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/03/32699 Dated: 25-02-19

To
M/S Transtech Engineering Company
NESPAK-CMEC
PTPL
Construction of 1263 MW Punjab Power Plant, Jhang

Subject: **TESTING OF CAST IRON DISCHARGE DITCH COVER, (AASHTO-M-306)**

Reference to yourletter No. TEC/UET/19022601, dated 25.02.2019 on the subjectcitedabove. One Cast Iron Discharge Ditch Cover as received by us has been tested. The results are tabulated as under.

Sr. No.	Sample	Result
1	Cast Iron Discharge Ditch Cover	No Cracks and permanent deformation was observed at specified load

I/C Testing Laboratoires
UET Lahore, Pakistan.

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

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To,
M/S Defence Housing Authority.
Lahore Cantt
(Construction 1-Kanal Villas at DRGCC Club House, DHA Ph-6 (M/s Linker Developers (Pvt) Ltd)

Reference # CED/TFL **32846** (Dr. M Rizwan Riaz) Dated: 15-03-2019
Reference of the request letter # 408/241/E/Lab/485/456 Dated: 14-03-2019

Tension Test Report (Page -1/1)

Date of Test 18-03-2019
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	0.402	3	0.388	0.11	0.118	3470	5230	69600	64740	104800	97600	1.20	15.0	Ittefaq Steel
2	0.367	3	0.371	0.11	0.108	3130	4530	62800	63990	90800	92700	1.40	17.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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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To,
Project Manager
Habib Rafiq (Pvt) Ltd
Widening and Strengthening of National Highway N-70 (Rakhi Gajj-Bewata Section) of East Weast Road Improvement Project Package-1 (Munir Industry)

Reference # CED/TFL **32855** (Dr. M Rizwan Riaz) Dated: 18-03-2019
Reference of the request letter # HRL/N70/1373 Dated: 18-03-2019

Tension Test Report (Page – 1/1)

Date of Test 18-03-2019
Gauge length 2 inches
Description Gabin Wire Tensile Test

Sr. No.	Diameter / size	Area	Breaking Load	Ultimate Stress	Elongation	% Elongation	Marks
	(cm)	(cm^2)	(kg)	(kg/cm^2)	(inch)		
1	0.20	0.031	170	5411.27	0.4	20	
2	0.20	0.031	110	3501.41	0.4	20	
3	0.28	0.062	130	2111.24	0.6	30	
4	0.28	0.062	320	5196.90	0.5	25	
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	
Only Four Samples for Tensile Test							

Witness by Faisal Shahzad (AME Habib Rafiq)

I/C Testing Laboratoires
UET Lahore, Pakistan.

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STRUCTURAL ENGINEERING DIVISION

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Department of Civil Engineering
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Pakistan. Ph: 92-42-99029202

To,
Project Manager
Habib Rafiq (Pvt) Ltd
Widening and Strengthening of National Highway N-70 (Rakhi Gajj-Bewata Section) of East Weast Road Improvement Project Package-1 (Nizami Industry)

Reference # CED/TFL **32856** (Dr. M Rizwan Riaz) Dated: 18-03-2019
Reference of the request letter # HRL/N70/1374 Dated: 18-03-2019

Tension Test Report (Page – 1/1)

Date of Test 18-03-2019
Gauge length 2 inches
Description Gabin Wire Tensile Test

Sr. No.	Diameter / size	Area	Breaking Load	Ultimate Stress	Elongation	% Elongation	Marks
	(cm)	(cm^2)	(kg)	(kg/cm^2)	(inch)		
1	0.23	0.042	170	4091.70	0.35	17.5	
2	0.23	0.042	210	5054.45	0.40	20	
3	0.25	0.049	210	4278.08	0.30	15	
4	0.25	0.049	250	5092.96	0.30	15	
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	
Only Four Samples for Tensile Test							

Witness by Faisal Shahzad (AME Habib Rafiq)

I/C Testing Laboratoires
UET Lahore, Pakistan.

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To,
Project Manager
Liberty Builders
Construction of Zee Avenue Project, 17-A, Cooper Road, Lahore

Reference # CED/TFL **32860** (Dr. M Rizwan Riaz) Dated: 18-03-2019
Reference of the request letter # CONC-20190318 Dated: 18-03-2019

Tension Test Report (Page -1/1)

Date of Test 18-03-2019
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	0.348	3	0.361	0.11	0.102	3130	4100	62800	67440	82200	88400	1.00	12.5	Model Steel
2	0.346	3	0.360	0.11	0.102	3560	4740	71400	77080	95000	102700	0.80	10.0	
3	4.227	10	1.258	1.27	1.243	39400	51600	68400	69890	89600	91600	1.60	20.0	Kamran Steel
4	3.963	10	1.218	1.27	1.165	41200	53600	71500	77960	93100	101500	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	

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

Bend Test

#3 Bar Bend Test Through 180º is Satisfactory

#10 Bar Bend Test Through 180º is Satisfactory

I/C Testing Laboratoires
UET Lahore, Pakistan.

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