



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
RENARDET S.A ((M-4), Package-III A)
Construction Supervision of Four Lane Motorway from Faisalabad to Khanewal Project (M-4)
184 km, Package-3A, Shorkot – Dinpur Section (31km) (D & L International)(M/s GRC)

Reference # CED/TFL **32773-774** (Dr. Qasim Khan)
Reference of the request letter # RSA/M-4/3A/2019/306

Dated: 06-03-2019
Dated: 22-02-2019

Tension Test Report (Page – 1/1)

Date of Test 15-03-2019
Gauge length 2 inches
Description W-Section 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
	-----	(cm)	(cm ²)	(kg)	(kg)	(kg/cm ²)	(kg/cm ²)	(in)		
1	W-Section	2.97x0.275	0.82	4400	6100	5387.21	7468.63	0.40	20.00	S-1
2		2.97x0.275	0.82	4350	6100	5325.99	7468.63	0.40	20.00	
3	W-Section	2.97x0.275	0.82	4300	6100	5264.77	7468.63	0.45	22.50	S-2
4		2.97x0.275	0.82	4400	6100	5387.21	7468.63	0.45	22.50	
-	-	-	-	-	-	-	-	-	-	-
-		-	-	-	-	-	-	-	-	
Only Four Samples for Tensile and Four Samples for Bend Test										
Bend Test										
Strip Taken from W-Section Bend Test Through 180° is Satisfactory										
Strip Taken from W-Section Bend Test Through 180° is Satisfactory										
Strip Taken from W-Section Bend Test Through 180° is Satisfactory										
Strip Taken from W-Section Bend Test Through 180° is Satisfactory										

I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

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To,
Resident Engineer
RENARDET S.A ((M-4), Package-III A)
Construction Supervision of Four Lane Motorway from Faisalabad to Khanewal Project (M-4)
184 km, Package-3A, Shorkot – Dinpur Section (31km) (D & L International)(M/s GRC)

Reference # CED/TFL **32775** (Dr. Qasim Khan)
Reference of the request letter # RSA/M-4/3A/2019/307

Dated: 06-03-2019
Dated: 22-02-2019

Tension Test Report (Page – 1/2)

Date of Test 15-03-2019
Gauge length 2 inches
Description Vertical Post Strip Tensile Test

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	Vertical Post	2.40x0.71	1.70	6500	9300	3814.55	5457.75	0.70	35.00	S-1
2		2.40x0.71	1.70	6400	9200	3755.87	5399.06	0.75	37.50	
3	Vertical Post	2.40x0.71	1.70	6500	9300	3814.55	5457.75	0.75	37.50	S-2
4		2.40x0.71	1.70	6600	9300	3873.24	5457.75	0.70	35.00	
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
Only Four Samples for Tensile Test										
Bend Test										

I/C Testing Laboratoires
UET Lahore, Pakistan.

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To,
Resident Engineer
RENARDET S.A ((M-4), Package-III A)
Construction Supervision of Four Lane Motorway from Faisalabad to Khanewal Project (M-4)
184 km, Package-3A, Shorkot – Dinpur Section (31km) (D & L International)(M/s GRC)

Reference # CED/TFL **32775** (Dr. Qasim Khan)
Reference of the request letter # RSA/M-4/3A/2019/307

Dated: 06-03-2019
Dated: 22-02-2019

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

Date of Test 15-03-2019
Gauge length -----
Description Vertical Post Weight and Size Test

Sr. No.	Designation	Weight	Length	Weight per Unit Length	Web Thickness (t _w)	Remark
		(g)	(mm)	(kg/m)	(mm)	
1	Vertical Post	919	79.4	11.57	7.10	S-1
2	Vertical Post	921	79.3	11.61	7.10	S-2
-	-	-	-	-	-	
-	-	-	-	-	-	
-	-	-	-	-	-	
-	-	-	-	-	-	
-	-	-	-	-	-	
-	-	-	-	-	-	
Only Two Samples for Test						

I/C Testing Laboratoires
UET Lahore, Pakistan.

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To,
Resident Engineer
RENARDET S.A ((M-4), Package-III A)
Construction Supervision of Four Lane Motorway from Faisalabad to Khanewal Project (M-4)
184 km, Package-3A, Shorkot – Dinpur Section (31km)

Reference # CED/TFL **32776** (Dr. Qasim Khan)
Reference of the request letter # RSA/M-4/3A/2019/310

Dated: 06-03-2019
Dated: 23-02-2019

Tension Test Report (Page – 1/2)

Date of Test 15-03-2019
Gauge length 2 inches
Description G.I Corrugated Sheet Strip Tensile Test

Sr. No.	Designation	Size of Strip	X Section Area	Yield load	Breaking Load	Yield Stress	Ultimate Stress	Elongation	% Elongation	Remarks
	-----	(mm)	(mm ²)	(kg)	(kg)	(MPa)	(MPa)	(in)		
1	Sheet	22.00x0.95	20.90	900	1100	422.44	516.32	0.70	35.00	
2		22.00x0.95	20.90	900	1100	422.44	516.32	0.70	35.00	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
Only Two Samples for Tensile Test										
Bend Test										

I/C Testing Laboratoires
UET Lahore, Pakistan.

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To,
Resident Engineer
RENARDET S.A ((M-4), Package-III A)
Construction Supervision of Four Lane Motorway from Faisalabad to Khanewal Project (M-4)
184 km, Package-3A, Shorkot – Dinpur Section (31km)

Reference # CED/TFL **32776** (Dr. Qasim Khan)
Reference of the request letter # RSA/M-4/3A/2019/310

Dated: 06-03-2019
Dated: 23-02-2019

Thickness Test Report (Page – 2/2)

Date of Test 15-03-2019
Gauge length -----
Description G.I Corrugated Sheet Thickness Test

Sr. No.	Designation	Thickness	Remark
	-----	(mm)	
1	Sheet	0.95	
-	-	-	
-	-	-	
-	-	-	
-	-	-	
-	-	-	
-	-	-	
Only One Sample for Test			

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,
 QC Engineer
 Elite Metal Tek Pvt. Ltd
 Lahore
 (Specimen # EMT-CYL-PQ110B)

Reference # CED/TFL **32801** (Dr. Qasim Khan)
 Reference of the request letter # Frm-QA/QC-029

Dated: 08-03-2019
 Dated: 08-03-2019

Tension Test Report (Page – 1/3)

Date of Test 15-03-2019
 Gauge length 2 inches
 Description Welded Plate Tensile Test

Sr. No.	Designation	Size of Strip	X Section Area	Breaking Load	Ultimate Stress	Elongation	% Elongation	Remarks
		(mm)	(mm ²)	(kg)	(MPa)	(inch)		
1	Welded Plate	21.20x4.00	84.80	4400	509.01	0.45	22.50	Failure at the location other than weld
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
Only one sample for tensile test								
Bend Test								

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,
QC Engineer
Elite Metal Tek Pvt. Ltd
Lahore
(Specimen # EMT-CYL-PQ110A)

Reference # CED/TFL **32801** (Dr. Qasim Khan)
Reference of the request letter # Frm-QA/QC-028

Dated: 08-03-2019
Dated: 08-03-2019

Tension Test Report (Page – 2/3)

Date of Test 15-03-2019
Gauge length 2 inches
Description Welded Plate Tensile Test

Sr. No.	Designation	Size of Strip	X Section Area	Breaking Load	Ultimate Stress	Elongation	% Elongation	Remarks
		(mm)	(mm ²)	(kg)	(MPa)	(inch)		
1	Welded Plate	21.00x4.00	84.00	4400	513.86	0.40	20.00	Failure at the location other than weld
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
Only two samples for tensile test								
Bend Test								

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,
QC Engineer
Elite Metal Tek Pvt. Ltd
Lahore

Reference # CED/TFL **32801** (Dr. Qasim Khan)
Reference of the request letter # Frm-QA/QC-030

Dated: 08-03-2019
Dated: 08-03-2019

Bend Test Report (Page – 3/3)

Date of Test 20-11-2018
Gauge length 2 inches
Description Welded Plate Bend Test

Sr. No.	Bend Test	Specimen #
1	Strip taken from Welded Plate (Face) Bend Test Through 180° is Satisfactory	EMT-CYL-PQ111A
2	Strip taken from Welded Plate (Face) Bend Test Through 180° is Satisfactory	EMT-CYL-PQ111B
3	Strip taken from Welded Plate (Root) Bend Test Through 180° is Satisfactory	EMT-CYL-PQ112A
4	Strip taken from Welded Plate (Root) Bend Test Through 180° is Satisfactory	EMT-CYL-PQ112B
Only four samples for bend test		

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 Steel Wire Rope
Lahore

Reference # CED/TFL **32512** (Dr. Asif Hameed)
Reference of the request letter # Nil

Dated: 11-03-2019

Dated: 11-03-2019

Tension Test Report (Page – 1/1)

Date of Test 15-03-2019

Gauge length -----

Description Steel Wire Rope Tensile Test

Sr. No.	Nominal Diameter	Measured weight	Breaking Load	Remarks / Coil No.
	(mm)	(kg/m)	(kg)	
1	38	6.25	65000	
-	-	-	-	
-	-	-	-	
-	-	-	-	
-	-	-	-	
Only one sample for Test				

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

Ref: CED/TFL/03/32824

Dated: 13-03-19

To
M/S Namco Associates (Pvt) Ltd
Model Town, Lahore

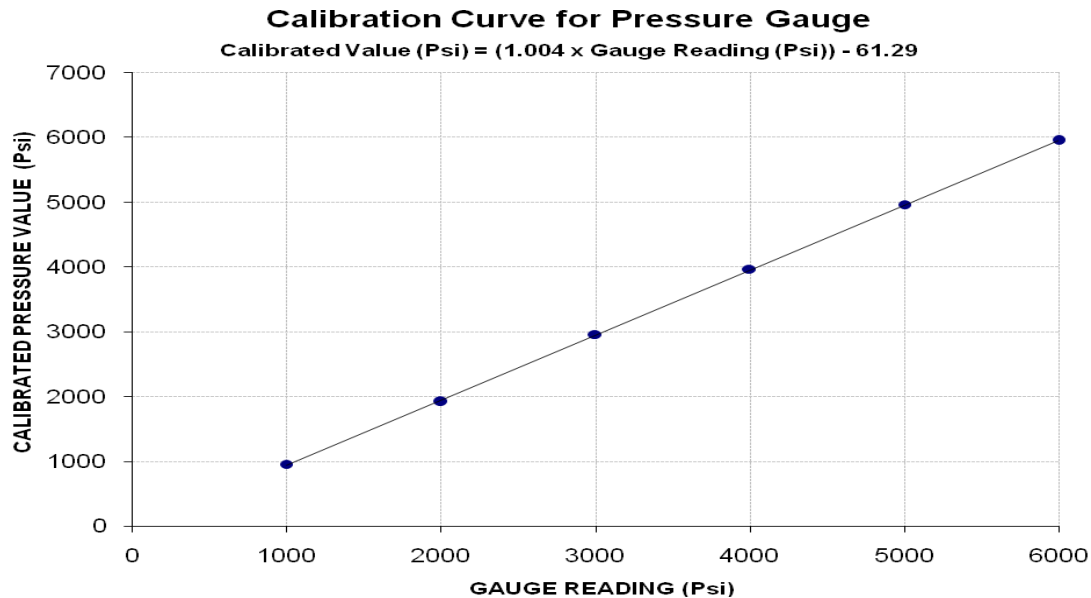
Subject: - CALIBRATION OF PRESSURE GAUGE (MARK: TFL/03/32824) (Page – 1/1)

Reference to your Letter No. NAMCO/UET/10/19, dated: 13/03/2019 on the subject cited above. One Pressure Gauge as received by us has been calibrated. The results are tabulated as under:

Total Range : Zero - 8000 (Psi)
Calibrated Range : Zero - 6000 (Psi)

Pressure Gauge Reading (Psi)	1000	2000	3000	4000	5000	6000
Calibrated Load (kg)	13300	26700	41200	55200	69100	82900
Calibrated Pressure (Psi)	955.38	1917.95	2959.53	3965.20	4963.68	5954.98

The Ram Area of Calibration = 198 cm²



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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
Public Health Engg: Sub Division-II
Mianwali
(Rural Drainage Scheme including Construction of PCC Slab at Pai Khel City & Rural Area
District Mianwali Work No. 4)
Reference # CED/TFL **32828** (Dr. Qasim Khan)
Reference of the request letter # 89/MI-II

Dated: 14-03-2019
Dated: 08-01-2019

Tension Test Report (Page -1/1)

Date of Test 15-03-2019
Gauge length 8 inches
Description Deformed Steel Bar Tensile and Bend Test

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	0.063	5/32	0.154	-----	0.019	650	900	-----	77310	-----	107100	0.70	8.8	
2	0.075	3/16	0.167	-----	0.022	900	1100	-----	90420	-----	110600	0.90	11.3	
3	0.100	1/4	0.193	-----	0.029	900	1100	-----	67570	-----	82600	0.70	8.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only three samples for tensile and three samples for bend test														
Bend Test														
5/32" Dia Bar Bend Test Through 180° is Satisfactory														
3/16" Dia Bar Bend Test Through 180° is Satisfactory														
1/4" 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,
Material Engineer
ACE (Pvt) Ltd
Construction of Haripur Bypass Road Project

Reference # CED/TFL **32829** (Dr. Ali Ahmed)
Reference of the request letter # RE/ACE/HBRP/LAB/41

Dated: 14-03-2019
Dated: 13-03-2019

Tension Test Report (Page – 1/2)

Date of Test 15-03-2019
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	784.0	18700	183.45	20400	200.12	199	>3.50	xx
-	-	-	-	-	-	-	-	-	-	xx
-	-	-	-	-	-	-	-	-	-	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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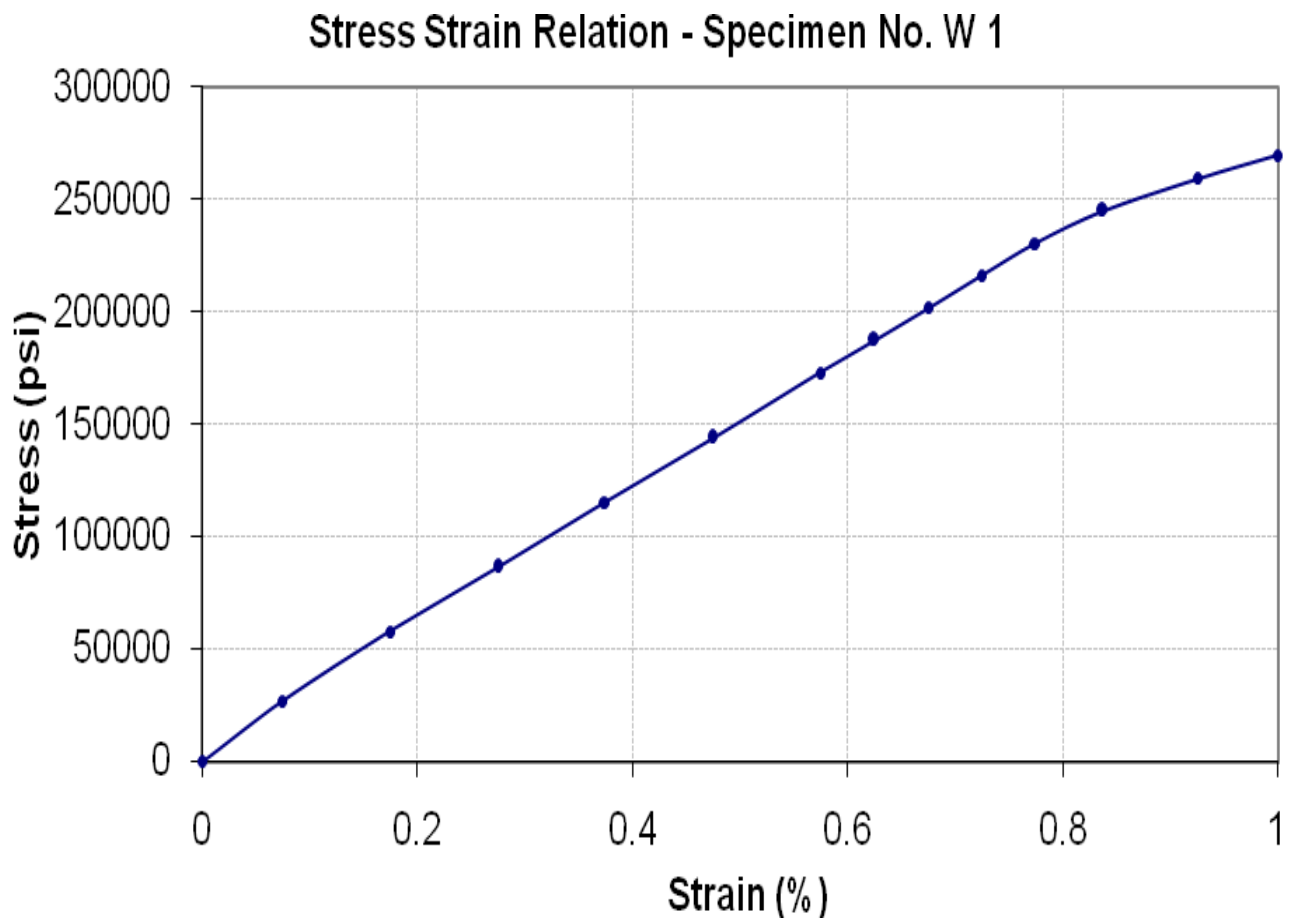
To,
Material Engineer
ACE (Pvt) Ltd
Construction of Haripur Bypass Road Project

Reference # CED/TFL **32829** (Dr. Ali Ahmed)
Reference of the request letter # RE/ACE/HBRP/LAB/41

Dated: 14-03-2019

Dated: 13-03-2019

Graph (Page – 2/2)



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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. 6
 Lahore
 (Replacement of Dangerous Roofs in Punjab Civil Secretariat Lahore (Old Minister Block))

Reference # CED/TFL **32830** (Dr. Qasim Khan)
 Reference of the request letter # 592/Sd-6th

Dated: 14-03-2019
 Dated: 13-03-2019

Tension Test Report (Page -1/1)

Date of Test 15-03-2019
 Gauge length 2 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	0.369	3/8	0.372	0.11	0.109	3100	4300	62200	62970	86200	87400	1.50	18.8	
2	0.372	3/8	0.373	0.11	0.109	3100	4300	62200	62490	86200	86700	1.40	17.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile test														
Bend Test														

I/C Testing Laboratoires
UET Lahore, Pakistan.

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To,
Material Engineer
NESPAK
Up-Gradation/Dualization of Motorway Link from Kohat via Jand Pindigheb to KHushal Garh
(Phg-1) (W.M.I)

Reference # CED/TFL **32831** (Dr. Ali Ahmed)
Reference of the request letter # 36264/103/JH/052

Dated: 14-03-2019
Dated: 13-03-2019

Tension Test Report (Page – 1/4)

Date of Test 15-03-2019
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	782.0	18300	179.52	20300	199.14	199	>3.50	xx
2	12.70 (1/2")	775.0	772.0	17900	175.60	20000	196.20	198	>3.50	xx
3	12.70 (1/2")	775.0	780.0	18100	177.56	20300	199.14	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

I/C Testing Laboratories
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

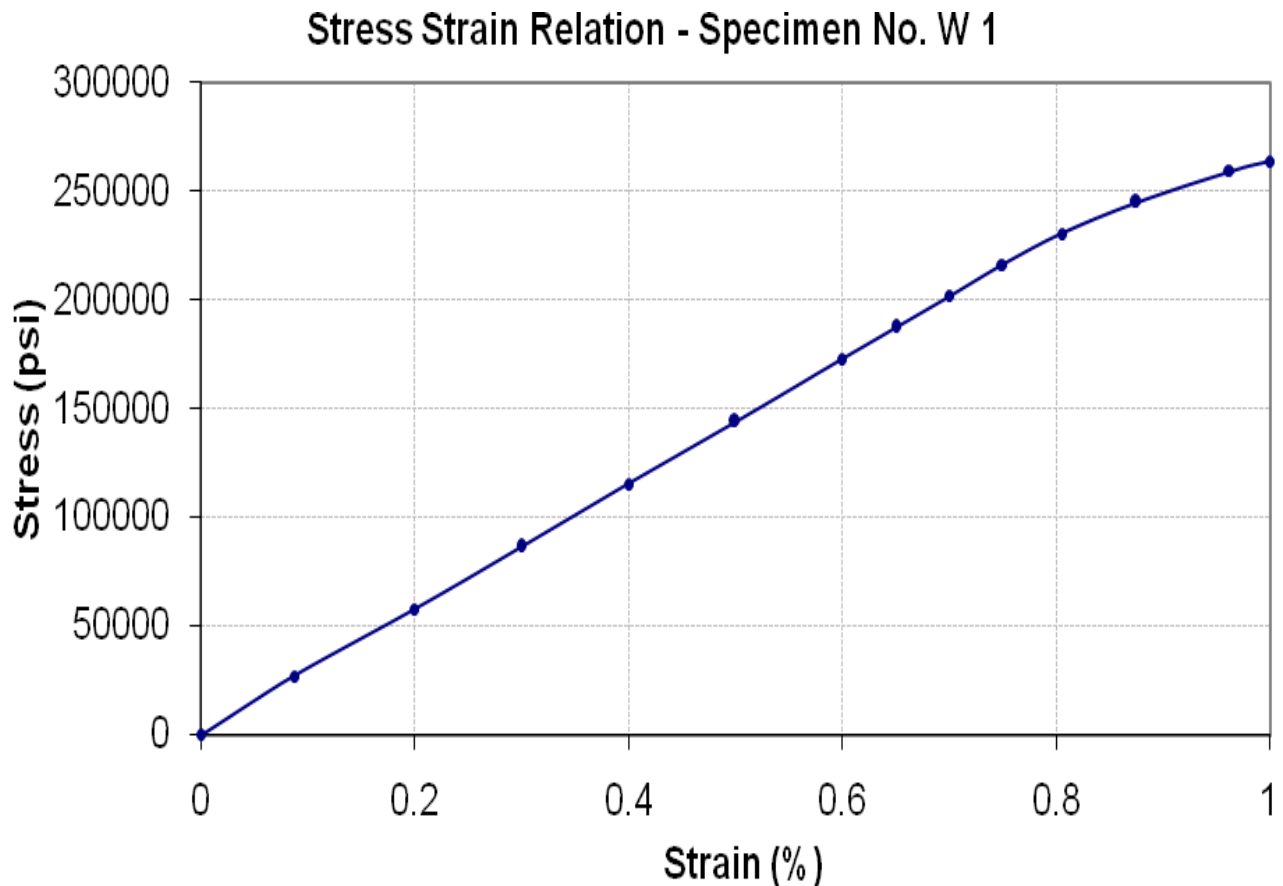
To,
Material Engineer
NESPAK
Up-Gradation/Dualization of Motorway Link from Kohat via Jand Pindigheb to KHushal Garh
(Phg-1) (W.M.I)

Reference # CED/TFL **32831** (Dr. Ali Ahmed)
Reference of the request letter # 36264/103/JH/052

Dated: 14-03-2019

Dated: 13-03-2019

Graph (Page – 2/4)



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UET Lahore, Pakistan.

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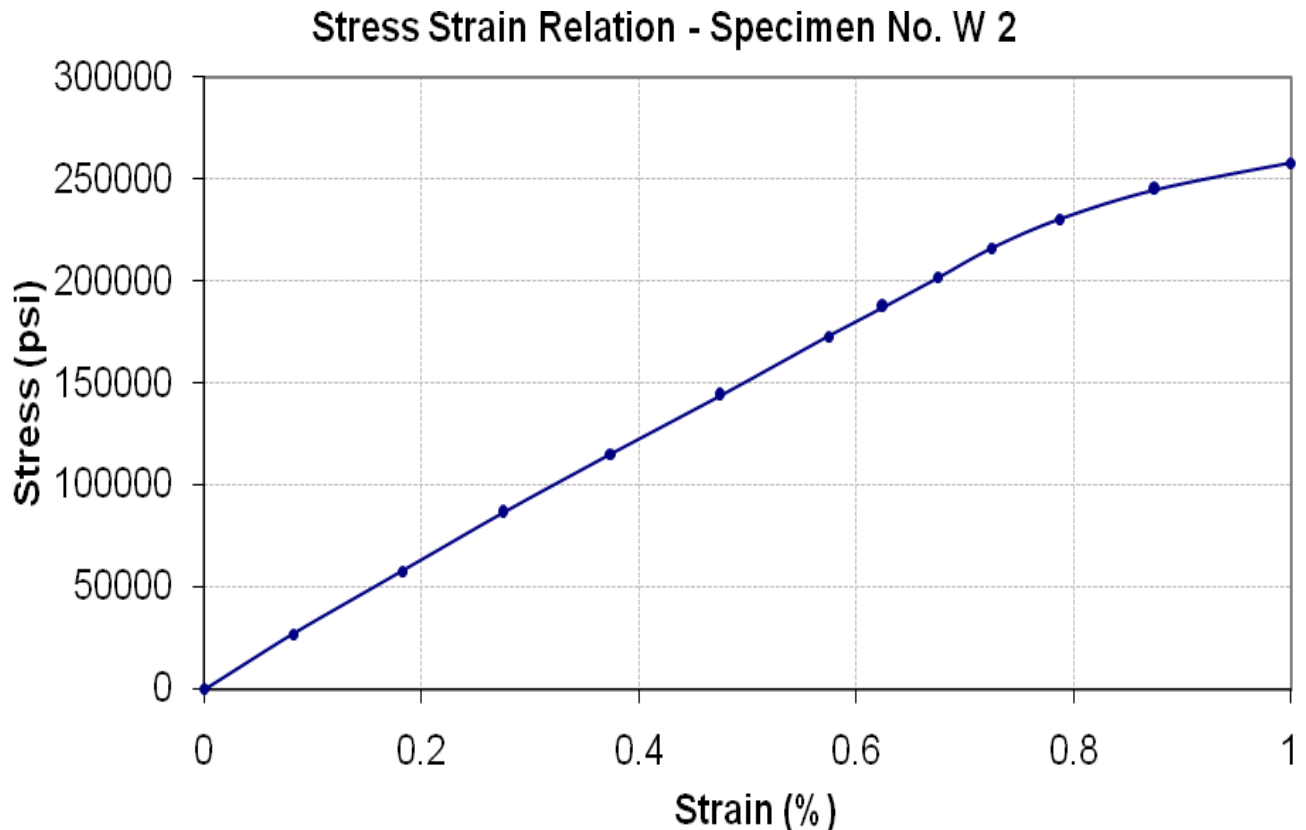
To,
Material Engineer
NESPAK
Up-Gradation/Dualization of Motorway Link from Kohat via Jand Pindigheb to KHushal Garh
(Phg-1) (W.M.I)

Reference # CED/TFL **32831** (Dr. Ali Ahmed)
Reference of the request letter # 36264/103/JH/052

Dated: 14-03-2019

Dated: 13-03-2019

Graph (Page – 3/4)



I/C Testing Laboratoires
UET Lahore, Pakistan.

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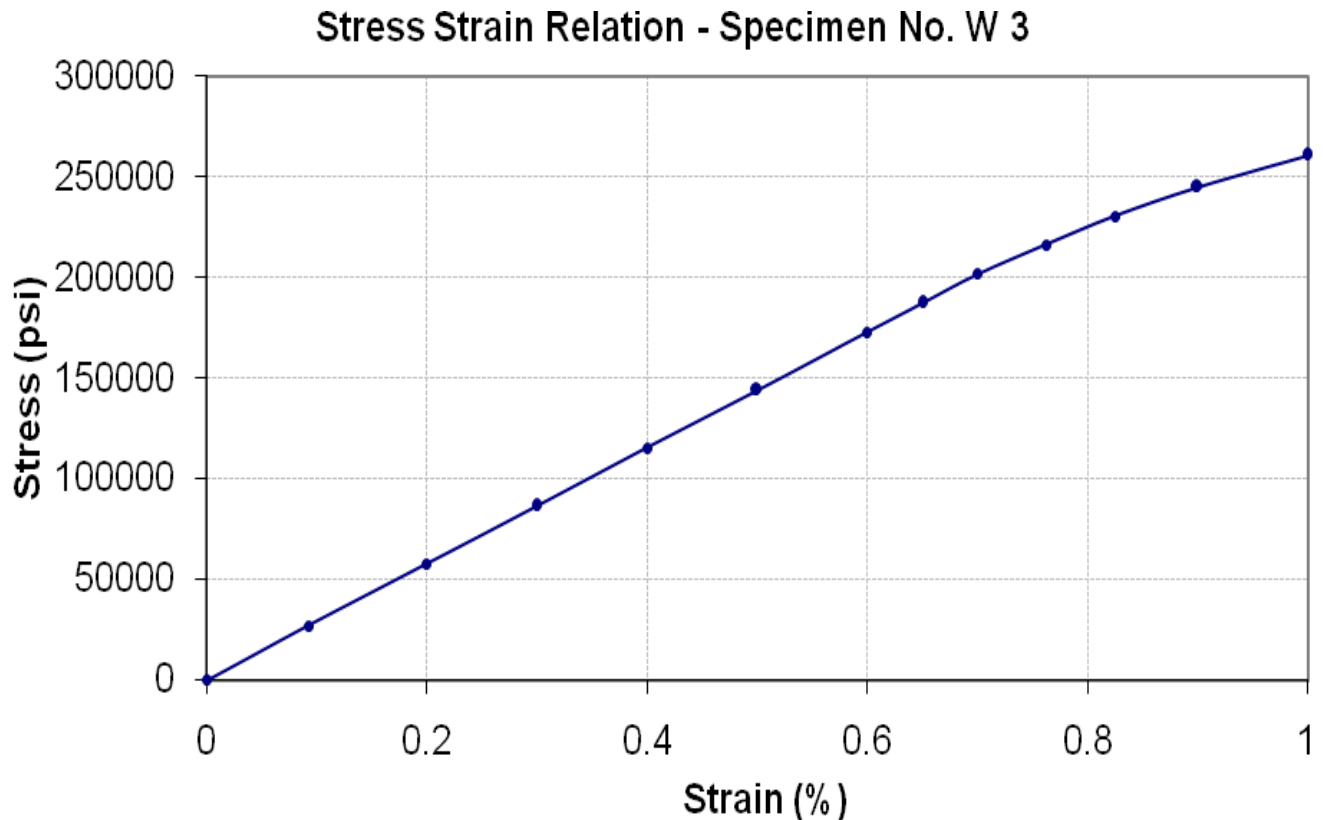
To,
Material Engineer
NESPAK
Up-Gradation/Dualization of Motorway Link from Kohat via Jand Pindigheb to KHushal Garh
(Phg-1) (W.M.I)

Reference # CED/TFL **32831** (Dr. Ali Ahmed)
Reference of the request letter # 36264/103/JH/052

Dated: 14-03-2019

Dated: 13-03-2019

Graph (Page – 4/4)



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

Reference # CED/TFL **32839** (Dr. Qasim Khan)
Reference of the request letter # 408/241/E/Lab/478/1733

Dated: 14-03-2019
Dated: 13-03-2019

Tension Test Report (Page -1/1)

Date of Test 15-03-2019
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	0.366	3	0.370	0.11	0.107	3500	5250	70200	71800	105200	107700	1.40	17.5	Kamran Steel
2	0.364	3	0.369	0.11	0.107	3300	4700	66200	67910	94200	96800	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.

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
(Proposed Commercial Plaza, DRGCC Ph-III, DHA Ph-VI (M/s Construct))

Reference # CED/TFL **32840** (Dr. Qasim Khan)
Reference of the request letter # 408/241/E/Lab/477/1807

Dated: 14-03-2019
Dated: 13-03-2019

Tension Test Report (Page -1/1)

Date of Test 15-03-2019
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	0.376	3	0.375	0.11	0.110	4400	5300	88200	87860	106200	105900	1.00	12.5	ASG Steel
2	0.371	3	0.373	0.11	0.109	4000	5000	80200	80770	100200	101000	1.00	12.5	
3	0.375	3	0.375	0.11	0.110	4400	5200	88200	87880	104200	103900	1.00	12.5	
4	0.373	3	0.373	0.11	0.110	4100	5000	82200	82490	100200	100600	1.10	13.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only four samples for tensile and two samples for bend test														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														
#3 Bar Bend Test Through 180° is Satisfactory														

I/C Testing Laboratories
UET Lahore, Pakistan.

Note:

- 1- You can See your reports On Internet in the following web site
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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
(Infra Dev Works at Sector-R, Pkg1, DHA Ph-IX (M/s DHA-C Coy)

Reference # CED/TFL **32841** (Dr. Qasim Khan)
Reference of the request letter # 408/241/E/Lab/481/3999

Dated: 14-03-2019
Dated: 14-03-2019

Tension Test Report (Page -1/2)

Date of Test 15-03-2019
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	0.378	3	0.376	0.11	0.111	3400	4750	68200	67450	95200	94300	1.30	16.3	Saeed Kasur
2	0.372	3	0.373	0.11	0.109	3500	5300	70200	70560	106200	106900	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.

Note:

- 1- You can See your reports On Internet in the following web site
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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
(Infra Dev Works at Sector-R, Pkg1, DHA Ph-IX (M/s DHA-C Coy)

Reference # CED/TFL **32841** (Dr. Qasim Khan)
Reference of the request letter # 408/241/E/Lab/479/3995

Dated: 14-03-2019
Dated: 14-03-2019

Tension Test Report (Page -2/2)

Date of Test 15-03-2019
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	0.368	3	0.371	0.11	0.108	3100	5050	62200	63220	101200	103000	1.10	13.8	Saeed Kasur
2	0.368	3	0.371	0.11	0.108	3200	5100	64200	65240	102200	104000	1.00	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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.

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,
 General Manager (Projects)
 A.S Enterprises
 (US Apparel & Textile Mills Ltd)(AA Associates)(Afco)

Reference # CED/TFL **32843** (Dr. Qasim Khan)
 Reference of the request letter # US/ASE/12

Dated: 14-03-2019
 Dated: 14-03-2019

Tension Test Report (Page -1/1)

Date of Test 15-03-2019
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight	Diameter/ Size (mm)		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	0.411	10	9.96	0.11	0.121	3700	5100	74200	67550	102200	93100	0.80	10.0	
2	0.404	10	9.88	0.11	0.119	3700	4800	74200	68650	96200	89100	0.90	11.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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 Laboratories
UET Lahore, Pakistan.

Note:

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