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-IIIA)
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 CGGC)
Reference # CED/TFL **33327** (Dr. M Rizwan Riaz) Dated: 30-05-2019
Reference of the request letter # RSA/M-4/3A/2019/363 Dated: 28-05-2019

Tension Test Report (Page – 1/3)

Date of Test 21-06-2019
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	1.86x0.275	0.51	1800	2800	3519.06	5474.10	0.80	40.00	S-1
2		2.40x0.275	0.66	2600	3300	3939.39	5000.00	0.80	40.00	
3	W-Section	1.86x0.275	0.51	1800	3100	3519.06	6060.61	0.90	45.00	S-2
4		2.36x0.275	0.65	2300	3300	3543.91	5084.75	0.80	40.00	
5	W-Section	2.00x0.275	0.55	2000	3100	3636.36	5636.36	0.80	40.00	S-3
6		2.01x0.275	0.55	2000	3000	3618.27	5427.41	0.90	45.00	
7	W-Section	2.10x0.275	0.58	2100	3000	3636.36	5194.81	0.85	42.50	S-4
8		1.96x0.275	0.54	1900	2900	3525.05	5380.33	0.80	40.00	
Only Eight Samples for Tensile and Eight Samples for Bend Test										

Bend Test
Strip Taken from W-Section Bend Test Through 180º is Satisfactory
Strip Taken from W-Section Bend Test Through 180º is Satisfactory
Strip Taken from W-Section Bend Test Through 180º is Satisfactory
Strip Taken from W-Section Bend Test Through 180º is Satisfactory
Strip Taken from W-Section Bend Test Through 180º is Satisfactory
Strip Taken from W-Section Bend Test Through 180º is Satisfactory
Strip Taken from W-Section Bend Test Through 180º is Satisfactory
Strip Taken from W-Section Bend Test Through 180º 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,
Resident Engineer
RENARDET S.A ((M-4), Package-IIIA)
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 CGGC)

Reference # CED/TFL **33327** (Dr. M Rizwan Riaz) Dated: 30-05-2019
Reference of the request letter # RSA/M-4/3A/2019/363 Dated: 28-05-2019

Tension Test Report (Page – 1/2)

Date of Test 21-06-2019
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	2.36x0.275	0.65	2300	3200	3543.91	4930.66	0.80	40.00	S-5
2		2.40x0.275	0.66	2500	3300	3787.88	5000.00	0.85	42.50	
3	W-Section	2.06x0.275	0.57	2100	2800	3706.97	4942.63	0.70	35.00	S-6
4		2.19x0.275	0.60	2400	3000	3985.06	4981.32	0.75	37.50	
5	W-Section	2.10x0.275	0.58	2200	3000	3809.52	5194.81	0.75	37.50	S-7
6		2.10x0.275	0.58	2200	2950	3809.52	5108.23	0.75	37.50	
Only Six Samples for Tensile and Six Samples for Bend Test										

Bend Test
Strip Taken from W-Section Bend Test Through 180º is Satisfactory
Strip Taken from W-Section Bend Test Through 180º is Satisfactory
Strip Taken from W-Section Bend Test Through 180º is Satisfactory
Strip Taken from W-Section Bend Test Through 180º is Satisfactory
Strip Taken from W-Section Bend Test Through 180º is Satisfactory
Strip Taken from W-Section Bend Test Through 180º is Satisfactory

I/C Testing Laboratoires
UET Lahore, Pakistan.

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Test Floor Laboratory
Department of Civil Engineering
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To,
Resident Engineer
RENARDET S.A ((M-4), Package-IIIA)
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 CGGC)

Reference # CED/TFL **33327** (Dr. M Rizwan Riaz) Dated: 30-05-2019
Reference of the request letter # RSA/M-4/3A/2019/363 Dated: 28-05-2019

Tension Test Report (Page – 1/2)

Date of Test 21-06-2019
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	2.19x0.275	0.60	2400	3000	3985.06	4981.32	0.70	35.00	S-8
2		2.19x0.275	0.60	2500	3000	4151.10	4981.32	0.70	35.00	
3	W-Section	2.46x0.275	0.68	2600	3400	3843.31	5025.87	0.70	35.00	S-9
4		2.19x0.275	0.60	2300	3000	3819.01	4981.32	0.80	40.00	
5	W-Section	2.12x0.275	0.58	2300	2900	3945.11	4974.27	0.70	35.00	S-10
6		2.06x0.275	0.57	2000	2800	3530.45	4942.63	0.70	35.00	
Only Six Samples for Tensile and Six Samples for Bend Test										

Bend Test
Strip Taken from W-Section Bend Test Through 180º is Satisfactory
Strip Taken from W-Section Bend Test Through 180º is Satisfactory
Strip Taken from W-Section Bend Test Through 180º is Satisfactory
Strip Taken from W-Section Bend Test Through 180º is Satisfactory
Strip Taken from W-Section Bend Test Through 180º is Satisfactory
Strip Taken from W-Section Bend Test Through 180º 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

Ref: CED/TFL/06/33381 Dated: 14-06-19

To
Resident Engineer
Fazia Housing Scheme
Gujranwala
Infrastructure Development Works at Fazia Housing Scheme, Gujranwala

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

Reference to your letter No. FHSG/6015/5/4/DEV, dated 13.06.2019 on the subject cited above. Three 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″)	2.388	2.227	280.00	221.66	29.17	4300	5400	85.45	107.31
2	304.8 (12″)	2.357	2.220	412.00	308.34	51.83	6400	8000	91.72	114.65
3	457.2 (18″)	2.342	2.228	590.00	460.54	64.73	8500	10600	81.27	101.34

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 Ann Global (Pvt) Ltd
Lahore
(Manufacturing of PCC Poles at Sahiwal Pole Plant)

Reference # CED/TFL **33402** (Dr. M Rizwan Riaz) Dated: 19-06-2019
Reference of the request letter # ANN/UET/19/15 Dated: 28-05-2019

Tension Test Report (Page -1/1)

Date of Test 21-06-2019
Gauge length 2 inches
Description MS Wire Tensile Test

Sr. No.	Weight	Diameter/ size		Area (mm^2)		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	0.152	5	4.97	-------	19.4	900	1300	455	657	0.30	15.0	
2	0.154	5	5.00	--------	19.7	900	1200	449	599	0.30	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile test												
Bend Test												

I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:
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2. The above results pertain to sample /samples supplied to this laboratory.
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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/06/33409 Dated: 19-06-19

To
DCRE/RE-1
Zeeruk International (Pvt) Ltd
Lahore Sialkot Motorway Project

Subject: **- TEST RESULT REPORT FOR BEARING DEVICE (PAD)** (Page -1/2)

Reference to your letter no. LSMP/RE-1/2019/870, Dated: 19/06/2019 on the above mentioned subject. Two Elastromeric Bearing Rubber Pads (EBRP) (Source: Interbuna) have been received by us. The same was tested and results are given below.

Laboratory	**:**	**TEST FLOOR LAB**
Machine	**:**	**SHIMADZU**
Sample No.	**:**	**1/2**
Dimensions of EBRP	**:**	**502 x 403 x 79.73 mm**

TEST RESULTS – SHORT DURATION

Load Duration	**:**	**5+5 minutes**
Test Load	**:**	**190 TONS**
Bulging Pattern	**:**	**Uniform Buldging.**
Laminated Parallelism	**:**	**Parallel**
Cracks	**:**	**No crack was observed**

(Witness by Kamran Tahir (M.E. LSM – Zeerk), & Ghazanfar Ali (M.E LSM – FWO))

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

Ref: CED/TFL/06/33409 Dated: 19-06-19

To
DCRE/RE-1
Zeeruk International (Pvt) Ltd
Lahore Sialkot Motorway Project

Subject: **- TEST RESULT REPORT FOR BEARING DEVICE (PAD)** (Page -2/2)

Reference to your letter no. LSMP/RE-1/2019/870, Dated: 19/06/2019 on the above mentioned subject. Two Elastromeric Bearing Rubber Pads (EBRP) (Source: Interbuna) have been received by us. The same was tested and results are given below.

Laboratory	**:**	**TEST FLOOR LAB**
Machine	**:**	**SHIMADZU**
Sample No.	**:**	**2/2**
Dimensions of EBRP	**:**	**504 x 454 x 77.65 mm**

TEST RESULTS – SHORT DURATION

Load Duration	**:**	**5+5 minutes**
Test Load	**:**	**196 TONS**
Bulging Pattern	**:**	**Uniform Buldging.**
Laminated Parallelism	**:**	**Parallel**
Cracks	**:**	**No crack was observed**

(Witness by Kamran Tahir (M.E. LSM – Zeerk), & Ghazanfar Ali (M.E LSM – FWO))

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,
Director
Hussaain Bibi Memorial Caroiac & General Hospital
Construction of Hussaain Bibi Memorial Caroiac & General Hospital, Gujranwala

Reference # CED/TFL **33412** (Dr. M Rizwan Riaz) Dated: 20-06-2019
Reference of the request letter # AIC/2019/GW/03 Dated: 19-06-2019

Tension Test Report (Page -1/1)

Date of Test 21-06-2019
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	0.384	3	0.379	0.11	0.113	2800	4100	56200	54720	82200	80200	1.20	15.0	
2	0.375	3	0.375	0.11	0.110	3100	4500	62200	61980	90200	90000	1.60	20.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
#3 Bar Bend Test Through 180º 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,
PMCS Manager
MAK Associates
PAF Skyview Golf and Countary Club, Bedian Road, Lahore

Reference # CED/TFL **33413** (Dr. M Rizwan Riaz) Dated: 20-06-2019
Reference of the request letter # MAK/PAF/SV-GL/TB-008 Dated: 19-06-2019

Tension Test Report (Page -1/1)

Date of Test 21-06-2019
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	0.388	3	0.381	0.11	0.114	3300	5100	66200	63710	102200	98500	1.10	13.8	
2	0.382	3	0.378	0.11	0.112	3000	5000	60200	58950	100200	98300	0.80	10.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
#3 Bar Bend Test Through 180º 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 Defence Housing Authority.
Lahore Cantt
(Infra Dev Works at Sector-R, DHA Ph-IX - (M/s DHA-C Coy)

Reference # CED/TFL **33414** (Dr. M Rizwan Riaz) Dated: 20-06-2019
Reference of the request letter # 408/241/E/Lab/612/4580 Dated: 19-06-2019

Tension Test Report (Page -1/1)

Date of Test 21-06-2019
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	0.389	3	0.381	0.11	0.114	3100	5000	62200	59830	100200	96500	0.90	11.3	Saeed Kasur
2	0.381	3	0.378	0.11	0.112	3100	5000	62200	61010	100200	98400	1.00	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	

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

Bend Test

#3 Bar Bend Test Through 180º 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,
M/S Chishty Bros
New Garden Town, Lahore
(Construction of Prodution Hall for Golden Pearl Cosmetic Ltd. Quaid-e-Azam Industrial Estate, Kot Lakhpat, Lahore)

Reference # CED/TFL **33417** (Dr. M Rizwan Riaz) Dated: 20-06-2019
Reference of the request letter # CBA-1/111-4032 Dated: 20-06-2019

Tension Test Report (Page -1/1)

Date of Test 21-06-2019
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	0.378	3/8	0.376	0.11	0.111	4500	5800	90200	89370	116300	115200	0.90	11.3	
2	0.376	3/8	0.375	0.11	0.111	4200	5800	84200	83670	116300	115600	0.90	11.3	
3	0.377	3/8	0.376	0.11	0.111	4300	5900	86200	85470	118300	117300	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only three samples for tensile test														
Bend Test														

I/C Testing Laboratoires
UET Lahore, Pakistan.

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