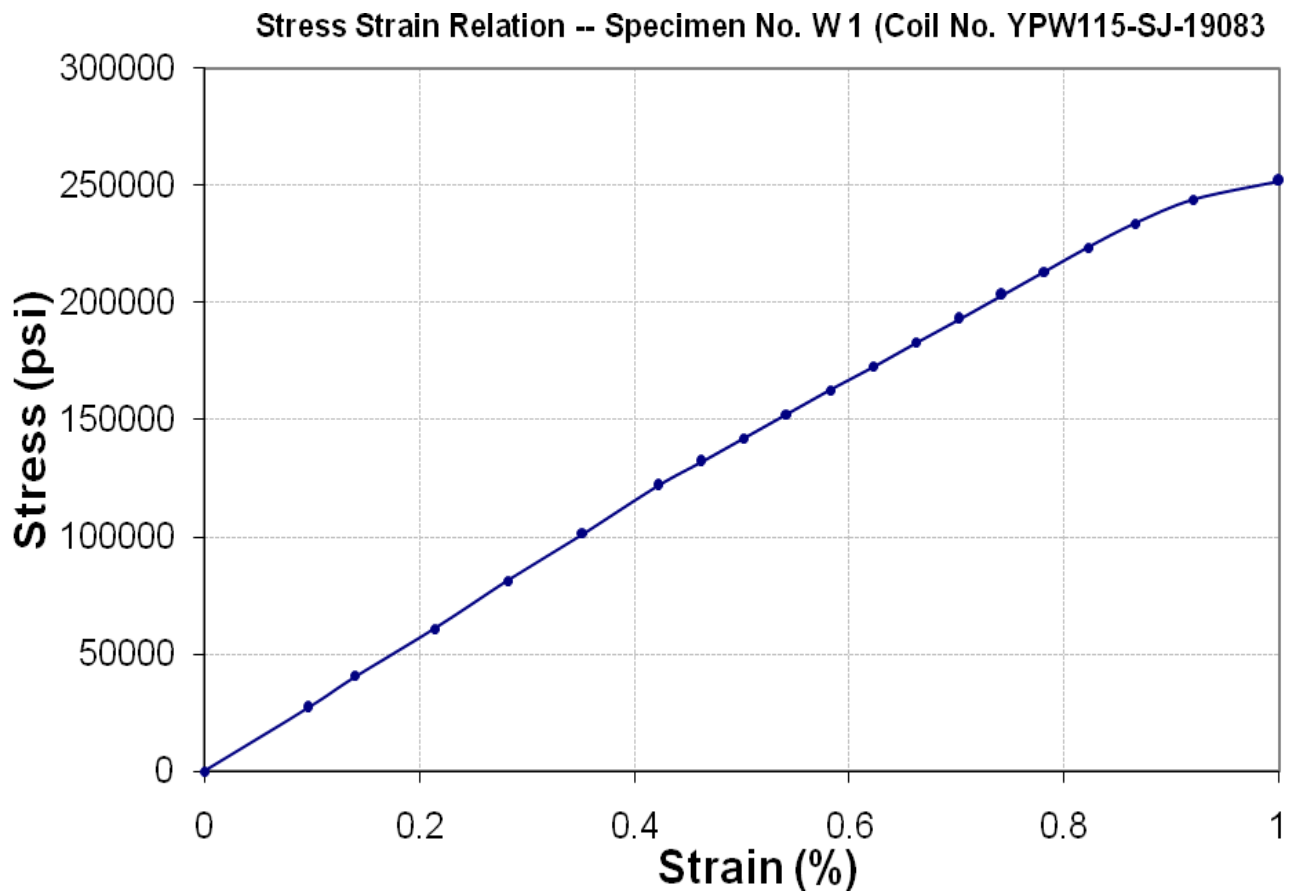
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To,  
Laboratory Manager  
M/S CGGC Sukhi Kinari Project Management in Pakistan  
874 MW Sukhi Kinari Power Project (Liu Zhou Ovm Machinery Co. Ltd)

Reference # CED/TFL **33582** (Dr. Qasim Khan)  
Reference of the request letter # Nil

Dated: 18-07-2019  
Dated: 14-07-2019

**Graph** (Page – 2/2)



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To,  
 Manager  
 QA/QC Department  
 Bahria Town Private Limited, Lahore  
 Boundary Wall at Ghazi Block Bahria Multan Road  
 (Mughal Supreme)

Reference # CED/TFL **33583** (Dr. Ali Ahmed)  
 Reference of the request letter # QA/QC-Steel-1514

Dated: 18-07-2019  
 Dated: 18-07-2019

**Tension Test Report** (Page -1/1)

Date of Test 19-07-2019  
 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 <sup>2</sup> )		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	0.357	3	0.365	0.11	0.105	3700	4700	74200	77730	94200	98800	1.00	12.5	
2	0.362	3	0.368	0.11	0.106	4000	4800	80200	82910	96200	99500	1.00	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile and one sample for bend test</b>														
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**  
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**University of Engineering and Technology Lahore, 54890**  
**Pakistan. Ph: 92-42-99029202**

To,  
 Manager  
 QA/QC Department  
 Bahria Town Private Limited, Lahore  
 Boundary Wall at Ghazi Block Bahria Multan Road  
 (Mughal Supreme)  
 Reference # CED/TFL **33584** (Dr. Ali Ahmed)  
 Reference of the request letter # QA/QC-Steel-1515

Dated: 18-07-2019  
 Dated: 18-07-2019

**Tension Test Report** (Page -1/1)

Date of Test 19-07-2019  
 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 <sup>2</sup> )		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	0.371	0.11	0.108	4100	5000	82200	83400	100200	101800	1.10	13.8	
2	0.371	3	0.372	0.11	0.109	4100	5000	82200	82950	100200	101200	0.90	11.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile and one sample for bend test</b>														
Bend Test														
#3 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**  
**Department of Civil Engineering**  
**University of Engineering and Technology Lahore, 54890**  
**Pakistan. Ph: 92-42-99029202**

To,  
 Chairman Development Works  
 NFC Institute of Engineering & Technology  
 "Construction of Parking Building/Plaza at NFC IET Multan"

Reference # CED/TFL **33585** (Dr. Qasim Khan)  
 Reference of the request letter # NFC/IET/Civil2019/18

Dated: 18-07-2019  
 Dated: 12-07-2019

**Tension Test Report** (Page -1/1)

Date of Test 19-07-2019  
 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 <sup>2</sup> )		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	0.373	3/8	0.374	0.11	0.110	4100	5000	82200	82460	100200	100600	1.00	12.5	
2	0.373	3/8	0.374	0.11	0.110	4000	5000	80200	80450	100200	100600	1.00	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile and one sample for bend test</b>														
Bend Test														
3/8" Dia 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**  
**Department of Civil Engineering**  
**University of Engineering and Technology Lahore, 54890**  
**Pakistan. Ph: 92-42-99029202**

To,  
 Project Director  
 Sundar Industrial Estate  
 Construction of Road and Other Services Including Laying of Sewer Supply and Electricity in  
 Extended Area of Sundar Industrial Estate

Reference # CED/TFL **33588** (Dr. Qasim Khan)  
 Reference of the request letter # SIE/PIE/CIV/47

Dated: 18-07-2019  
 Dated: 18-07-2019

**Tension Test Report** (Page -1/1)

Date of Test 18-07-2019  
 Gauge length 8 inches  
 Description Plain Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight (lbs/ft)	Diameter/ Size		Area (in <sup>2</sup> )		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	4.849	11	1.347	1.56	1.425	28600	42800	40500	44230	60500	66200	1.30	16.3	
2	4.974	11	1.364	1.56	1.462	32600	51800	46100	49150	73200	78100	1.40	17.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile and one sample for bend test</b>														
Bend Test														
#11 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**  
**Department of Civil Engineering**  
**University of Engineering and Technology Lahore, 54890**  
**Pakistan. Ph: 92-42-99029202**

To,  
M/S Defence Housing Authority.  
Lahore Cantt  
(Const of Mosque Sector-D, DHA Ph-VI)(M/s Warraich Constr)

Reference # CED/TFL **33589** (Dr. Qasim Khan)  
Reference of the request letter # 408/241/E/Lab/625/036

Dated: 18-07-2019  
Dated: 29-06-2019

**Tension Test Report** (Page -1/1)

Date of Test 19-07-2019  
Gauge length 8 inches  
Description Deformed Steel Bar Tensile Test as per ASTM-A615

Sr. No.	Weight (lbs/ft)	Diameter/ size		Area (in <sup>2</sup> )		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	0.379	3	0.377	0.11	0.111	3500	4600	70200	69280	92200	91100	0.90	11.3	Saed Kasur
2	0.387	3	0.380	0.11	0.114	3700	4700	74200	71750	94200	91200	0.90	11.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile test</b>														
Bend Test														

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

Note:

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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,  
 Client Engineer  
 Solitaire of UAE (Pvt) Ltd  
 Heritage Bountique Hotel Project

Reference # CED/TFL **33590** (Dr. Qasim Khan)  
 Reference of the request letter # HBH/UET/12

Dated: 18-07-2019  
 Dated: 18-07-2019

**Tension Test Report** (Page -1/1)

Date of Test 19-07-2019  
 Gauge length 8 inches  
 Description Deformed Steel Bar Tensile Test as per ASTM-A615

Sr. No.	Weight (lbs/ft)	Diameter/ Size		Area (in <sup>2</sup> )		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	0.387	3	0.380	0.11	0.114	3600	4700	72200	69840	94200	91200	1.10	13.8	
2	0.373	3	0.373	0.11	0.110	3700	4800	74200	74440	96200	96600	1.00	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile and one sample for bend test</b>														
Bend Test														
#3 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**  
**Department of Civil Engineering**  
**University of Engineering and Technology Lahore, 54890**  
**Pakistan. Ph: 92-42-99029202**

To,  
 Sub Divisional Officer  
 Buildings Sub Division  
 Pattoki  
 (Construction of Arazi Record Centre at Chunian District Kasur)

Reference # CED/TFL **33591** (Dr. Qasim Khan)  
 Reference of the request letter # 896/P

Dated: 18-07-2019  
 Dated: 30-04-2019

**Tension Test Report** (Page -1/1)

Date of Test 19-07-2019  
 Gauge length 8 inches  
 Description Deformed Steel Bar Tensile Test as per ASTM-A615

Sr. No.	Weight (lbs/ft)	Diameter/ Size (inch)		Area (in <sup>2</sup> )		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	0.384	3/8	0.379	0.11	0.113	2600	3800	52100	50790	76200	74300	1.60	20.0	
2	0.388	3/8	0.381	0.11	0.114	2700	4100	54100	52170	82200	79300	1.70	21.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile test</b>														
Bend Test														

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

Note:

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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 KSL Group  
Islamabad

Reference # CED/TFL **33592** (Dr. Qasim Khan)  
Reference of the request letter # Nil

Dated: 18-07-2019

Dated: 18-07-2019

**Tension Test Report** (Page – 1/1)

Date of Test 19-07-2019  
Gauge length -----  
Description Steel Wire Rope Tensile Test

Sr. No.	Nominal Diameter	Measured weight	Yield Load	Breaking Load	Remarks / Coil No.
	(mm)	(kg/km)	(kg)	(kg)	
1	8	251.15	-----	4600	
-	-	-	-	-	
-	-	-	-	-	
-	-	-	-	-	
-	-	-	-	-	
<b>Only one sample for Test</b>					

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

**Note:**

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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,  
 Manager Civil  
 Orient Electrick (Pvt) Ltd  
 Hotel Tower Project FTC Johar Town – Lahore  
 (Afco Steel)

Reference # CED/TFL **33598** (Dr. Ali Ahmed) Dated: 19-07-2019  
 Reference of the request letter # ORIENT/AFCO/Hotel Tower/Steel/007 Dated: 17-07-2019

**Tension Test Report** (Page -1/2)

Date of Test 19-07-2019  
 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 <sup>2</sup> )		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	0.433	10	10.22	0.12	0.127	3670	6350	67424	63590	116660	110100	1.00	12.5	
2	0.428	10	10.17	0.12	0.126	3440	6220	63199	60270	114272	109000	1.00	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile and one sample for bend test</b>														
Bend Test														
10mm Dia 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**  
**Department of Civil Engineering**  
**University of Engineering and Technology Lahore, 54890**  
**Pakistan. Ph: 92-42-99029202**

To,  
 Manager Civil  
 Orient Electrick (Pvt) Ltd  
 Hotel Tower Project FTC Johar Town – Lahore  
 (Afco Steel)

Reference # CED/TFL **33598** (Dr. Ali Ahmed) Dated: 19-07-2019  
 Reference of the request letter # ORIENT/AFCO/Hotel Tower/Steel/006 Dated: 16-07-2019

**Tension Test Report** (Page -2/2)

Date of Test 19-07-2019  
 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 <sup>2</sup> )		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	0.419	10	10.06	0.12	0.123	3530	5300	64852	63150	97370	94900	1.30	16.3	
2	0.421	10	10.08	0.12	0.124	3620	5330	66505	64530	97921	95100	1.30	16.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile and one sample for bend test</b>														
Bend Test														
10mm Dia Bar Bend Test Through 180° is Satisfactory														

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

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**Test Floor Laboratory**  
**Department of Civil Engineering**  
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**I/C Testing Laboratories**  
**UET Lahore, Pakistan.**

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