



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 Polecrete Spun Limited
Lahore

Reference # CED/TFL **32599** (Dr. Usman Akmal)
Reference of the request letter # PSPL/K-09/2019

Dated: 11-02-2019
Dated: 06-02-2019

Tension Test Report (Page -1/2)

Date of Test 14-02-2018
Gauge length 2 inches
Description MS Wire Tensile Test

Sr. No.	Weight (kg/m)	Diameter/ Size (mm)		Area (mm ²)		Yield load (kg)	Breaking Load (kg)	Yield Stress (MPa) Actual	Ultimate Stress (MPa) Actual	Elongation (inch)	% Elongation	Remarks
		Nominal	Actual	Nominal	Actual							
1	0.152	5	4.97	-----	19.4	1000	1400	506	708	0.3	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
Note: only one sample for tensile test												
Bend Test												

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,
M/S Polecrete Spun Limited
Lahore

Reference # CED/TFL **32599** (Dr. Usman Akmal)
Reference of the request letter # PSPL/K-09/2019

Dated: 11-02-2019

Dated: 06-02-2019

Tension Test Report (Page – 2/2)

Date of Test 11-02-2019
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)		% Elongation	Remarks / Coil No.
	(mm)	(kg/km)	(kg/km)	(kg)	(kN)	(kg)	(kN)		
1	9.53 (3/8")	432.0	439.0	10200	100.06	11400	111.83	>3.50	xx
2	11.11 (7/16")	582.0	588.0	12600	123.61	14600	143.23	>3.50	xx
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
Only two samples for Test									

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To,
Resident Engineer
RENARDET S.A ((M-4), Package-3A)
Construction of Faisalabad-Khanewal Motorway (M-4) Project, Package-III A (Ali Hajvery)(M/s
CGGC)

Reference # CED/TFL **32610** (Engr. Amina Rajput)
Reference of the request letter # RE/M-4/3A/2019/294

Dated: 11-02-2019
Dated: 09-02-2019

Tension Test Report (Page – 1/3)

Date of Test 14-02-2019
Gauge length -----
Description Chain Link Fence Wire Tensile Test as per AASHTO-M-181

Sr. No.	Diameter of Wire	Breaking Load		Remarks
	(mm)	(kg)	(kN)	
1	3.20	500	4.91	
-	-	-	-	
-	-	-	-	
-	-	-	-	
-	-	-	-	
-	-	-	-	
-	-	-	-	
Only One Sample for Test				

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To,
 Sr. DGM (Projects)
 Lucky Cement Limited, Pezu
 Luky Cement Plant Project 7500 TPD Pezu, District Lakki Marwat

Reference # CED/TFL **32613** (Engr. Amina Rajput)
 Reference of the request letter # Nil

Dated: 12-02-2019
 Dated: 08-02-2019

Tension Test Report (Page -1/1)

Date of Test 14-02-2019
 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 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	0.416	10	10.02	0.11	0.122	4000	5400	80200	72180	108200	97500	1.00	12.5	
2	0.414	10	10.00	0.11	0.122	4100	5400	82200	74300	108200	97900	0.90	11.3	
3	3.276	32	28.13	1.27	0.963	33200	45600	57700	75990	79200	104400	1.60	20.0	
4	3.296	32	28.21	1.27	0.969	33800	46000	58700	76900	79900	104700	1.50	18.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Note: only four samples for tensile and two samples for bend test

Bend Test

10mm Dia Bar Bend Test Through 180° is Satisfactory

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
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To,
 Project Manager
 Orbit Housing
 Spring Apartments, Canal Road, Lahore

Reference # CED/TFL **32615** (Engr. Amina Rajput)
 Reference of the request letter # Nil

Dated: 12-02-2019
 Dated: 12-02-2019

Tension Test Report (Page -1/1)

Date of Test 14-02-2019
 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	0.380	3	0.377	0.11	0.112	3200	5400	64200	63160	108200	106600	0.80	10.0	
2	0.346	3	0.360	0.11	0.102	2100	3000	42100	45520	60200	65100	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 Innovative
Lahore

Reference # CED/TFL **32618** (Dr. Nauman Khurram)
Reference of the request letter # Nil

Dated: 13-02-2019
Dated: 13-02-2019

Tension Test Report (Page -1/1)

Date of Test 14-02-2019
Gauge length 8 inches
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight	Diameter/ Size (inch)		Area (in ²)		Yield load	Breaking Load	Yield Stress (psi)		Ultimate Stress (psi)		Elongation	% Elongation	Remarks
	(lbs/ft)	Nominal	Actual	Nominal	Actual	(kg)	(kg)	Nominal	Actual	Nominal	Actual	(inch)		
1	0.405	3/8	0.389	0.11	0.119	4650	6000	93200	86170	120300	111200	0.90	11.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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 Laboratories
UET Lahore, Pakistan.

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STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
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To,
 Resident Engineer
 NESPAK
 Up-Gradation/ Dualization of Motorway Link from Kohat Via Jand Pindigheb to Khushal Garh
 (Pkg-1) (WMI)

Reference # CED/TFL **32619** (Dr. Usman Akmal)
 Reference of the request letter # 36264/103/JH/021

Dated: 13-02-2019
 Dated: 12-02-2019

Tension Test Report (Page – 1/4)

Date of Test 14-02-2019
 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)			
1	12.70 (1/2")	775.0	782.0	17500	171.68	19400	190.31	199	>3.50	xx
2	12.70 (1/2")	775.0	780.0	17900	175.60	19900	195.22	198	>3.50	xx
3	12.70 (1/2")	775.0	779.0	17700	173.64	20000	196.20	199	>3.50	xx
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
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

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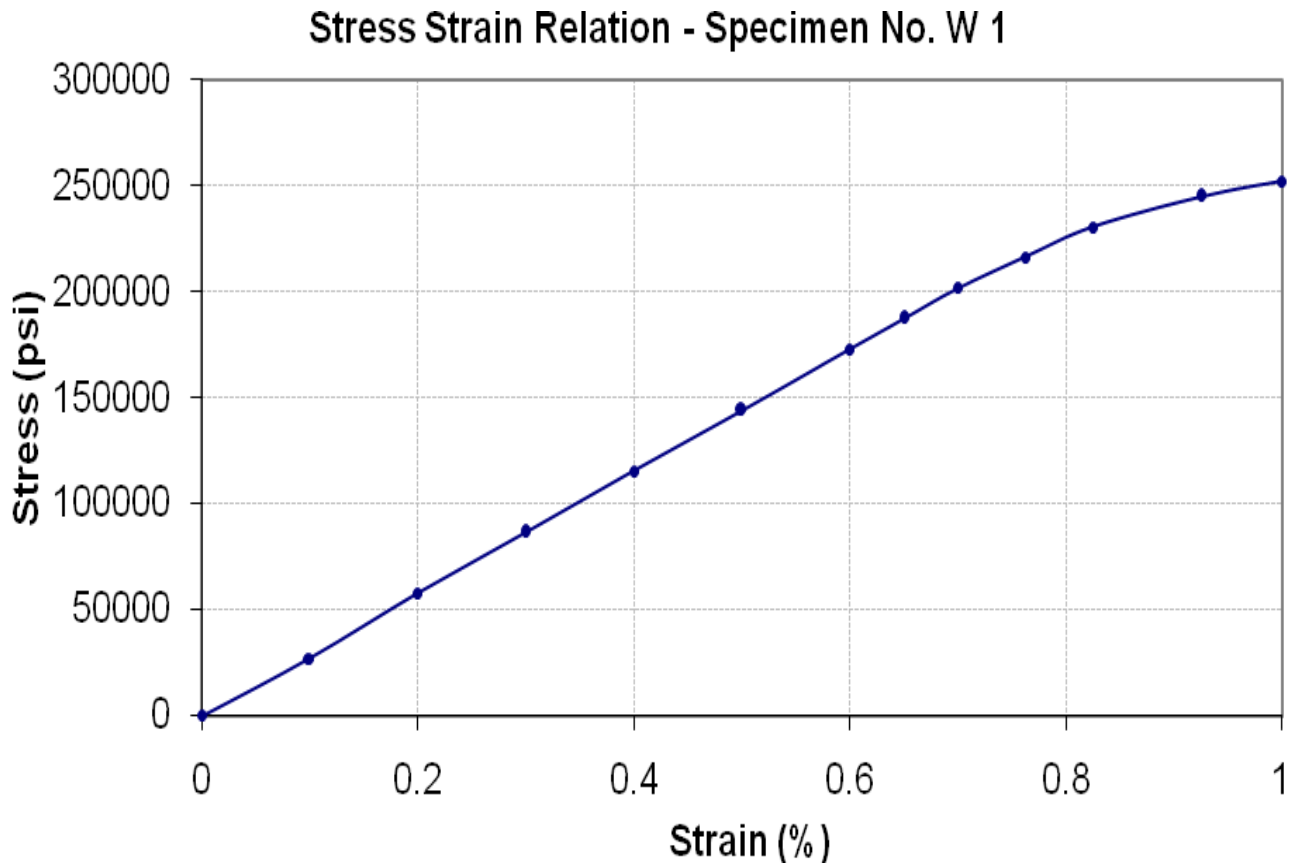
STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
Resident Engineer
NESPAK
Up-Gradation/ Dualization of Motorway Link from Kohat Via Jand Pindigheb to Khushal Garh
(Pkg-1) (WMI)

Reference # CED/TFL **32619** (Dr. Usman Akmal)
Reference of the request letter # 36264/103/JH/021

Dated: 13-02-2019
Dated: 12-02-2019

Graph (Page – 2/4)



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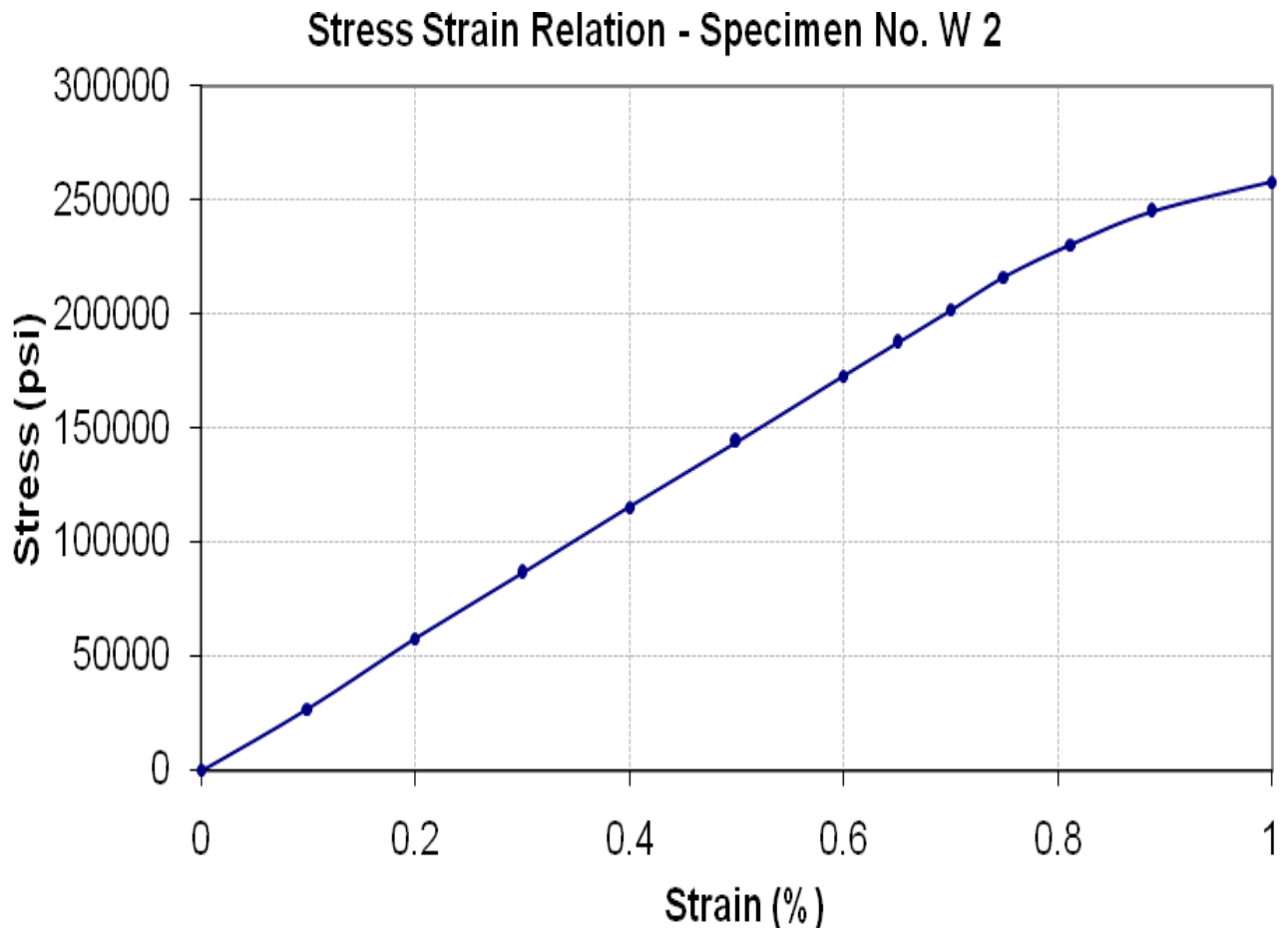
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Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
Resident Engineer
NESPAK
Up-Gradation/ Dualization of Motorway Link from Kohat Via Jand Pindigheb to Khushal Garh
(Pkg-1) (WMI)

Reference # CED/TFL **32619** (Dr. Usman Akmal)
Reference of the request letter # 36264/103/JH/021

Dated: 13-02-2019
Dated: 12-02-2019

Graph (Page – 2/4)



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UET Lahore, Pakistan.

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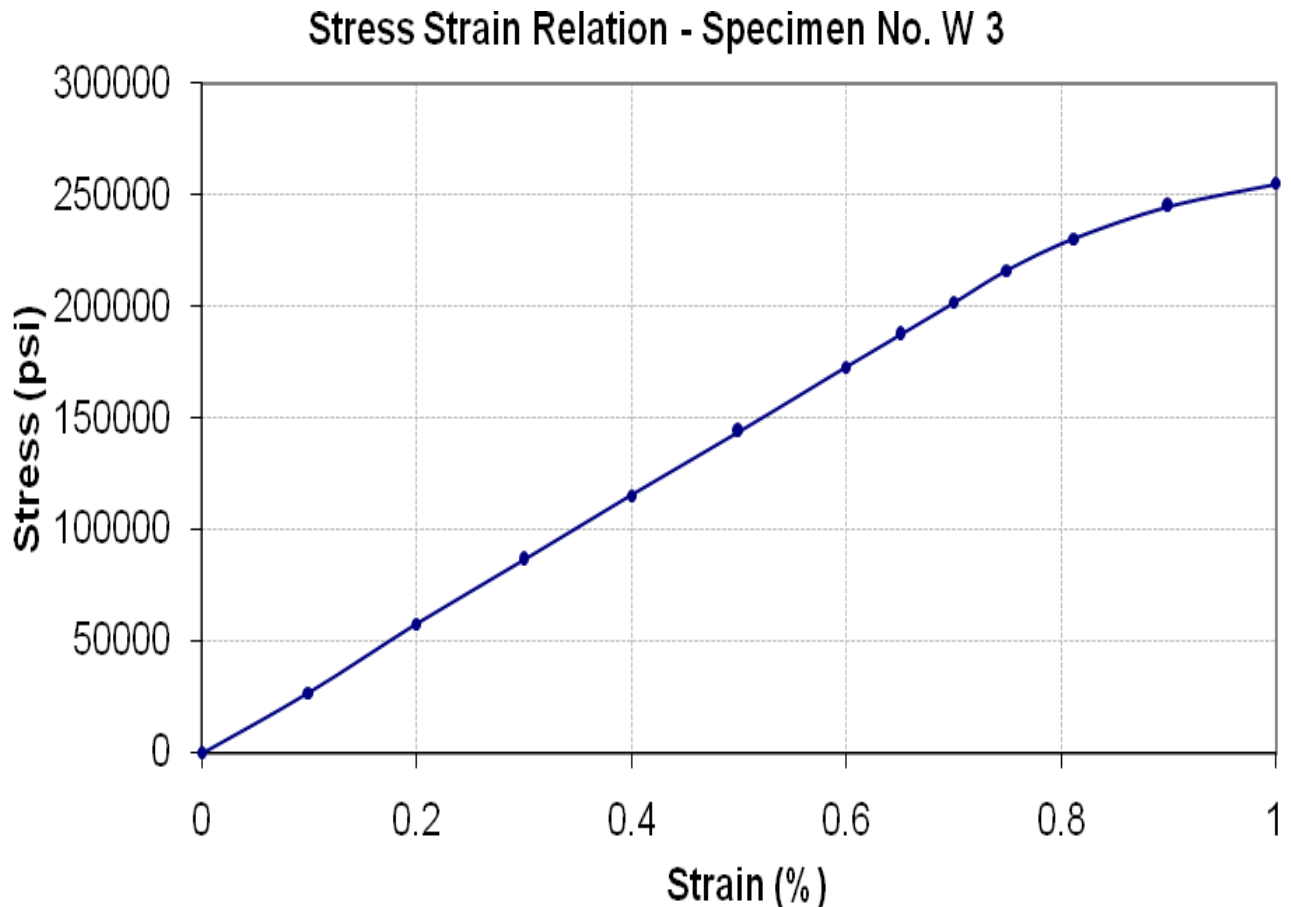
STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
Resident Engineer
NESPAK
Up-Gradation/ Dualization of Motorway Link from Kohat Via Jand Pindigheb to Khushal Garh
(Pkg-1) (WMI)

Reference # CED/TFL **32619** (Dr. Usman Akmal)
Reference of the request letter # 36264/103/JH/021

Dated: 13-02-2019
Dated: 12-02-2019

Graph (Page – 4/4)



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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 Coordinator
 Banu Mukhtar Contracting (Pvt) Ltd
 Pioneer Cement Ltd, Khushab

Reference # CED/TFL **32620** (Engr. Amina Rajput) Dated: 13-02-2019
 Reference of the request letter # BML/PC/Pioneer Cement/106 Dated: 13-02-2019

Tension Test Report (Page -1/1)

Date of Test 14-02-2019
 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	0.365	3	0.370	0.11	0.107	4000	5000	80200	82110	100200	102700	1.00	12.5	
2	0.365	3	0.369	0.11	0.107	4000	4950	80200	82270	99200	101900	0.80	10.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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.

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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
 Building Sub Division Nankana Sahib
 (Construction of Police Station (PS) City Nankana Sahib)

Reference # CED/TFL **32621** (Engr. Amina Rajput)
 Reference of the request letter # 109

Dated: 13-02-2019
 Dated: 12-02-2019

Tension Test Report (Page -1/1)

Date of Test 14-02-2019
 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	0.413	3/8	0.393	0.11	0.122	3400	5100	68200	61660	102200	92500	1.20	15.0	
2	0.397	3/8	0.385	0.11	0.117	3200	4800	64200	60510	96200	90800	1.50	18.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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.

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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 CM Engineering (Pvt) Ltd\
Lahore
(CMPAK Project, Site ID: 42462, 42643, 42628, 42622, 42426, 41521, 41639, 41252, 41088, 42404, 41518)

Reference # CED/TFL **32622** (Engr. Amina Rajput)
Reference of the request letter # CME/Steel/CMPAK/324

Dated: 13-02-2019
Dated: 15-01-2019

Tension Test Report (Page -1/1)

Date of Test 14-02-2019
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 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	0.377	10	9.55	0.11	0.111	3100	4700	62200	61600	94200	93400	1.20	15.0	
2	0.380	10	9.57	0.11	0.112	3100	4700	62200	61250	94200	92900	1.10	13.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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.

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

To,
M/S Tijaarat Developers
Lahore

Reference # CED/TFL **32623** (Engr. Amina Rajput)
Reference of the request letter # Nil

Dated: 13-02-2019
Dated: 13-02-2019

Tension Test Report (Page -1/1)

Date of Test 14-02-2019
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	0.359	3	0.367	0.11	0.106	3100	4600	62200	64680	92200	96000	1.00	12.5	
2	0.363	3	0.369	0.11	0.107	3100	4700	62200	63950	94200	97000	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 Zubair Feeds (Pvt) Ltd
Depalpur Road Pakpattan

Reference # CED/TFL **32624** (Engr. Amina Rajput)
Reference of the request letter # Nil

Dated: 13-02-2019

Dated: 12-02-2019

Tension Test Report (Page -1/1)

Date of Test 14-02-2019
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	0.169	2	0.252	-----	0.050	1200	1800	-----	53160	-----	79800	1.50	18.8	
2	0.174	2	0.255	-----	0.051	1300	1850	-----	56080	-----	79800	1.60	20.0	
3	0.397	3	0.385	0.11	0.117	3100	4000	62200	58610	80200	75700	1.40	17.5	
4	0.398	3	0.386	0.11	0.117	2950	3900	59200	55590	78200	73500	1.80	22.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only four samples for tensile and two samples for bend test														
Bend Test														
#2 Bar Bend Test Through 180° is Satisfactory														
#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
 Building Sub Division No. 5
 Lahore
 (Construction of 60-Bedded Hospital at Sabzazar Lahore (Provision of Filter Clinic, Cafeteria / Store) Group No. 3)
 Reference # CED/TFL **32625** (Engr. Amina Rajput) Dated: 13-02-2019
 Reference of the request letter # 27/5th Dated: 23-01-2019

Tension Test Report (Page -1/1)

Date of Test 14-02-2019
 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	0.384	3/8	0.379	0.11	0.113	-----	7200	-----	-----	144300	140800	0.40	5.0	
.	
.	
.	
.	
.	
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.

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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,
 Resident Engineer
 CAMEOS Consultant
 ZMAK Road, Project

Reference # CED/TFL **32626** (Dr. Amina Rajput)
 Reference of the request letter # ZMAK/CAMEOS/RE/386

Dated: 13-02-2019
 Dated: 11-02-2019

Tension Test Report (Page -1/1)

Date of Test 14-02-2019
 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 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	0.408	10	9.93	0.11	0.120	3280	5400	65800	60220	108200	99200	1.20	15.0	
2	0.408	10	9.93	0.11	0.120	3300	5300	66200	60620	106200	97400	1.10	13.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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.

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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,
Resident Engineer
CAMEOS Consultant
ZMAK Road, Project

Reference # CED/TFL **32627** (Engr. Amina Rajput)
Reference of the request letter # ZMAK/CAMEOS/RE/385

Dated: 13-02-2019
Dated: 11-02-2019

Tension Test Report (Page – 1/1)

Date of Test 14-02-2019
Gauge length -----
Description Steel Wire Tensile Test

Sr. No.	Diameter of Wire	Breaking Load		Remarks
	(mm)	(kg)	(kN)	
1	3.80	550	5.40	
2	3.80	500	4.91	
-	-	-	-	
-	-	-	-	
-	-	-	-	
-	-	-	-	
-	-	-	-	
Only Two Samples for Test				

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,
Sub Divisional Officer
Daska Drainage Sub Division
Daska
(Flood Protection of Sialkot Against Nullah (Package-C))

Reference # CED/TFL **32635** (Dr. Usman Akmal)
Reference of the request letter # C-2/DSK

Dated: 14-02-2019
Dated: 11-02-2019

Tension Test Report (Page – 1/2)

Date of Test 14-02-2019
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	781.0	17500	171.68	19500	191.30	199	>3.50	20249
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
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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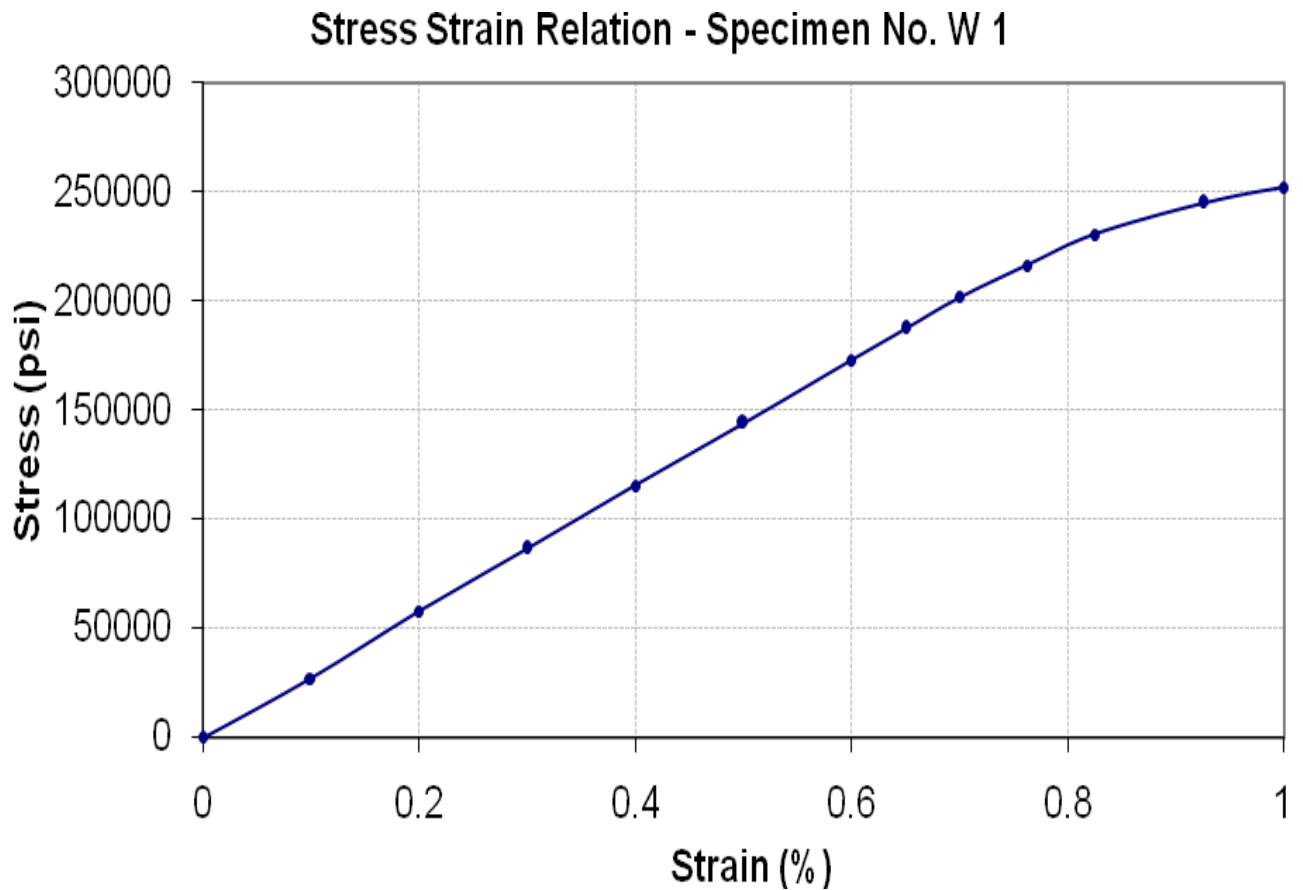
STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
Sub Divisional Officer
Daska Drainage Sub Division
Daska
(Flood Protection of Sialkot Against Nullah (Package-C))

Reference # CED/TFL **32635** (Dr. Usman Akmal)
Reference of the request letter # C-2/DSK

Dated: 14-02-2019
Dated: 11-02-2019

Graph (Page – 2/2)



I/C Testing Laboratories
UET Lahore, Pakistan.

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