



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/05/5046, 5065

Dated: 07-05-2024

Dated of Test: 11-05-2024

To

ARE PCP Package-V
MM Pakistan (Pvt) Ltd.
Comprehensive Sewerage System in Khanewal City Under Punjab Cities
Program (PCP)

Subject: **TESTING OF R.C.C. PIPE [ASTM-C76 - 08a]** (Page -1/2)

Reference to your letter No. PCP/KWL-124/2024, dated 07.05.2024 on the subject cited above. Three R.C.C. Pipes have been tested at their site. 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
	(inch)	(foot)	(foot)	(inch)	(inch)	(inch)	(kg)	(kg)	Pound/Linear foot/foot	Pound/Linear foot/foot
1	48	7.92	7.50	58.00	48.00	5.00	26422	44661	1942	3282
2	18	8.02	7.50	22.75	17.75	2.50	14422	21142	2866	4201
3	24	7.71	7.50	26.75	21.25	2.75	13462	17782	2235	2952

Witness by Saeed Ahmed (ARE MMP), Shahbaz Ali (Sub Engineer, MC Khanewal), Zain Ali and Nisar Salahudin (DPO-ID PMD FC)

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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Ref: CED/TFL/05/5046, 5065

Dated: 07-05-2024

Dated of Test: 11-05-2024

To

ARE PCP Package-V
MM Pakistan (Pvt) Ltd.
Comprehensive Sewerage System in Khanewal City Under Punjab Cities
Program (PCP)

Subject: **TESTING OF R.C.C. PIPE [ASTM-C76 - 08a]** (Page -2/2)

Reference to your letter No. PCP/KWL-125/2024, dated 10.05.2024 on the subject cited above. One R.C.C. Pipe has been tested at their site. 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
	(inch)	(foot)	(foot)	(inch)	(inch)	(inch)	(kg)	(kg)	Pound/Linear foot/foot	Pound/Linear foot/foot
1	48	8.00	7.50	58.00	48.00	5.00	15862	32181	1166	2365

Witness by Saeed Ahmed (ARE MMP), Shahbaz Ali (Sub Engineer, MC Khanewal), Zain Ali and Nisar Salahudin (DPO-ID PMD FC)

I/C Testing Laboratoires
UET Lahore, Pakistan.

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Ref: CED/TFL/05/5055

Dated: 09-05-2024

Dated of Test: 13-05-2024

To

Assistant Director (QCD)
WASA, LDA, Lahore
(M/s Mian Ahtesham Pipe Factory.)

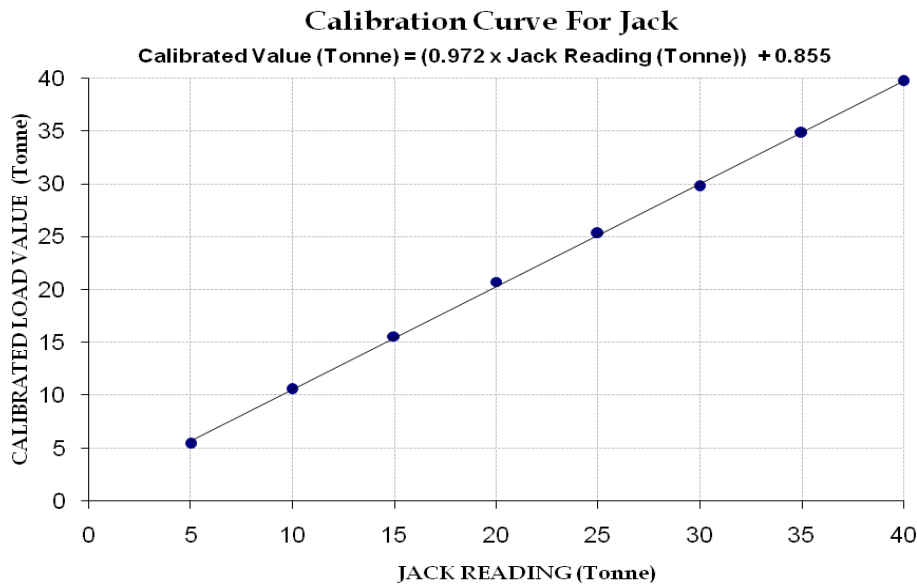
Subject: - CALIBRATION OF HYDRAULIC JACK. (MARK: TFL/05/5055)

Reference to your Letter No. QCD/703-04, Dated: 06/05/2024 on the subject cited above. One Hydraulic Jack with Gauge as received by us has been calibrated. The results are tabulated as under:

Total Range : Zero - 50 (Tonne)
Calibrated Range : Zero - 40 (Tonne)

Hydraulic Jack Reading (Tonne)	5	10	15	20	25	30	35	40	
Calibrated Load	(kg)	5400	10550	15600	20750	25300	29750	34800	39700
	(Tonne)	5.40	10.55	15.60	20.75	25.30	29.75	34.80	39.70

1 Tonne = 1000 kg



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STRUCTURAL ENGINEERING DIVISION
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To,

Material Engineer
 NESPAK – EPCM Consultants
 Punjab Intermediate Cities Improvement Investment Program (PICIIP)
 Consultancy Services for Engineering, Procurement and Construction Management
 Trunk Main Sewer, Effluent Pumping Station and Allied Works (LOT-4)

Reference # CED/TFL **5061** (Dr. M Rizwan Riaz)

Dated: 10-05-2024

Reference of the request letter # 3976/11/MS/SWL/Lot-4/01/1253

Dated: 10-05-2024

Tension Test Report (Page -1/2)

Date of Test 13-05-2024

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	0.392	3	0.383	0.11	0.115	3690	5220	74000	70500	104600	99800	1.00	12.5	AF Steel
2	0.382	3	0.378	0.11	0.112	3590	5300	72000	70410	106200	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.

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To,

Material Engineer
 NESPAK – EPCM Consultants
 Punjab Intermediate Cities Improvement Investment Program (PICIIP)
 Consultancy Services for Engineering, Procurement and Construction Management
 Trunk Main Sewer, Effluent Pumping Station and Allied Works (LOT-4)

Reference # CED/TFL **5061** (Dr. M Rizwan Riaz)

Dated: 10-05-2024

Reference of the request letter # 3976/11/MS/SWL/Lot-4/01/1246

Dated: 09-05-2024

Tension Test Report (Page -2/2)

Date of Test 13-05-2024

Gauge length 8 inches

Description Deformed Steel Bar Tensile and Bend Test

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	0.164	2	0.248	-----	0.048	1370	2090	-----	62590	-----	95500	1.20	15.0	AF Steel
2	0.161	2	0.246	-----	0.047	1370	1940	-----	63620	-----	90100	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
#2 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,

Construction Manager
 Thaheem Construction Company
 Washing Extension Building Project at Master Textile Mills Facility.

Reference # CED/TFL **5062** (Dr. M Rizwan Riaz)
 Reference of the request letter # Nil

Dated: 10-05-2024
 Dated: 21-03-2024

Tension Test Report (Page -1/1)

Date of Test 13-05-2024
 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	0.373	3/8	0.374	0.11	0.110	3590	4760	72000	72110	95400	95700	1.10	13.8	FF Steel
2	0.374	3/8	0.374	0.11	0.110	3640	4790	73000	72930	96000	96000	1.10	13.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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.

Note:

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STRUCTURAL ENGINEERING DIVISION
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To,

Assistant Manager
Civil Works Sub Divi: (N)
LESCO, SMR, Lahore
(Construction of Office Building of Construction Sub Division No. 2 Sheikhpura.)

Reference # CED/TFL **5063** (Dr. M Rizwan Riaz)
Reference of the request letter # A.M (N) C-W 02

Dated: 10-05-2024
Dated: 01-01-2024

Tension Test Report (Page -1/2)

Date of Test 13-05-2024
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	0.377	3/8	0.376	0.11	0.111	3310	4940	66400	65860	99000	98300	1.00	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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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To,
 ADH (QA) Centre Lahore
 GHQ, AG's Br (Housing Dte)
 Askari – XI Lahore

Reference # CED/TFL **5066** (Dr. M Rizwan Riaz)
 Reference of the request letter # 24501/HD/QA

Dated: 13-05-2024
 Dated: 11-05-2024

Tension Test Report (Page -1/1)

Date of Test 13-05-2024
 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	0.361	3	0.368	0.11	0.106	4050	5120	81200	84040	102600	106300	0.80	10.0	AK Supreme
2	0.364	3	0.369	0.11	0.107	4150	5200	83200	85470	104200	107100	0.90	11.3	
3	0.376	3	0.375	0.11	0.111	3360	4740	67400	66950	95000	94500	1.30	16.3	S/J Steel
4	0.374	3	0.374	0.11	0.110	3360	4790	67400	67320	96000	96000	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 Laboratoires
UET Lahore, Pakistan.

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To,
M/s Prime Steel Re-Rolling Mills
Sheikhupura

Reference # CED/TFL **5067** (Dr. M Rizwan Riaz)
Reference of the request letter # Nil

Dated: 13-05-2024
Dated: 13-05-2024

Tension Test Report (Page -1/2)

Date of Test 13-05-2024
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	0.390	3	0.382	0.11	0.115	3640	5150	73000	69970	103200	99000	0.90	11.3	Prime Steel Heat No. 2	
-	-	-	-	-	-	-	-	-	-	-	-	-	-		
-	-	-	-	-	-	-	-	-	-	-	-	-	-		
-	-	-	-	-	-	-	-	-	-	-	-	-	-		
-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Note: only one sample 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 Prime Steel Re-Rolling Mills
 Sheikhpura

Reference # CED/TFL **5067** (Dr. M Rizwan Riaz)
 Reference of the request letter # Nil

Dated: 13-05-2024
 Dated: 13-05-2024

Tension Test Report (Page -2/2)

Date of Test 13-05-2024
 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	0.394	3	0.384	0.11	0.116	3410	5450	68400	64830	109200	103700	1.00	12.5	Prime Steel Heat No.1	
-	-	-	-	-	-	-	-	-	-	-	-	-	-		
-	-	-	-	-	-	-	-	-	-	-	-	-	-		
-	-	-	-	-	-	-	-	-	-	-	-	-	-		
-	-	-	-	-	-	-	-	-	-	-	-	-	-		
-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Note: only one sample for tensile and one sample for bend test															
Bend Test															
#3 Bar Bend Test Through 180° is Satisfactory															

I/C Testing Laboratoires
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To,

Unit Head PMO
ABL – UML P-199 & 200
Allied Bank
Construction of ABL Upper Mall Lahore Plot No. 199, 200.

Reference # CED/TFL **5068** (Dr. M Rizwan Riaz)
Reference of the request letter # ABL-UML-AMC-QAQC-80

Dated: 13-05-2024
Dated: 13-05-2024

Tension Test Report (Page -1/1)

Date of Test 13-05-2024
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	0.375	3	0.375	0.11	0.110	3840	5010	77000	76720	100400	100100	1.20	15.0	FF Steel
2	0.373	3	0.374	0.11	0.110	3720	5010	74600	74770	100400	100700	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														

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