

Ref: CED/TFL/05/6976

Dated: 16-05-2025

Dated of Test: 03-06-2025 (Dr. Asif Hameed)

To

**Mr. Awais Akram**  
**Resident Engineer**  
**NESPAK, Lahore.**  
**Sustainable Development of Gulberg Scheme Block B-III, Lahore.**

Subject: **TESTING OF R.C.C. PIPE (ASTM-C76)**

Reference to your letter no: 3772/103/LDA-GulbergB-III/AA/06 on dated 10.04.2025 on the subject cited above. One R.C.C. Pipe as received by us has 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	D-Load (0.01 inch)	D-Load Ultimate
	(inch)	(inch)	(inch)	(inch)	(inch)	(inch)	(kg)	(kg)	Lbs/Linear foot/foot	Lbs/Linear foot/foot
1	12	92.5	87.4	15.9	12.00	1.95	9500	13200	2876	3996

Test Performed and Verified by:

## DUPLICATE

Ref: CED/TFL/06/7012  
Dated of Test: 03-06-2025

Dated: 23-05-2025

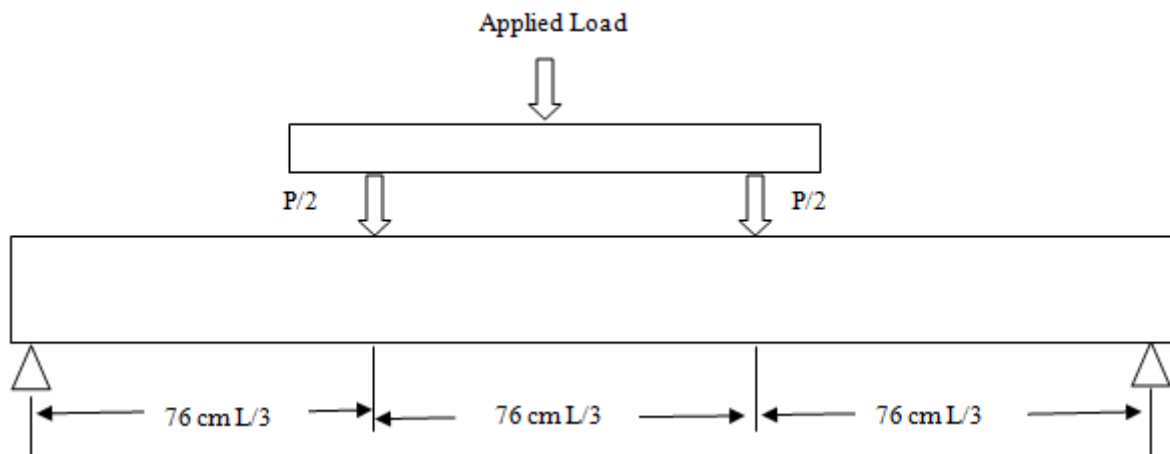
To

**General Manager (Planning & Projects)**  
**Lahore Waste Management Company**  
**Construction of Waste Enclosure (2.5 kanal) at MangaNear THQ Manga, District Lahore.**

Subject: **TESTING OF RCC SLAB** (Page – 1/8)

Reference to your letter No. LWMC-P&P-76, dated 08.05.2025 on the subject cited above. One Precast Slab (8' x 1' x 2") as received by us has been tested in Flexure (Four point loading). The results are tabulated as under.

<b>Total Length</b>	:	<b>243.84 cm</b>
<b>Effective Length</b>	:	<b>182.88 cm</b>
<b>Width</b>	:	<b>29.00 cm</b>
<b>Thickness</b>	:	<b>4.40 cm</b>
<b>Ultimate Load</b>	:	<b>1.40 kN</b>
<b>Ultimate Moment</b>	:	<b>0.43 kN-m</b>



Test Performed and Verified by:

## DUPLICATE

Ref: CED/TFL/06/7012  
Dated of Test: 03-06-2025

Dated: 23-05-2025

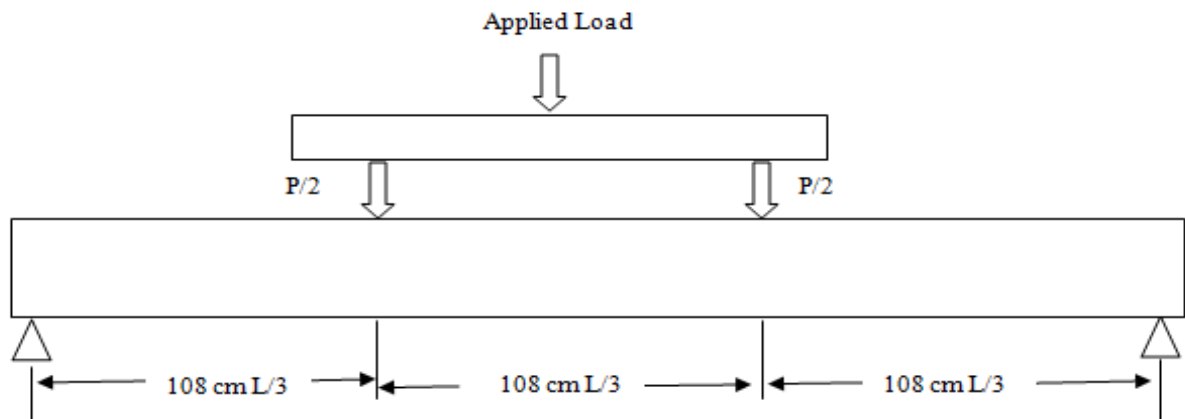
To

**General Manager (Planning & Projects)**  
**Lahore Waste Management Company**  
**Construction of Waste Enclosure (2.5 kanal) at Manga Near THQ Manga, District Lahore.**

Subject: **TESTING OF RCC SLAB** (Page – 2/8)

Reference to your letter No. LWMC-P&P-76, dated 08.05.2025 on the subject cited above. One Precast Girder (9' x 7" x 2") as received by us has been tested in Flexure (Four point loading). The results are tabulated as under.

<b>Total Length</b>	:	<b>308.40 cm</b>
<b>Effective Length</b>	:	<b>274.32 cm</b>
<b>Depth</b>	:	<b>16.50 cm</b>
<b>Flange Width</b>	:	<b>15.50 cm</b>
<b>Top Flange Thickness</b>	:	<b>4.70 cm</b>
<b>Bottom Flange Thickness</b>	:	<b>5.30 cm</b>
<b>Web Thickness</b>	:	<b>5.70 cm</b>
<b>Ultimate Load</b>	:	<b>2.5 kN</b>
<b>Ultimate Moment</b>	:	<b>1.143 kN/m</b>



Test Performed and Verified by:

## DUPLICATE

Ref: CED/TFL/06/7012  
Dated of Test: 03-06-2025

Dated: 23-05-2025

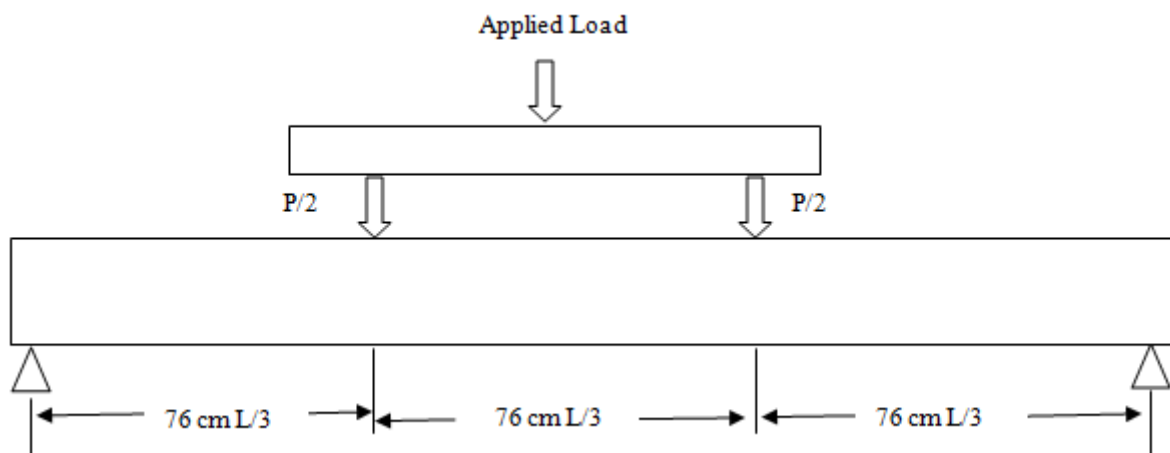
To

**General Manager (Planning & Projects)  
Lahore Waste Management Company  
Construction of Waste Enclosure (2.5 kanal) at Raiwind Near Raiwind Bazar,  
District Lahore.**

Subject: **TESTING OF RCC SLAB** (Page – 3/8)

Reference to your letter No. LWMC-P&P-73, dated 08.05.2025 on the subject cited above. One Precast Slab (8' x 1' x 2") as received by us has been tested in Flexure (Four point loading). The results are tabulated as under.

<b>Total Length</b>	:	<b>243.84 cm</b>
<b>Effective Length</b>	:	<b>182.88 cm</b>
<b>Width</b>	:	<b>29.00 cm</b>
<b>Thickness</b>	:	<b>4.40 cm</b>
<b>Ultimate Load</b>	:	<b>1.60 kN</b>
<b>Ultimate Moment</b>	:	<b>0.49 kN-m</b>



Test Performed and Verified by:

## DUPLICATE

Ref: CED/TFL/06/7012  
Dated of Test: 03-06-2025

Dated: 23-05-2025

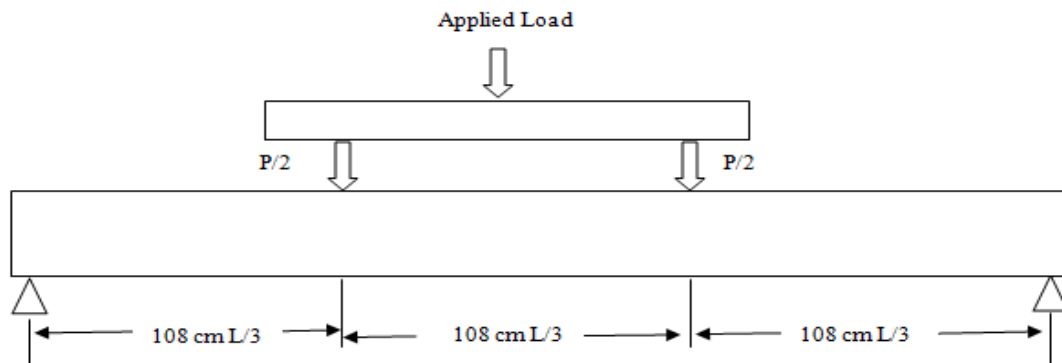
To

**General Manager (Planning & Projects)  
Lahore Waste Management Company  
Construction of Waste Enclosure (2.5 kanal) at Raiwind Near Raiwind Bazar,  
District Lahore.**

Subject: **TESTING OF RCC SLAB** (Page – 4/8)

Reference to your letter No. LWMC-P&P-73, dated 08.05.2025 on the subject cited above. One Precast Girder (9' x 7" x 2") as received by us has been tested in Flexure (Four point loading). The results are tabulated as under.

<b>Total Length</b>	:	<b>308.40 cm</b>
<b>Effective Length</b>	:	<b>274.32 cm</b>
<b>Depth</b>	:	<b>16.50 cm</b>
<b>Flange Width</b>	:	<b>15.50 cm</b>
<b>Top Flange Thickness</b>	:	<b>4.80 cm</b>
<b>Bottom Flange Thickness</b>	:	<b>5.20 cm</b>
<b>Web Thickness</b>	:	<b>5.70 cm</b>
<b>Ultimate Load</b>	:	<b>3.5 kN</b>
<b>Ultimate Moment</b>	:	<b>1.160 kN/m</b>



Test Performed and Verified by:

## DUPLICATE

Ref: CED/TFL/06/7012  
Dated of Test: 03-06-2025

Dated: 23-05-2025

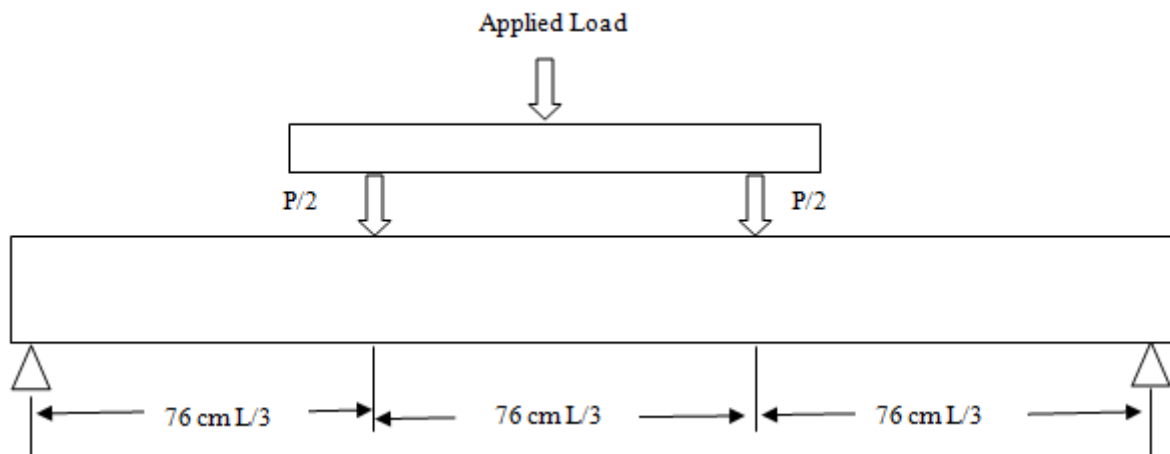
To

**General Manager (Planning & Projects)  
Lahore Waste Management Company  
Construction of Waste Enclosure (2.5 kanal) at Rohi Nala Near Gajjumatta,  
District Lahore.**

Subject: **TESTING OF RCC SLAB** (Page – 5/8)

Reference to your letter No. LWMC-P&P-75, dated 08.05.2025 on the subject cited above. One Precast Slab (8' x 1' x 2") as received by us has been tested in Flexure (Four point loading). The results are tabulated as under.

<b>Total Length</b>	:	<b>243.84 cm</b>
<b>Effective Length</b>	:	<b>182.88 cm</b>
<b>Width</b>	:	<b>29.00 cm</b>
<b>Thickness</b>	:	<b>4.40 cm</b>
<b>Ultimate Load</b>	:	<b>1.35 kN</b>
<b>Ultimate Moment</b>	:	<b>0.41 kN-m</b>



Test Performed and Verified by:

## DUPLICATE

Ref: CED/TFL/06/7012  
Dated of Test: 03-06-2025

Dated: 23-05-2025

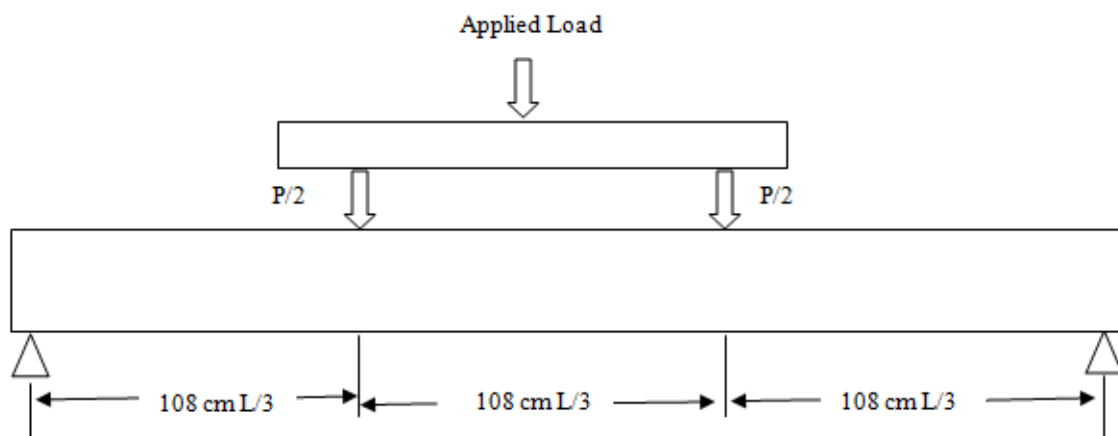
To

**General Manager (Planning & Projects)**  
**Lahore Waste Management Company**  
**Construction of Waste Enclosure (2.5 kanal) at Rohi Nala Near Gajjumatta,**  
**District Lahore.**

Subject: **TESTING OF RCC SLAB** (Page – 6/8)

Reference to your letter No. LWMC-P&P-75, dated 08.05.2025 on the subject cited above. One Precast Girder (9' x 7" x 2") as received by us has been tested in Flexure (Four point loading). The results are tabulated as under.

<b>Total Length</b>	:	<b>308.40 cm</b>
<b>Effective Length</b>	:	<b>274.32 cm</b>
<b>Depth</b>	:	<b>16.50 cm</b>
<b>Flange Width</b>	:	<b>15.50 cm</b>
<b>Top Flange Thickness</b>	:	<b>4.80 cm</b>
<b>Bottom Flange Thickness</b>	:	<b>5.40 cm</b>
<b>Web Thickness</b>	:	<b>5.60 cm</b>
<b>Ultimate Load</b>	:	<b>3.4 kN</b>
<b>Ultimate Moment</b>	:	<b>1.160 kN/m</b>



Test Performed and Verified by:

## DUPLICATE

Ref: CED/TFL/06/7012  
Dated of Test: 03-06-2025

Dated: 23-05-2025

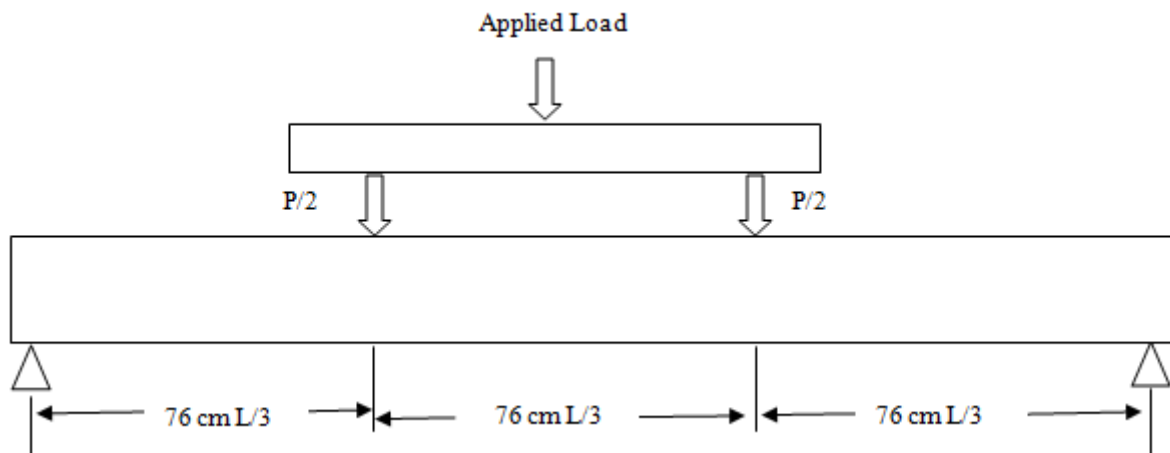
To

**General Manager (Planning & Projects)  
Lahore Waste Management Company  
Construction of Waste Enclosure (2.5 kanal) at Shahzada Village Near Kahna,  
District Lahore.**

Subject: **TESTING OF RCC SLAB** (Page – 7/8)

Reference to your letter No. LWMC-P&P-74, dated 08.05.2025 on the subject cited above. One Precast Slab (8' x 1' x 2") as received by us has been tested in Flexure (Four point loading). The results are tabulated as under.

<b>Total Length</b>	:	<b>243.84 cm</b>
<b>Effective Length</b>	:	<b>182.88 cm</b>
<b>Width</b>	:	<b>29.00 cm</b>
<b>Thickness</b>	:	<b>4.40 cm</b>
<b>Ultimate Load</b>	:	<b>1.32 kN</b>
<b>Ultimate Moment</b>	:	<b>0.40 kN-m</b>



Test Performed and Verified by:



## DUPLICATE

Ref: CED/TFL/06/7012  
Dated of Test: 03-06-2025

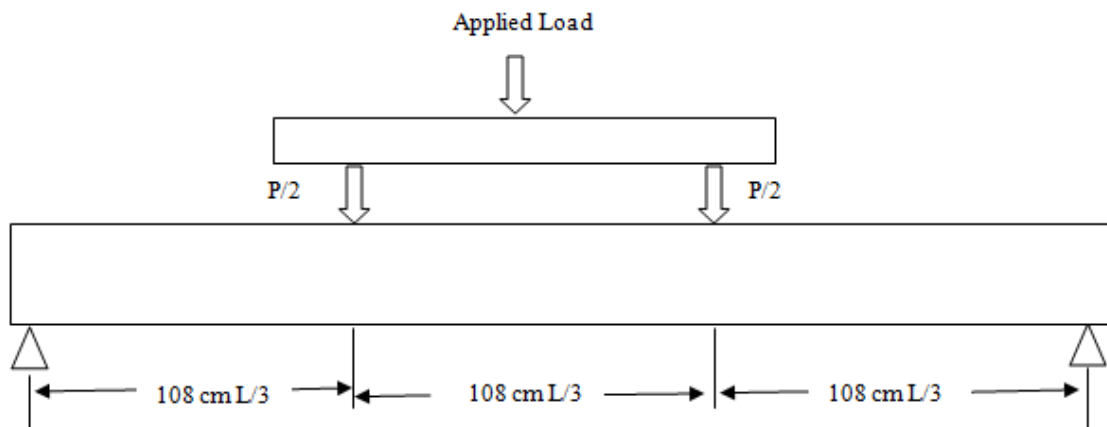
Dated: 23-05-2025

To

**General Manager (Planning & Projects)**  
**Lahore Waste Management Company**  
**Construction of Waste Enclosure (2.5 kanal) at Shahzada Village Near Kahna,**  
**District Lahore.**  
Subject: **TESTING OF RCC SLAB** (Page – 8/8)

Reference to your letter No. LWMC-P&P-74, dated 08.05.2025 on the subject cited above. One Precast Girder (9' x 7" x 2") as received by us has been tested in Flexure (Four point loading). The results are tabulated as under.

<b>Total Length</b>	:	<b>308.40 cm</b>
<b>Effective Length</b>	:	<b>274.32 cm</b>
<b>Depth</b>	:	<b>16.60 cm</b>
<b>Flange Width</b>	:	<b>15.40 cm</b>
<b>Top Flange Thickness</b>	:	<b>4.60 cm</b>
<b>Bottom Flange Thickness</b>	:	<b>5.30 cm</b>
<b>Web Thickness</b>	:	<b>5.80 cm</b>
<b>Ultimate Load</b>	:	<b>4.2 kN</b>
<b>Ultimate Moment</b>	:	<b>1.92 kN/m</b>



Test Performed and Verified by:

Ref: CED/TFL/05/7028

Dated: 27-05-2025

Dated of Test: 03-06-2025 (Dr. Asif Hameed)

To

**Engr. Sajjad Hashmi**  
**GM QA/QC**  
**Vision Developers Pvt. Ltd.**  
**Park View City Lahore.**

**Subject: TESTING OF R.C.C. PIPE (Three Edge Bearing Test)**

Reference to your letter no: Nil on dated 27.05.2025 on the subject cited above. Three R.C.C. Pipes as received by us has 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	D-Load (0.01 inch)	D-Load Ultimate
	(inch)	(inch)	(inch)	(inch)	(inch)	(inch)	(kg)	(kg)	Lbs/Linear foot/foot	Lbs/Linear foot/foot
1	9	92.9	87.0	12.6	8.80	1.90	11500	19000	4769	7879
2	9	93.1	87.8	12.4	9.06	1.67	12500	16000	4989	6385
3	15	92.4	87.0	19.4	14.64	2.38	7700	15500	1919	3863

Test Performed and Verified by:

Ref: CED/TFL/05/7030

Dated: 27-05-2025

Dated of Test: 03-06-2025 (Dr. Asif Hameed)

To

**Mr. Sohaib Awais (Resident Engineer)**  
**Nespak (Pvt.) Ltd.**  
**Infrastructure Development at Chahar Bagh Phase-II.**

Subject: **TESTING OF R.C.C. PIPE (ASTM C-76)**

Reference to your letter no: 4841/13/SA/05/40 on dated 24.05.2025 on the subject cited above. Two R.C.C. Pipes as received by us has 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	D-Load (0.01 inch)	D-Load Ultimate
	(inch)	(inch)	(inch)	(inch)	(inch)	(inch)	(kg)	(kg)	Lbs/Linear foot/foot	Lbs/Linear foot/foot
1	9	94.3	87.9	11.1	9.03	1.03	7500	9700	2999	3878
2	12	93.3	87.0	15.95	11.92	2.02	12500	16500	3828	5052

Test Performed and Verified by:

To,  
 Assistant Executive Engineer (Central Civil Division No.1)  
 Government of Pakistan,  
 Pakistan Public Works Department  
 Construction of Hajj Complex, Lahore (Sh: Training Auditorium)

Reference # CED/TFL      7052 (Dr. Rizwan Azam)  
 Reference of the request letter #      AEE-II/CCD-I/LHR/236

Dated: 02-06-2025  
 Dated: 21-06-2024

**Tension Test Report** (Page-1/1)

Date of Test      03-06-2025  
 Gauge Length      8 inches  
 Description      Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Actual Weight Per Unit Length (lb/ft)	Nominal Size (#)	Actual Diameter (inch)	Area (in <sup>2</sup> )		Yield Load (kg)	Breaking Load (kg)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
				Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.370	3	0.372	0.110	0.109	3100	4900	62113	62912	98178	99441	1.3	16.3	3"/8
2	0.372	3	0.373	0.110	0.109	3300	5000	66120	66552	100182	100836	1.1	13.8	3"/8
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Note: Only 2 Samples for Tensile and 1 Samples for Bend test														

Bend Test														
# 3 Bar Bend Test Through 180 Degree is Satisfactory														

Test Performed and Verified by:

Ref: CED/TFL/06/7053

Dated: 02-06-2025

Dated: 03-06-2025 (**Dr. M. Kashif**)

To

**M/S CGGC Dasu Hydropower Project Management in Pakistan Dasu Hydropower Project**

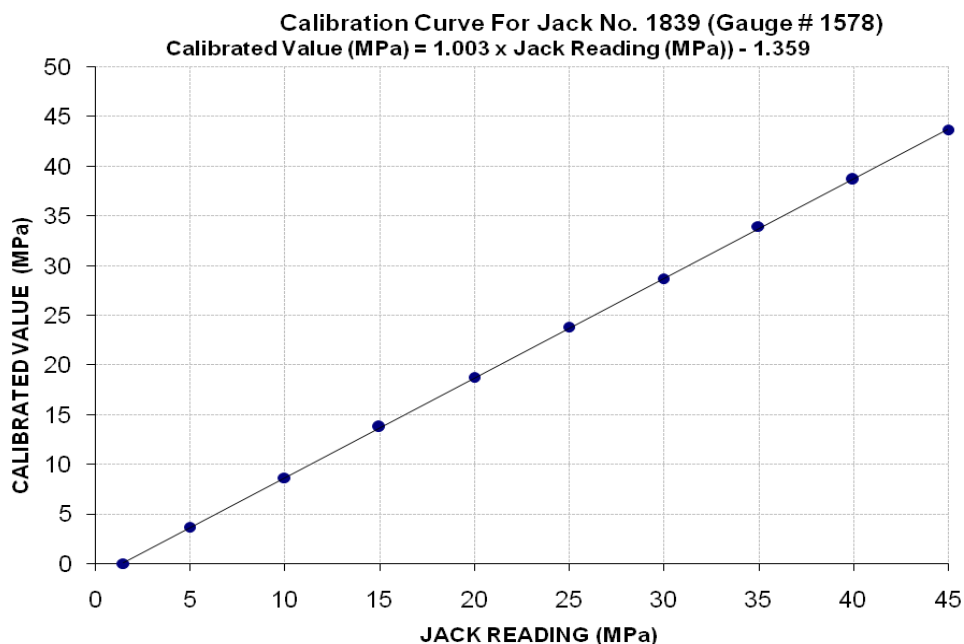
**Subject: - CALIBRATION OF HYDRAULIC JACK (MARK: TFL/06/7053) (Page -1/6)**

Reference to your Letter No. Nil, dated: 24/05/2025 on the subject cited above. One Hydraulic Jack (Jack No. 1839, Gauge No. 1578) as received by us has been calibrated. The results are tabulated as under:

**Total Range : Zero - 60 (MPa)**  
**Calibrated Range : Zero - 45 (MPa)**

Hydraulic Jack Reading (MPa)	1.5	5	10	15	20	25	30	35	40	45
Calibrated Load (kg)	0	11200	26400	41800	57000	72400	87200	103200	117600	132800
Calibrated Pressure (Mpa)	0	3.69	8.69	13.76	18.76	23.83	28.70	33.96	38.70	43.70

The Ram Area of Jack = 298 cm<sup>2</sup>



Test Performed and Verified by:

Ref: CED/TFL/06/7053

Dated: 02-06-2025

Dated: 03-06-2025 (**Dr. M. Kashif**)

To

**M/S CGGC Dasu Hydropower Project Management in Pakistan Dasu Hydropower Project**

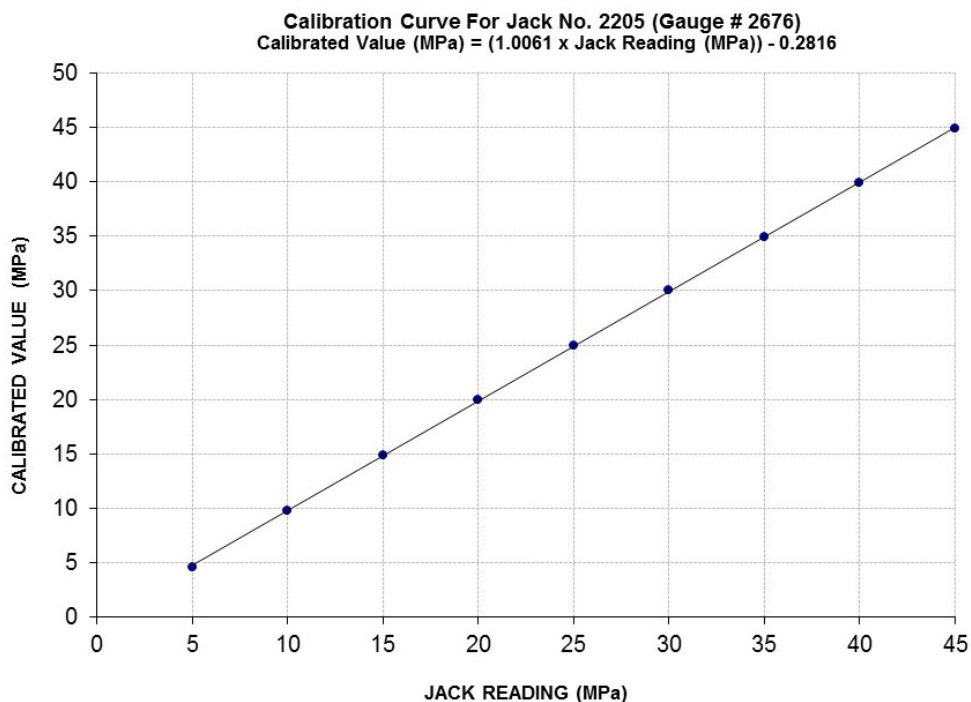
**Subject: - CALIBRATION OF HYDRAULIC JACK (MARK: TFL/06/7053) (Page -2/6)**

Reference to your Letter No. Nil, dated: 24/05/2025 on the subject cited above. One Hydraulic Jack (Jack No. 2205, Gauge No. 2676) as received by us has been calibrated. The results are tabulated as under:

**Total Range : Zero - 60 (MPa)**  
**Calibrated Range : Zero - 45 (MPa)**

Hydraulic Jack Reading (MPa)	5	10	15	20	25	30	35	40	45
Calibrated Load (kg)	14000	29600	45200	60600	75800	91200	106000	121400	136400
Calibrated Pressure (Mpa)	4.61	9.74	14.88	19.94	24.95	30.01	34.88	39.95	44.89

The Ram Area of Jack = 298 cm<sup>2</sup>



Test Performed and Verified by:

Ref: CED/TFL/06/7053

Dated: 02-06-2025

Dated: 03-06-2025 (Dr. M. Kashif)

To

**M/S CGGC Dasu Hydropower Project Management in Pakistan Dasu Hydropower Project**

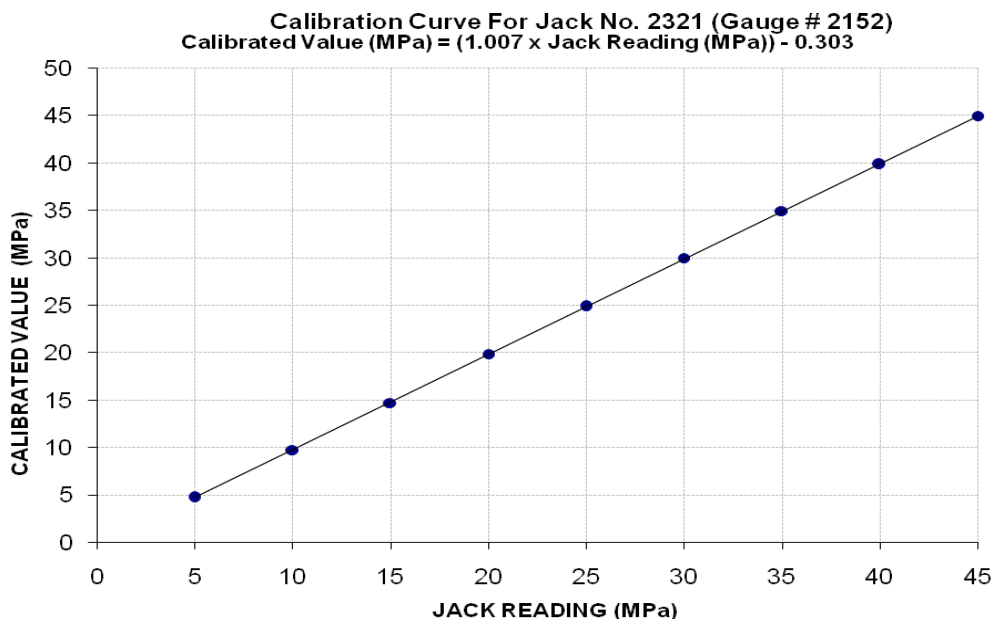
**Subject: - CALIBRATION OF HYDRAULIC JACK (MARK: TFL/06/7053) (Page -3/6)**

Reference to your Letter No. Nil, dated: 24/05/2025 on the subject cited above. One Hydraulic Jack (Jack No. 2321, Gauge No. 2152) as received by us has been calibrated. The results are tabulated as under:

**Total Range : Zero - 60 (MPa)**  
**Calibrated Range : Zero - 45 (MPa)**

Hydraulic Jack Reading (MPa)	5	10	15	20	25	30	35	40	45
Calibrated Load (kg)	14400	29600	44800	60400	75600	91200	106200	121200	136800
Calibrated Pressure (Mpa)	4.74	9.74	14.74	19.88	24.88	30.01	34.95	39.89	45.02

The Ram Area of Jack = 298 cm<sup>2</sup>



Test Performed and Verified by:

Ref: CED/TFL/06/7053

Dated: 02-06-2025

Dated: 03-06-2025 (Dr. M. Kashif)

To

**M/S CGGC Dasu Hydropower Project Management in Pakistan Dasu Hydropower Project**

**Subject: - CALIBRATION OF HYDRAULIC JACK (MARK: TFL/06/7053) (Page -4/6)**

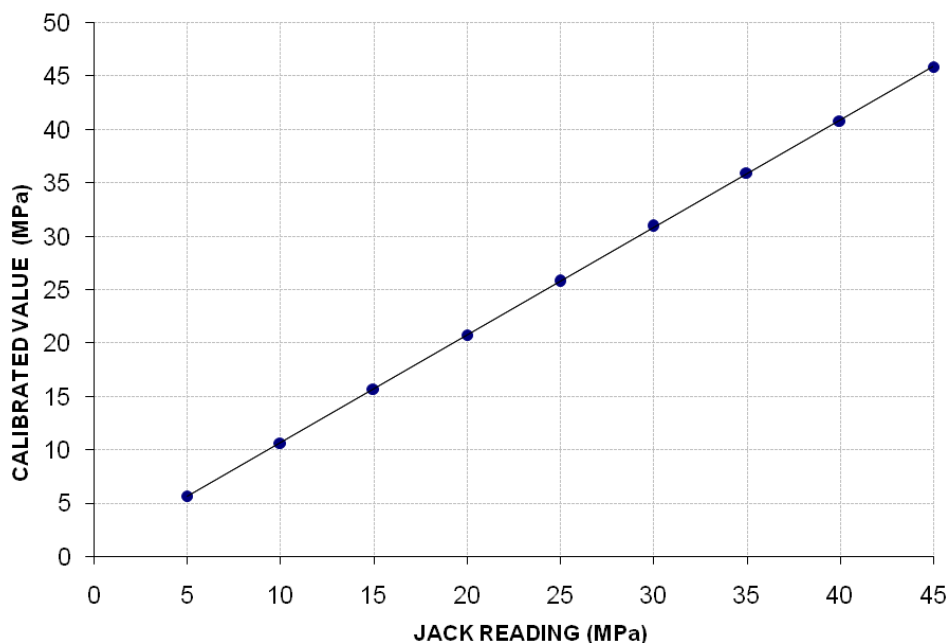
Reference to your Letter No. Nil, dated: 24/05/2025 on the subject cited above. One Hydraulic Jack (Jack No. 1801, Gauge No. 1575) as received by us has been calibrated. The results are tabulated as under:

**Total Range : Zero - 60 (MPa)**  
**Calibrated Range : Zero - 45 (MPa)**

Hydraulic Jack Reading (MPa)	5	10	15	20	25	30	35	40	45
Calibrated Load (kg)	17200	32400	47800	63200	78400	94000	109200	124000	139400
Calibrated Pressure (Mpa)	5.66	10.66	15.73	20.80	25.80	30.93	35.94	40.81	45.88

The Ram Area of Jack = 298 cm<sup>2</sup>

**Calibration Curve For Jack No. 1801 (Gauge # 1575)**  
**Calibrated Value (MPa) = (1.006 x Jack Reading (MPa)) + 0.647**





Test Performed and Verified by:

Ref: CED/TFL/06/7053

Dated: 02-06-2025

Dated: 03-06-2025 (Dr. M. Kashif)

To

**M/S CGGC Dasu Hydropower Project Management in Pakistan Dasu Hydropower Project**

**Subject: - CALIBRATION OF HYDRAULIC JACK (MARK: TFL/06/7053) (Page -5/6)**

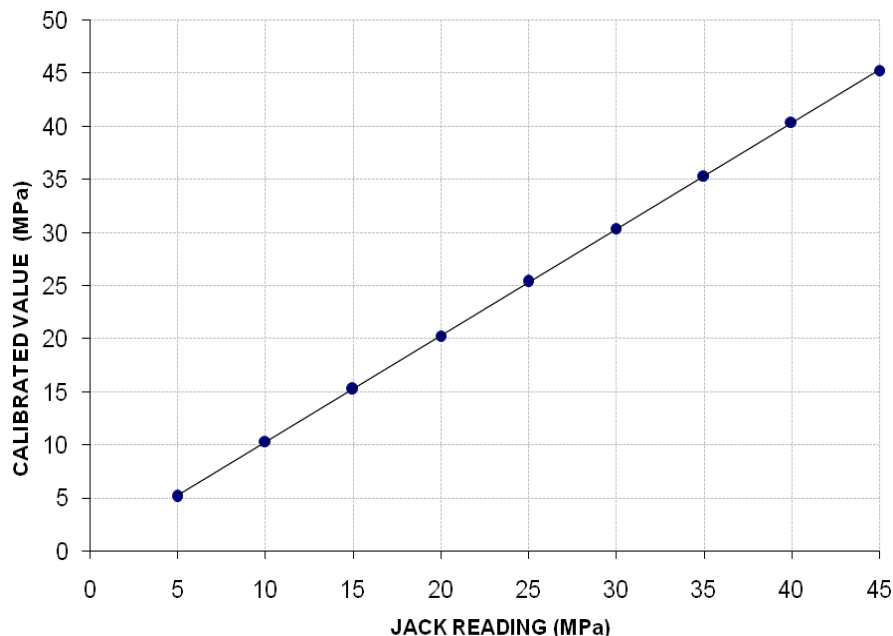
Reference to your Letter No. Nil, dated: 24/05/2025 on the subject cited above. One Hydraulic Jack (Jack No. 2318, Gauge No. 2663) as received by us has been calibrated. The results are tabulated as under:

**Total Range : Zero - 60 (MPa)**  
**Calibrated Range : Zero - 45 (MPa)**

Hydraulic Jack Reading (MPa)	5	10	15	20	25	30	35	40	45
Calibrated Load (kg)	15600	31400	46400	61600	77200	92400	107400	122800	137600
Calibrated Pressure (Mpa)	5.13	10.33	15.27	20.27	25.41	30.41	35.34	40.41	45.28

The Ram Area of Jack = 298 cm<sup>2</sup>

**Calibration Curve For Jack No. 2318 (Gauge # 2663)**  
**Calibrated Value (MPa) = (1.003 x Jack Reading (MPa)) + 0.224**



Test Performed and Verified by:

Ref: CED/TFL/06/7053

Dated: 02-06-2025

Dated: 03-06-2025 (Dr. M. Kashif)

To

**M/S CGGC Dasu Hydropower Project Management in Pakistan Dasu Hydropower Project**

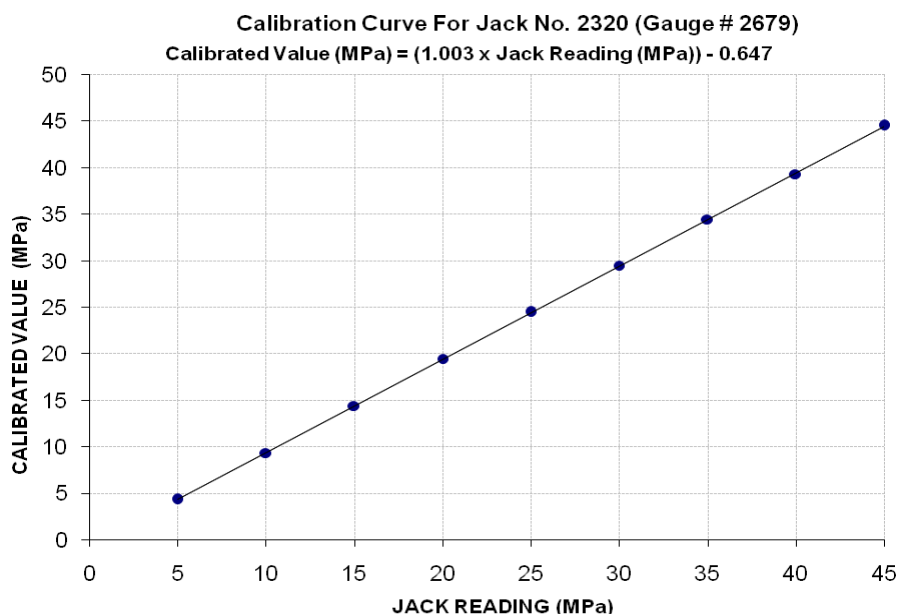
**Subject: - CALIBRATION OF HYDRAULIC JACK (MARK: TFL/06/7053) (Page -6/6)**

Reference to your Letter No. Nil, dated: 24/05/2025 on the subject cited above. One Hydraulic Jack (Jack No. 2320, Gauge No. 2679) as received by us has been calibrated. The results are tabulated as under:

**Total Range : Zero - 60 (MPa)**  
**Calibrated Range : Zero - 45 (MPa)**

Hydraulic Jack Reading (MPa)	5	10	15	20	25	30	35	40	45
Calibrated Load (kg)	13200	28400	43800	59200	74400	89600	104800	119600	135400
Calibrated Pressure (Mpa)	4.34	9.35	14.41	19.48	24.48	29.49	34.49	39.36	44.56

The Ram Area of Jack = 298 cm<sup>2</sup>



Test Performed and Verified by:

To,

Mr. Akash Shahzad Khan (XEN)  
GE (Army)-II Okara  
Const of Med Store at CMH Oka Cantt-CEA-CZ-31/2025

Reference # CED/TFL 7055 (Dr. Rizwan Azam)  
Reference of the request letter # 6000/Gen/132/E-6

Dated: 02-06-2025  
Dated: 06-05-2025

### Tension Test Report (Page-1/1)

Date of Test 03-06-2025  
Gauge Length 8 inches  
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Actual Weight Per Unit Length (lb/ft)	Nominal Size (#)	Actual Diameter (inch)	Area (in <sup>2</sup> )		Yield Load (kg)	Breaking Load (kg)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
				Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.391	3	0.383	0.110	0.115	3400	5000	68124	65197	100182	95878	0.8	10.0	3"/8
2	0.393	3	0.384	0.110	0.116	3400	4900	68124	64851	98178	93462	0.8	10.0	3"/8
3	0.373	3	0.373	0.110	0.109	3300	5000	66120	66431	100182	100652	1.4	17.5	3"/8
4	0.370	3	0.372	0.110	0.109	3200	5000	64116	64795	100182	101242	1.2	15.0	3"/8
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Note: Only 4 Samples for Tensile and 2 Samples for Bend test														

#### Bend Test

# 3 Bar Bend Test Through 180 Degree is Satisfactory

# 3 Bar Bend Test Through 180 Degree is Satisfactory

Test Performed and Verified by:

To,

Mr. Muhammad Saleem (Material Engineer Nespak)

Nespak (Pvt.) Ltd.

Rainwater Management-Drainage Arrangement for Sore Point at Fruit and Vegetable, Lahore

Annual Development Program-WASA (ADP 2024-25)

Reference # CED/TFL **7058** (Dr. Rizwan Azam)

Dated: 02-06-2025

Reference of the request letter # Nespak/wasa/ADP/UGWT/Fruit&vegetable/M Dated: 28-05-2025

### Tension Test Report (Page-1/1)

Date of Test 03-06-2025

Gauge Length 8 inches

Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Actual Weight Per Unit Length (lb/ft)	Nominal Size (#)	Actual Diameter (inch)	Area (in <sup>2</sup> )		Yield Load (kg)	Breaking Load (kg)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
				Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.388	3	0.381	0.110	0.114	3600	5000	72131	69576	100182	96634	1.3	16.3	FF Steel
2	0.388	3	0.381	0.110	0.114	3700	5000	74135	71595	100182	96750	1.2	15.0	FF Steel
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Note: Only 2 Samples for Tensile and 1 Samples for Bend test														

#### Bend Test

# 3 Bar Bend Test Through 180 Degree is Satisfactory

Test Performed and Verified by:

To,  
 Mr. Kamran Khan (Procurement Manager)  
 Q-Links Property Construction Pvt. Ltd.  
 Construction of Q-High Street Lahore

Reference # CED/TFL 7059 (Dr. Rizwan Azam)  
 Reference of the request letter # Apr-DN-2437

Dated: 02-06-2025  
 Dated: 02-06-2025

### Tension Test Report (Page-1/1)

Date of Test 03-06-2025  
 Gauge Length 8 inches  
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Actual Weight Per Unit Length (lb/ft)	Nominal Size (#)	Actual Diameter (inch)	Area (in <sup>2</sup> )		Yield Load (kg)	Breaking Load (kg)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
				Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.370	3	0.372	0.110	0.109	3100	4800	62113	62782	96175	97210	1.4	17.5	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Note: Only 1 Samples for Tensile and 1 Samples for Bend test														

Bend Test														
# 3 Bar Bend Test Through 180 Degree is Satisfactory														

Test Performed and Verified by:

To,  
 Mr. M. Yasir Kiani (Resident Engineer JCP Wahga)  
 Nespak (Pvt.) Ltd.  
 Expansion of Joint Check Post Wahga, Lahore  
 Kamran Steel

Reference # CED/TFL 7060 (Dr. Rizwan Azam)  
 Reference of the request letter # 4749/031/YK/01/188

Dated: 02-06-2025  
 Dated: 31-05-2025

### Tension Test Report (Page-1/2)

Date of Test 03-06-2025  
 Gauge Length 8 inches  
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Actual Weight Per Unit Length (lb/ft)	Nominal Size (#)	Actual Diameter (inch)	Area (in <sup>2</sup> )		Yield Load (kg)	Breaking Load (kg)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
				Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.371	3	0.372	0.110	0.109	3300	4800	66120	66746	96175	97086	1.4	17.5	-
2	0.366	3	0.370	0.110	0.108	3200	4800	64116	65541	96175	98312	1.3	16.3	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: Only 2 Samples for Tensile and 1 Samples for Bend test

Bend Test
# 3 Bar Bend Test Through 180 Degree is Satisfactory

Test Performed and Verified by:

To,  
 Mr. M. Yasir Kiani (Resident Engineer JCP Wahga)  
 Nespak (Pvt.) Ltd.  
 Expansion of Joint Check Post Wahga, Lahore  
 Aziz Steel

Reference # CED/TFL 7060 (Dr. Rizwan Azam)  
 Reference of the request letter # 4749/031/YK/01/185

Dated: 02-06-2025  
 Dated: 26-05-2025

### Tension Test Report (Page-2/2)

Date of Test 03-06-2025  
 Gauge Length 8 inches  
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Actual Weight Per Unit Length (lb/ft)	Nominal Size (#)	Actual Diameter (inch)	Area (in <sup>2</sup> )		Yield Load (kg)	Breaking Load (kg)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
				Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.371	3	0.373	0.110	0.109	3100	4700	62113	62630	94171	94956	1.3	16.3	-
2	0.371	3	0.372	0.110	0.109	3300	4900	66120	66779	98178	99157	1.2	15.0	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: Only 2 Samples for Tensile and 1 Samples for Bend test

Bend Test	
# 3 Bar Bend Test Through 180 Degree is Satisfactory	

Test Performed and Verified by:

Ref: CED/TFL/05/6976

Dated: 16-05-2025

Dated of Test: 03-06-2025 (Dr. Asif Hameed)

To

**Mr. Awais Akram**  
**Resident Engineer**  
**NESPAK, Lahore.**  
**Sustainable Development of Gulberg Scheme Block B-III, Lahore.**

Subject: **TESTING OF R.C.C. PIPE (ASTM-C76)**

Reference to your letter no: 3772/103/LDA-GulbergB-III/AA/06 on dated 10.04.2025 on the subject cited above. One R.C.C. Pipe as received by us has 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	D-Load (0.01 inch)	D-Load Ultimate
	(inch)	(inch)	(inch)	(inch)	(inch)	(inch)	(kg)	(kg)	Lbs/Linear foot/foot	Lbs/Linear foot/foot
1	12	92.5	87.4	15.9	12.00	1.95	9500	13200	2876	3996

Test Performed and Verified by:



## DUPLICATE

Ref: CED/TFL/06/7012  
Dated of Test: 03-06-2025

Dated: 23-05-2025

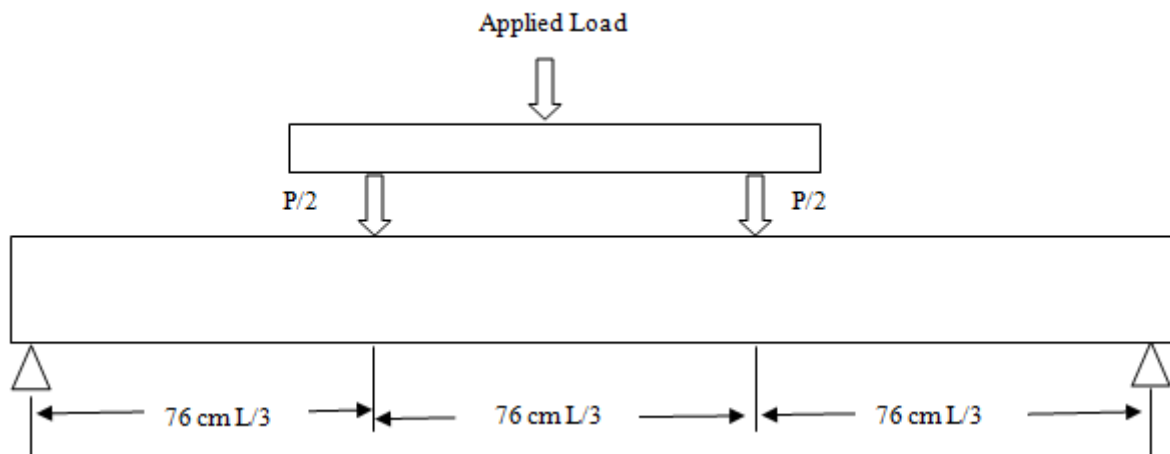
To

**General Manager (Planning & Projects)**  
**Lahore Waste Management Company**  
**Construction of Waste Enclosure (2.5 kanal) at MangaNear THQ Manga, District Lahore.**

Subject: **TESTING OF RCC SLAB** (Page – 1/8)

Reference to your letter No. LWMC-P&P-76, dated 08.05.2025 on the subject cited above. One Precast Slab (8' x 1' x 2") as received by us has been tested in Flexure (Four point loading). The results are tabulated as under.

<b>Total Length</b>	:	<b>243.84 cm</b>
<b>Effective Length</b>	:	<b>182.88 cm</b>
<b>Width</b>	:	<b>29.00 cm</b>
<b>Thickness</b>	:	<b>4.40 cm</b>
<b>Ultimate Load</b>	:	<b>1.40 kN</b>
<b>Ultimate Moment</b>	:	<b>0.43 kN-m</b>



Test Performed and Verified by:

## DUPLICATE

Ref: CED/TFL/06/7012  
Dated of Test: 03-06-2025

Dated: 23-05-2025

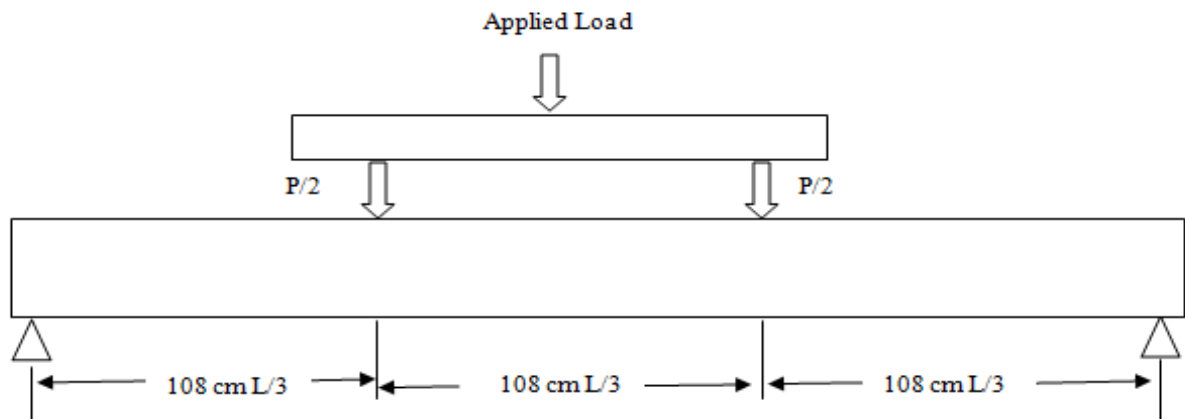
To

**General Manager (Planning & Projects)**  
**Lahore Waste Management Company**  
**Construction of Waste Enclosure (2.5 kanal) at Manga Near THQ Manga, District Lahore.**

Subject: **TESTING OF RCC SLAB** (Page – 2/8)

Reference to your letter No. LWMC-P&P-76, dated 08.05.2025 on the subject cited above. One Precast Girder (9' x 7" x 2") as received by us has been tested in Flexure (Four point loading). The results are tabulated as under.

<b>Total Length</b>	:	<b>308.40 cm</b>
<b>Effective Length</b>	:	<b>274.32 cm</b>
<b>Depth</b>	:	<b>16.50 cm</b>
<b>Flange Width</b>	:	<b>15.50 cm</b>
<b>Top Flange Thickness</b>	:	<b>4.70 cm</b>
<b>Bottom Flange Thickness</b>	:	<b>5.30 cm</b>
<b>Web Thickness</b>	:	<b>5.70 cm</b>
<b>Ultimate Load</b>	:	<b>2.5 kN</b>
<b>Ultimate Moment</b>	:	<b>1.143 kN/m</b>



Test Performed and Verified by:

## DUPLICATE

Ref: CED/TFL/06/7012  
Dated of Test: 03-06-2025

Dated: 23-05-2025

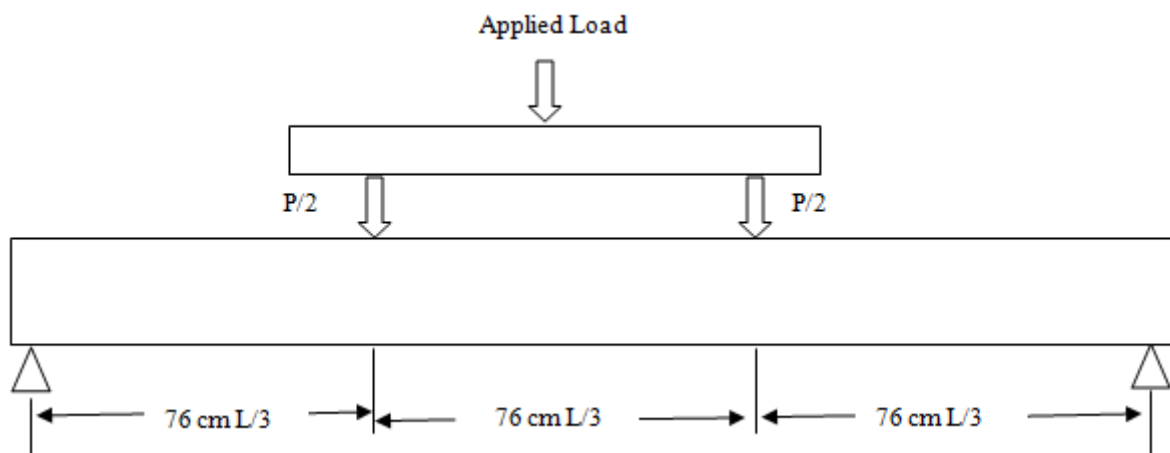
To

**General Manager (Planning & Projects)  
Lahore Waste Management Company  
Construction of Waste Enclosure (2.5 kanal) at Raiwind Near Raiwind Bazar,  
District Lahore.**

Subject: **TESTING OF RCC SLAB** (Page – 3/8)

Reference to your letter No. LWMC-P&P-73, dated 08.05.2025 on the subject cited above. One Precast Slab (8' x 1' x 2") as received by us has been tested in Flexure (Four point loading). The results are tabulated as under.

<b>Total Length</b>	:	<b>243.84 cm</b>
<b>Effective Length</b>	:	<b>182.88 cm</b>
<b>Width</b>	:	<b>29.00 cm</b>
<b>Thickness</b>	:	<b>4.40 cm</b>
<b>Ultimate Load</b>	:	<b>1.60 kN</b>
<b>Ultimate Moment</b>	:	<b>0.49 kN-m</b>



Test Performed and Verified by:

## DUPLICATE

Ref: CED/TFL/06/7012  
Dated of Test: 03-06-2025

Dated: 23-05-2025

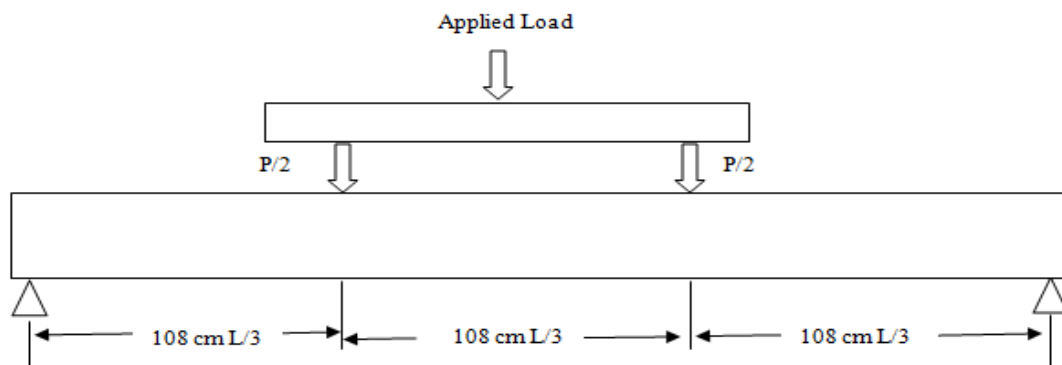
To

**General Manager (Planning & Projects)**  
**Lahore Waste Management Company**  
**Construction of Waste Enclosure (2.5 kanal) at Raiwind Near Raiwind Bazar,**  
**District Lahore.**

Subject: **TESTING OF RCC SLAB** (Page – 4/8)

Reference to your letter No. LWMC-P&P-73, dated 08.05.2025 on the subject cited above. One Precast Girder (9' x 7" x 2") as received by us has been tested in Flexure (Four point loading). The results are tabulated as under.

<b>Total Length</b>	:	<b>308.40 cm</b>
<b>Effective Length</b>	:	<b>274.32 cm</b>
<b>Depth</b>	:	<b>16.50 cm</b>
<b>Flange Width</b>	:	<b>15.50 cm</b>
<b>Top Flange Thickness</b>	:	<b>4.80 cm</b>
<b>Bottom Flange Thickness</b>	:	<b>5.20 cm</b>
<b>Web Thickness</b>	:	<b>5.70 cm</b>
<b>Ultimate Load</b>	:	<b>3.5 kN</b>
<b>Ultimate Moment</b>	:	<b>1.160 kN/m</b>



Test Performed and Verified by:

## DUPLICATE

Ref: CED/TFL/06/7012  
Dated of Test: 03-06-2025

Dated: 23-05-2025

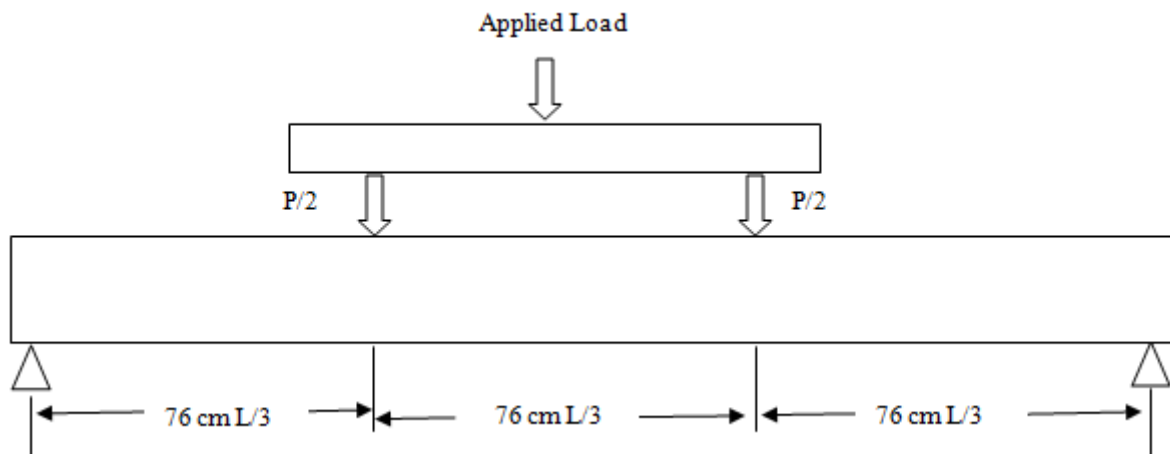
To

**General Manager (Planning & Projects)  
Lahore Waste Management Company  
Construction of Waste Enclosure (2.5 kanal) at Rohi Nala Near Gajjumatta,  
District Lahore.**

Subject: **TESTING OF RCC SLAB** (Page – 5/8)

Reference to your letter No. LWMC-P&P-75, dated 08.05.2025 on the subject cited above. One Precast Slab (8' x 1' x 2") as received by us has been tested in Flexure (Four point loading). The results are tabulated as under.

<b>Total Length</b>	:	<b>243.84 cm</b>
<b>Effective Length</b>	:	<b>182.88 cm</b>
<b>Width</b>	:	<b>29.00 cm</b>
<b>Thickness</b>	:	<b>4.40 cm</b>
<b>Ultimate Load</b>	:	<b>1.35 kN</b>
<b>Ultimate Moment</b>	:	<b>0.41 kN-m</b>



Test Performed and Verified by:

## DUPLICATE

Ref: CED/TFL/06/7012  
Dated of Test: 03-06-2025

Dated: 23-05-2025

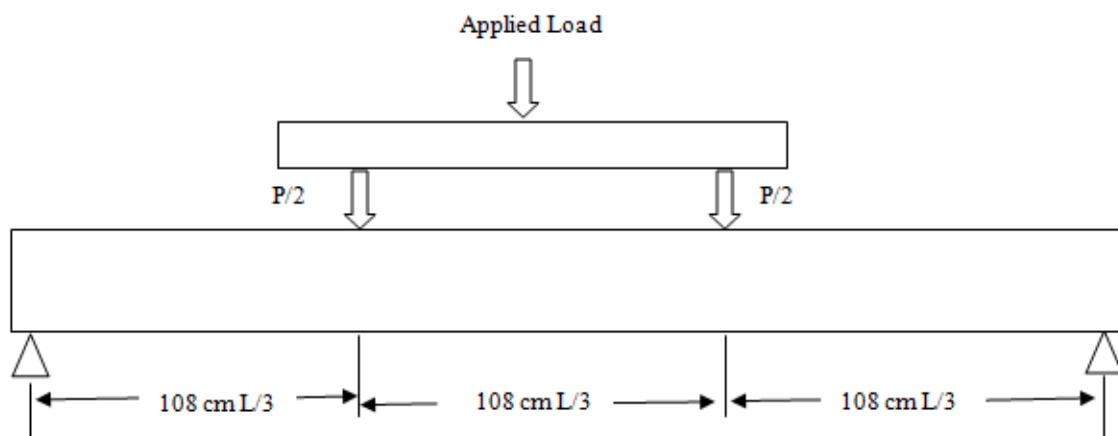
To

**General Manager (Planning & Projects)**  
**Lahore Waste Management Company**  
**Construction of Waste Enclosure (2.5 kanal) at Rohi Nala Near Gajjumatta,**  
**District Lahore.**

Subject: **TESTING OF RCC SLAB** (Page – 6/8)

Reference to your letter No. LWMC-P&P-75, dated 08.05.2025 on the subject cited above. One Precast Girder (9' x 7" x 2") as received by us has been tested in Flexure (Four point loading). The results are tabulated as under.

<b>Total Length</b>	:	<b>308.40 cm</b>
<b>Effective Length</b>	:	<b>274.32 cm</b>
<b>Depth</b>	:	<b>16.50 cm</b>
<b>Flange Width</b>	:	<b>15.50 cm</b>
<b>Top Flange Thickness</b>	:	<b>4.80 cm</b>
<b>Bottom Flange Thickness</b>	:	<b>5.40 cm</b>
<b>Web Thickness</b>	:	<b>5.60 cm</b>
<b>Ultimate Load</b>	:	<b>3.4 kN</b>
<b>Ultimate Moment</b>	:	<b>1.160 kN/m</b>



Test Performed and Verified by:

## DUPLICATE

Ref: CED/TFL/06/7012  
Dated of Test: 03-06-2025

Dated: 23-05-2025

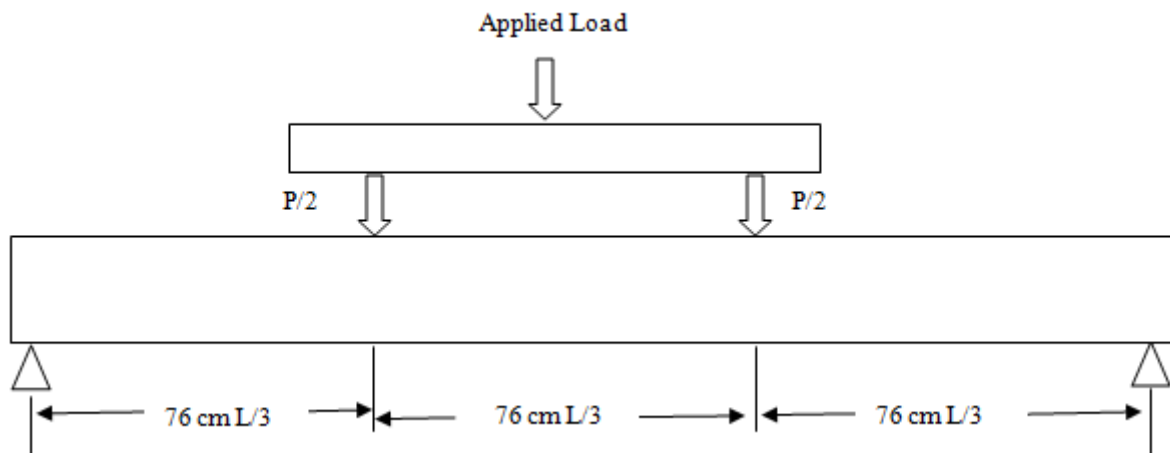
To

**General Manager (Planning & Projects)  
Lahore Waste Management Company  
Construction of Waste Enclosure (2.5 kanal) at Shahzada Village Near Kahna,  
District Lahore.**

Subject: **TESTING OF RCC SLAB** (Page – 7/8)

Reference to your letter No. LWMC-P&P-74, dated 08.05.2025 on the subject cited above. One Precast Slab (8' x 1' x 2") as received by us has been tested in Flexure (Four point loading). The results are tabulated as under.

<b>Total Length</b>	:	<b>243.84 cm</b>
<b>Effective Length</b>	:	<b>182.88 cm</b>
<b>Width</b>	:	<b>29.00 cm</b>
<b>Thickness</b>	:	<b>4.40 cm</b>
<b>Ultimate Load</b>	:	<b>1.32 kN</b>
<b>Ultimate Moment</b>	:	<b>0.40 kN-m</b>



Test Performed and Verified by:

## DUPLICATE

Ref: CED/TFL/06/7012  
Dated of Test: 03-06-2025

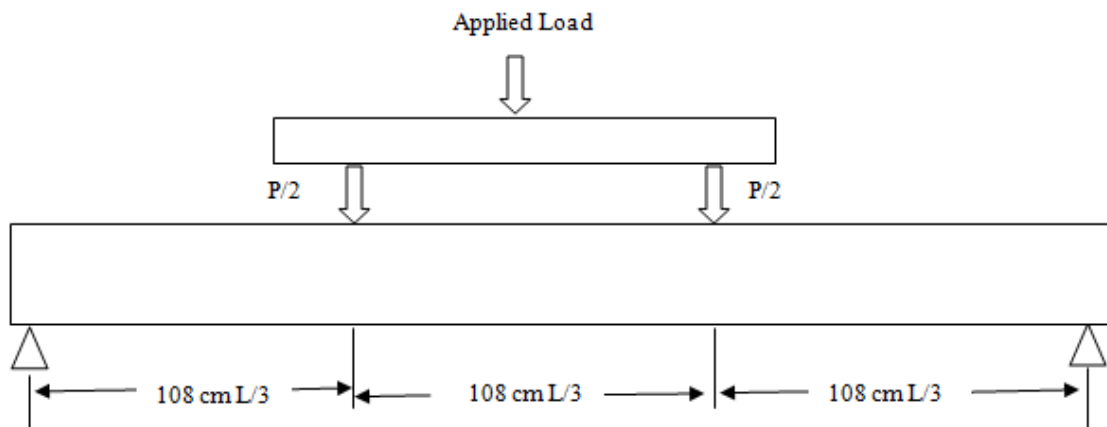
Dated: 23-05-2025

To

**General Manager (Planning & Projects)**  
**Lahore Waste Management Company**  
**Construction of Waste Enclosure (2.5 kanal) at Shahzada Village Near Kahna,**  
**District Lahore.**  
Subject: **TESTING OF RCC SLAB** (Page – 8/8)

Reference to your letter No. LWMC-P&P-74, dated 08.05.2025 on the subject cited above. One Precast Girder (9' x 7" x 2") as received by us has been tested in Flexure (Four point loading). The results are tabulated as under.

<b>Total Length</b>	:	<b>308.40 cm</b>
<b>Effective Length</b>	:	<b>274.32 cm</b>
<b>Depth</b>	:	<b>16.60 cm</b>
<b>Flange Width</b>	:	<b>15.40 cm</b>
<b>Top Flange Thickness</b>	:	<b>4.60 cm</b>
<b>Bottom Flange Thickness</b>	:	<b>5.30 cm</b>
<b>Web Thickness</b>	:	<b>5.80 cm</b>
<b>Ultimate Load</b>	:	<b>4.2 kN</b>
<b>Ultimate Moment</b>	:	<b>1.92 kN/m</b>



Test Performed and Verified by:



Ref: CED/TFL/05/7028

Dated: 27-05-2025

Dated of Test: 03-06-2025 (Dr. Asif Hameed)

To

**Engr. Sajjad Hashmi**  
**GM QA/QC**  
**Vision Developers Pvt. Ltd.**  
**Park View City Lahore.**

**Subject: TESTING OF R.C.C. PIPE (Three Edge Bearing Test)**

Reference to your letter no: Nil on dated 27.05.2025 on the subject cited above. Three R.C.C. Pipes as received by us has 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	D-Load (0.01 inch)	D-Load Ultimate
	(inch)	(inch)	(inch)	(inch)	(inch)	(inch)	(kg)	(kg)	Lbs/Linear foot/foot	Lbs/Linear foot/foot
1	9	92.9	87.0	12.6	8.80	1.90	11500	19000	4769	7879
2	9	93.1	87.8	12.4	9.06	1.67	12500	16000	4989	6385
3	15	92.4	87.0	19.4	14.64	2.38	7700	15500	1919	3863

Test Performed and Verified by:

Ref: CED/TFL/05/7030

Dated: 27-05-2025

Dated of Test: 03-06-2025 (Dr. Asif Hameed)

To

**Mr. Sohaib Awais (Resident Engineer)**  
**Nespak (Pvt.) Ltd.**  
**Infrastructure Development at Chahar Bagh Phase-II.**

Subject: **TESTING OF R.C.C. PIPE (ASTM C-76)**

Reference to your letter no: 4841/13/SA/05/40 on dated 24.05.2025 on the subject cited above. Two R.C.C. Pipes as received by us has 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	D-Load (0.01 inch)	D-Load Ultimate
	(inch)	(inch)	(inch)	(inch)	(inch)	(inch)	(kg)	(kg)	Lbs/Linear foot/foot	Lbs/Linear foot/foot
1	9	94.3	87.9	11.1	9.03	1.03	7500	9700	2999	3878
2	12	93.3	87.0	15.95	11.92	2.02	12500	16500	3828	5052

Test Performed and Verified by:

To,  
 Assistant Executive Engineer (Central Civil Division No.1)  
 Government of Pakistan,  
 Pakistan Public Works Department  
 Construction of Hajj Complex, Lahore (Sh: Training Auditorium)

Reference # CED/TFL      7052 (Dr. Rizwan Azam)  
 Reference of the request letter #      AEE-II/CCD-I/LHR/236

Dated: 02-06-2025  
 Dated: 21-06-2024

**Tension Test Report** (Page-1/1)

Date of Test      03-06-2025  
 Gauge Length      8 inches  
 Description      Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Actual Weight Per Unit Length (lb/ft)	Nominal Size (#)	Actual Diameter (inch)	Area (in <sup>2</sup> )		Yield Load (kg)	Breaking Load (kg)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
				Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.370	3	0.372	0.110	0.109	3100	4900	62113	62912	98178	99441	1.3	16.3	3"/8
2	0.372	3	0.373	0.110	0.109	3300	5000	66120	66552	100182	100836	1.1	13.8	3"/8
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Note: Only 2 Samples for Tensile and 1 Samples for Bend test														

Bend Test														
# 3 Bar Bend Test Through 180 Degree is Satisfactory														

Test Performed and Verified by:

Ref: CED/TFL/06/7053

Dated: 02-06-2025

Dated: 03-06-2025 (**Dr. M. Kashif**)

To

**M/S CGGC Dasu Hydropower Project Management in Pakistan Dasu Hydropower Project**

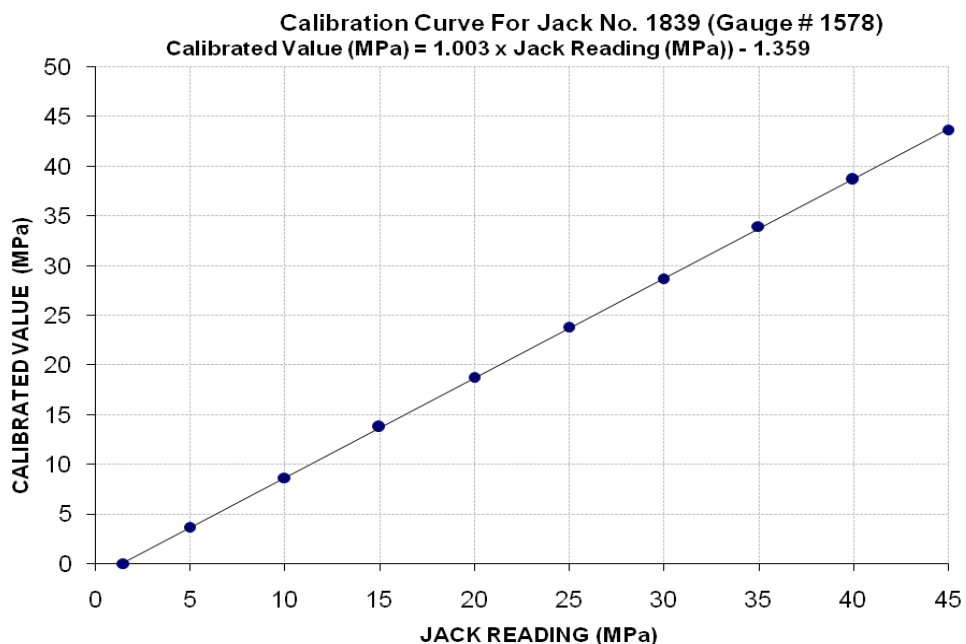
**Subject: - CALIBRATION OF HYDRAULIC JACK (MARK: TFL/06/7053) (Page -1/6)**

Reference to your Letter No. Nil, dated: 24/05/2025 on the subject cited above. One Hydraulic Jack (Jack No. 1839, Gauge No. 1578) as received by us has been calibrated. The results are tabulated as under:

**Total Range : Zero - 60 (MPa)**  
**Calibrated Range : Zero - 45 (MPa)**

Hydraulic Jack Reading (MPa)	1.5	5	10	15	20	25	30	35	40	45
Calibrated Load (kg)	0	11200	26400	41800	57000	72400	87200	103200	117600	132800
Calibrated Pressure (Mpa)	0	3.69	8.69	13.76	18.76	23.83	28.70	33.96	38.70	43.70

The Ram Area of Jack = 298 cm<sup>2</sup>



Test Performed and Verified by:

Ref: CED/TFL/06/7053

Dated: 02-06-2025

Dated: 03-06-2025 (**Dr. M. Kashif**)

To

**M/S CGGC Dasu Hydropower Project Management in Pakistan Dasu Hydropower Project**

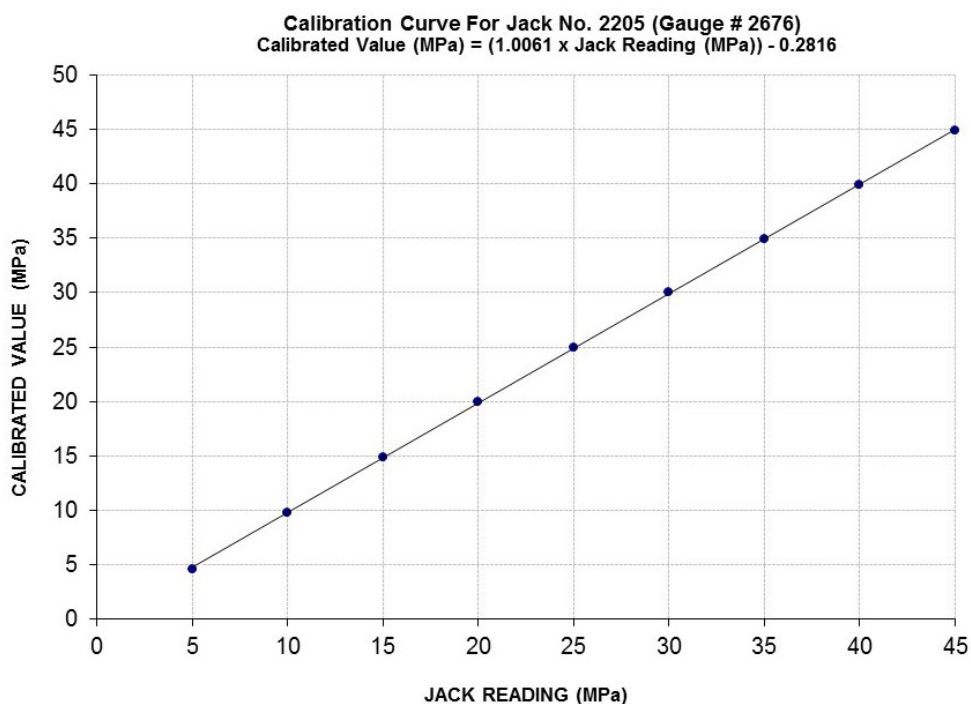
**Subject: - CALIBRATION OF HYDRAULIC JACK (MARK: TFL/06/7053) (Page -2/6)**

Reference to your Letter No. Nil, dated: 24/05/2025 on the subject cited above. One Hydraulic Jack (Jack No. 2205, Gauge No. 2676) as received by us has been calibrated. The results are tabulated as under:

**Total Range : Zero - 60 (MPa)**  
**Calibrated Range : Zero - 45 (MPa)**

Hydraulic Jack Reading (MPa)	5	10	15	20	25	30	35	40	45
Calibrated Load (kg)	14000	29600	45200	60600	75800	91200	106000	121400	136400
Calibrated Pressure (Mpa)	4.61	9.74	14.88	19.94	24.95	30.01	34.88	39.95	44.89

The Ram Area of Jack = 298 cm<sup>2</sup>



Test Performed and Verified by:

Ref: CED/TFL/06/7053

Dated: 02-06-2025

Dated: 03-06-2025 (Dr. M. Kashif)

To

**M/S CGGC Dasu Hydropower Project Management in Pakistan Dasu Hydropower Project**

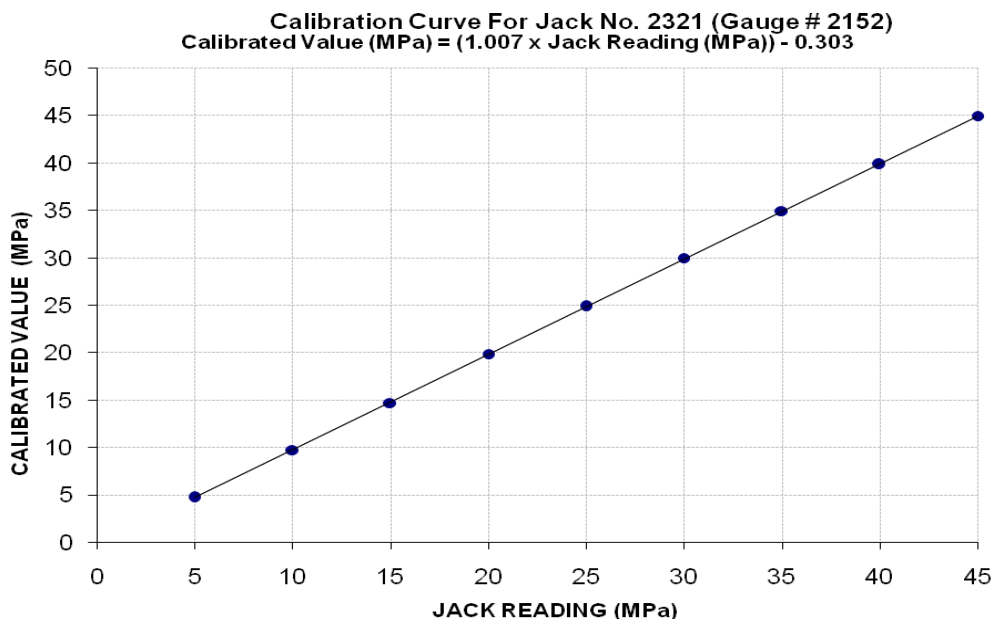
**Subject: - CALIBRATION OF HYDRAULIC JACK (MARK: TFL/06/7053) (Page -3/6)**

Reference to your Letter No. Nil, dated: 24/05/2025 on the subject cited above. One Hydraulic Jack (Jack No. 2321, Gauge No. 2152) as received by us has been calibrated. The results are tabulated as under:

**Total Range : Zero - 60 (MPa)**  
**Calibrated Range : Zero - 45 (MPa)**

Hydraulic Jack Reading (MPa)	5	10	15	20	25	30	35	40	45
Calibrated Load (kg)	14400	29600	44800	60400	75600	91200	106200	121200	136800
Calibrated Pressure (Mpa)	4.74	9.74	14.74	19.88	24.88	30.01	34.95	39.89	45.02

The Ram Area of Jack = 298 cm<sup>2</sup>



Test Performed and Verified by:

Ref: CED/TFL/06/7053

Dated: 02-06-2025

Dated: 03-06-2025 (**Dr. M. Kashif**)

To

**M/S CGGC Dasu Hydropower Project Management in Pakistan Dasu Hydropower Project**

**Subject: - CALIBRATION OF HYDRAULIC JACK (MARK: TFL/06/7053) (Page -4/6)**

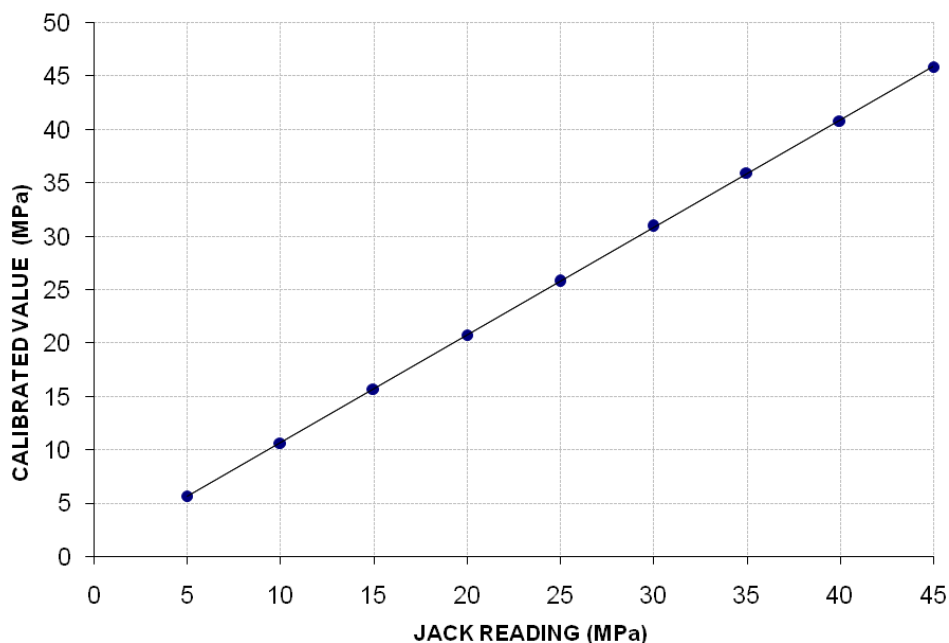
Reference to your Letter No. Nil, dated: 24/05/2025 on the subject cited above. One Hydraulic Jack (Jack No. 1801, Gauge No. 1575) as received by us has been calibrated. The results are tabulated as under:

**Total Range : Zero - 60 (MPa)**  
**Calibrated Range : Zero - 45 (MPa)**

Hydraulic Jack Reading (MPa)	5	10	15	20	25	30	35	40	45
Calibrated Load (kg)	17200	32400	47800	63200	78400	94000	109200	124000	139400
Calibrated Pressure (Mpa)	5.66	10.66	15.73	20.80	25.80	30.93	35.94	40.81	45.88

The Ram Area of Jack = 298 cm<sup>2</sup>

**Calibration Curve For Jack No. 1801 (Gauge # 1575)**  
**Calibrated Value (MPa) = (1.006 x Jack Reading (MPa)) + 0.647**



Test Performed and Verified by:

Ref: CED/TFL/06/7053

Dated: 02-06-2025

Dated: 03-06-2025 (Dr. M. Kashif)

To

**M/S CGGC Dasu Hydropower Project Management in Pakistan Dasu Hydropower Project**

**Subject: - CALIBRATION OF HYDRAULIC JACK (MARK: TFL/06/7053) (Page -5/6)**

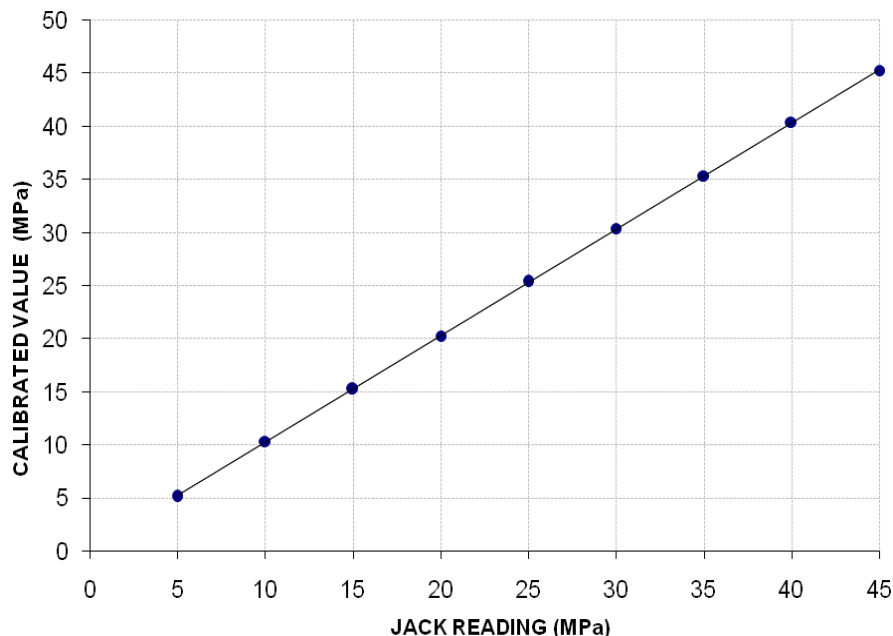
Reference to your Letter No. Nil, dated: 24/05/2025 on the subject cited above. One Hydraulic Jack (Jack No. 2318, Gauge No. 2663) as received by us has been calibrated. The results are tabulated as under:

**Total Range : Zero - 60 (MPa)**  
**Calibrated Range : Zero - 45 (MPa)**

Hydraulic Jack Reading (MPa)	5	10	15	20	25	30	35	40	45
Calibrated Load (kg)	15600	31400	46400	61600	77200	92400	107400	122800	137600
Calibrated Pressure (Mpa)	5.13	10.33	15.27	20.27	25.41	30.41	35.34	40.41	45.28

The Ram Area of Jack = 298 cm<sup>2</sup>

**Calibration Curve For Jack No. 2318 (Gauge # 2663)**  
**Calibrated Value (MPa) = (1.003 x Jack Reading (MPa)) + 0.224**





Test Performed and Verified by:

Ref: CED/TFL/06/7053

Dated: 02-06-2025

Dated: 03-06-2025 (Dr. M. Kashif)

To

**M/S CGGC Dasu Hydropower Project Management in Pakistan Dasu Hydropower Project**

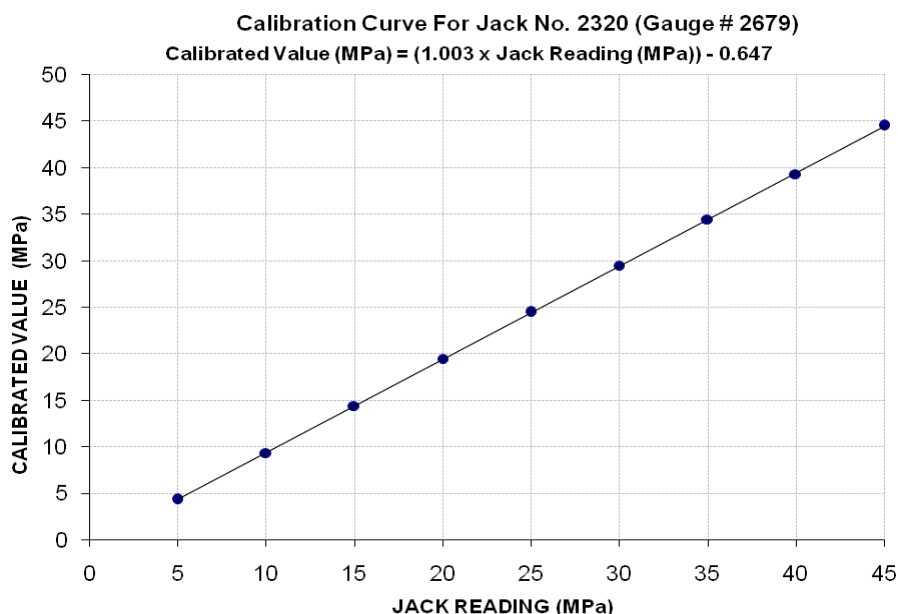
**Subject: - CALIBRATION OF HYDRAULIC JACK (MARK: TFL/06/7053) (Page -6/6)**

Reference to your Letter No. Nil, dated: 24/05/2025 on the subject cited above. One Hydraulic Jack (Jack No. 2320, Gauge No. 2679) as received by us has been calibrated. The results are tabulated as under:

**Total Range : Zero - 60 (MPa)**  
**Calibrated Range : Zero - 45 (MPa)**

Hydraulic Jack Reading (MPa)	5	10	15	20	25	30	35	40	45
Calibrated Load (kg)	13200	28400	43800	59200	74400	89600	104800	119600	135400
Calibrated Pressure (Mpa)	4.34	9.35	14.41	19.48	24.48	29.49	34.49	39.36	44.56

The Ram Area of Jack = 298 cm<sup>2</sup>



Test Performed and Verified by:

To,

Mr. Akash Shahzad Khan (XEN)  
GE (Army)-II Okara  
Const of Med Store at CMH Oka Cantt-CEA-CZ-31/2025

Reference # CED/TFL 7055 (Dr. Rizwan Azam)  
Reference of the request letter # 6000/Gen/132/E-6

Dated: 02-06-2025  
Dated: 06-05-2025

**Tension Test Report** (Page-1/1)

Date of Test 03-06-2025  
Gauge Length 8 inches  
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Actual Weight Per Unit Length (lb/ft)	Nominal Size (#)	Actual Diameter (inch)	Area (in <sup>2</sup> )		Yield Load (kg)	Breaking Load (kg)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
				Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.391	3	0.383	0.110	0.115	3400	5000	68124	65197	100182	95878	0.8	10.0	3"/8
2	0.393	3	0.384	0.110	0.116	3400	4900	68124	64851	98178	93462	0.8	10.0	3"/8
3	0.373	3	0.373	0.110	0.109	3300	5000	66120	66431	100182	100652	1.4	17.5	3"/8
4	0.370	3	0.372	0.110	0.109	3200	5000	64116	64795	100182	101242	1.2	15.0	3"/8
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Note: Only 4 Samples for Tensile and 2 Samples for Bend test														

**Bend Test**

# 3 Bar Bend Test Through 180 Degree is Satisfactory

# 3 Bar Bend Test Through 180 Degree is Satisfactory

Test Performed and Verified by:

To,

Mr. Muhammad Saleem (Material Engineer Nespak)

Nespak (Pvt.) Ltd.

Rainwater Management-Drainage Arrangement for Sore Point at Fruit and Vegetable, Lahore

Annual Development Program-WASA (ADP 2024-25)

Reference # CED/TFL **7058** (Dr. Rizwan Azam)

Dated: 02-06-2025

Reference of the request letter # Nespak/wasa/ADP/UGWT/Fruit&vegetable/M Dated: 28-05-2025

### Tension Test Report

(Page-1/1)

Date of Test 03-06-2025

Gauge Length 8 inches

Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Actual Weight Per Unit Length (lb/ft)	Nominal Size (#)	Actual Diameter (inch)	Area (in <sup>2</sup> )		Yield Load (kg)	Breaking Load (kg)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
				Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.388	3	0.381	0.110	0.114	3600	5000	72131	69576	100182	96634	1.3	16.3	FF Steel
2	0.388	3	0.381	0.110	0.114	3700	5000	74135	71595	100182	96750	1.2	15.0	FF Steel
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Note: Only 2 Samples for Tensile and 1 Samples for Bend test														

#### Bend Test

# 3 Bar Bend Test Through 180 Degree is Satisfactory

Test Performed and Verified by:

To,  
 Mr. Kamran Khan (Procurement Manager)  
 Q-Links Property Construction Pvt. Ltd.  
 Construction of Q-High Street Lahore

Reference # CED/TFL 7059 (Dr. Rizwan Azam)  
 Reference of the request letter # Apr-DN-2437

Dated: 02-06-2025  
 Dated: 02-06-2025

**Tension Test Report** (Page-1/1)

Date of Test 03-06-2025  
 Gauge Length 8 inches  
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Actual Weight Per Unit Length (lb/ft)	Nominal Size (#)	Actual Diameter (inch)	Area (in <sup>2</sup> )		Yield Load (kg)	Breaking Load (kg)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
				Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.370	3	0.372	0.110	0.109	3100	4800	62113	62782	96175	97210	1.4	17.5	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Note: Only 1 Samples for Tensile and 1 Samples for Bend test														

Bend Test														
# 3 Bar Bend Test Through 180 Degree is Satisfactory														

Test Performed and Verified by:

To,  
 Mr. M. Yasir Kiani (Resident Engineer JCP Wahga)  
 Nespak (Pvt.) Ltd.  
 Expansion of Joint Check Post Wahga, Lahore  
 Kamran Steel

Reference # CED/TFL 7060 (Dr. Rizwan Azam)  
 Reference of the request letter # 4749/031/YK/01/188

Dated: 02-06-2025  
 Dated: 31-05-2025

### Tension Test Report (Page-1/2)

Date of Test 03-06-2025  
 Gauge Length 8 inches  
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Actual Weight Per Unit Length (lb/ft)	Nominal Size (#)	Actual Diameter (inch)	Area (in <sup>2</sup> )		Yield Load (kg)	Breaking Load (kg)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
				Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.371	3	0.372	0.110	0.109	3300	4800	66120	66746	96175	97086	1.4	17.5	-
2	0.366	3	0.370	0.110	0.108	3200	4800	64116	65541	96175	98312	1.3	16.3	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: Only 2 Samples for Tensile and 1 Samples for Bend test

Bend Test
# 3 Bar Bend Test Through 180 Degree is Satisfactory

Test Performed and Verified by:

To,  
 Mr. M. Yasir Kiani (Resident Engineer JCP Wahga)  
 Nespak (Pvt.) Ltd.  
 Expansion of Joint Check Post Wahga, Lahore  
 Aziz Steel

Reference # CED/TFL 7060 (Dr. Rizwan Azam)  
 Reference of the request letter # 4749/031/YK/01/185

Dated: 02-06-2025  
 Dated: 26-05-2025

### Tension Test Report (Page-2/2)

Date of Test 03-06-2025  
 Gauge Length 8 inches  
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Actual Weight Per Unit Length (lb/ft)	Nominal Size (#)	Actual Diameter (inch)	Area (in <sup>2</sup> )		Yield Load (kg)	Breaking Load (kg)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
				Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.371	3	0.373	0.110	0.109	3100	4700	62113	62630	94171	94956	1.3	16.3	-
2	0.371	3	0.372	0.110	0.109	3300	4900	66120	66779	98178	99157	1.2	15.0	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Note: Only 2 Samples for Tensile and 1 Samples for Bend test														

Bend Test														
# 3 Bar Bend Test Through 180 Degree is Satisfactory														

Test Performed and Verified by: