



STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
 Engineer's Representative
 NESPAK
 Construction of Pakistan Kidney & Liver Institute and Research Center, Lahore Hospital
 Package C-I, Phase – I

Reference # CED/TFL **32685** (Dr. Qasim Khan) Dated: 22-02-2019
 Reference of the request letter # 3836/13/AA/10/C-1-MEP-FF-MTR-26 Dated: 22-02-2019

Tension Test Report (Page – 1/2)

Date of Test 28-02-2019
 Gauge length 2 inches
 Description Seamless Pipe Steel Strip Tensile Test

Sr. No.	Designation	Size of Strip	X Section Area	Yield load	Breaking Load	Yield Stress	Ultimate Stress	Elongation	% Elongation	Remarks
	(inch)	(mm)	(mm ²)	(kg)	(kg)	(MPa)	(MPa)	(in)		
1	1	25.20x3.20	80.64	4000	4500	486.61	547.43	0.50	25.00	
2	1	25.20x3.20	80.64	3900	4500	474.44	547.43	0.50	25.00	
3	3	25.70x5.50	141.35	7000	7800	485.82	541.34	0.50	25.00	
4	3	25.70x5.50	141.35	6500	7700	451.11	534.40	0.50	25.00	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
Only Four Samples for Tensile Test										
Bend Test										

I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

- 1- You can See your reports On Internet in the following web site
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
- 2- The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
Engineer's Representative
NESPAK
Construction of Pakistan Kidney & Liver Institute and Research Center, Lahore Hospital
Package C-I, Phase – I

Reference # CED/TFL **32685** (Dr. Qasim Khan) Dated: 22-02-2019
Reference of the request letter # 3836/13/AA/10/C-1-MEP-FF-MTR-26 Dated: 22-02-2019

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

Date of Test 28-02-2019
Gauge length -----
Description Seamless Pipe Weight and Size Test

Sr. No.	Designation	Weight	Length	Weight per Unit Length	External Diameter	Internal Diameter	Thickness	Remark
	(inch)	(g)	(cm)	(kg/m)	(mm)	(mm)	(mm)	
1	1	743	30.30	2.45	33.40	26.5	3.45	
2	1-1/2	1202	31.20	3.85	48.05	40.85	3.60	
3	2	1658	31.10	5.33	60.40	52.3	4.05	
4	2- 1/2	2693	30.50	8.83	76.10	64.9	5.60	
5	3	3392	30.90	10.98	89.10	77.4	5.85	
6	4	4864	30.20	16.11	114.60	102.4	6.10	
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	
Only Six Samples for Test								

I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

- 1- You can See your reports On Internet in the following web site
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
- 2- The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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 – II & III
 Zeeruk International (Pvt) Ltd
 Lahore Sialkot Motorway

Reference # CED/TFL **32692** (Dr. Qasim Khan)
 Reference of the request letter # LSM/RE-II/St/19/071

Dated: 25-02-2019
 Dated: 20-02-2019

Tension Test Report (Page – 1/2)

Date of Test 28-02-2019
 Gauge length 2 inches
 Description Steel Galvanized Steel Post & Galvanized Corrugated Beam 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
1	Steel Beam	1.84x0.275	0.51	2000	2500	3952.57	4940.71	0.75	37.50	
2	Steel Beam	1.84x0.275	0.51	2100	2500	4150.20	4940.71	0.65	32.50	
3	Steel Post	2.50x0.715	1.79	6400	8800	3580.42	4923.08	0.65	32.50	
4	Steel Post	2.52x0.715	1.80	6500	8900	3607.50	4939.50	0.65	32.50	
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
Only Four Samples for Tensile and Two Samples for Bend Test										
Bend Test										
Strip Taken from Steel Beam Bend Test Through 180° is Satisfactory										
Strip Taken from Steel Beam 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
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
- 2- The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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 – II & III
Zeeruk International (Pvt) Ltd
Lahore Sialkot Motorway

Reference # CED/TFL **32692** (Dr. Qasim Khan)
Reference of the request letter # LSM/RE-II/St/19/071

Dated: 25-02-2019
Dated: 20-02-2019

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

Date of Test 08-02-2019
Gauge length -----
Description Steel Galvanized Steel Post & Galvanized Corrugated Beam Weight and
Size Test

Sr. No.	Designation	Weight	Length	Weight per Unit Length	Depth	Thickness	Remark
1	Steel Post	918	80.10	11.46	121.30	7.10	
2	Steel Beam	-----	-----	-----	-----	2.80	
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	
Only Two Samples for Test							

I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

- 1- You can See your reports On Internet in the following web site
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
- 2- The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
 Asim Riaz Hashmat Khan
 Lahore

Reference # CED/TFL **32700** (Dr. Usman Akmal)
 Reference of the request letter # Nil

Dated: 26-02-2019
 Dated: 26-02-2019

Tension Test Report (Page -1/1)

Date of Test 28-02-2019
 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	0.371	3	0.372	0.11	0.109	4000	5800	80200	80910	116300	117400	0.90	11.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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 Laboratories
UET Lahore, Pakistan.

Note:

- 1- You can See your reports On Internet in the following web site
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
- 2- The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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
 Public Health Engg: Sub Division-II
 Mianwali
 (Sewerage and Sanitation at Village Dhoranka City UC Namal, District Mianwali)

Reference # CED/TFL **32701** (Dr. Usman Akmal)
 Reference of the request letter # 73/MI-II

Dated: 26-02-2019
 Dated: 08-01-2019

Tension Test Report (Page -1/1)

Date of Test 28-02-2019
 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	0.073	5/32	0.166	-----	0.022	680	880	-----	69580	-----	90100	0.30	15.0	
2	0.095	3/16	0.189	-----	0.028	880	1120	-----	69330	-----	88300	0.40	20.0	
3	0.185	1/4	0.263	-----	0.054	2200	3000	-----	89130	-----	121600	0.30	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	

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.

Note:

- 1- You can See your reports On Internet in the following web site
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
- 2- The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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
 Public Health Engg: Sub Division-II
 Mianwali
 (Sewerage and Sanitation for Paki Shah Mardan District Mianwali)

Reference # CED/TFL **32702** (Dr. Usman Akmal)
 Reference of the request letter # 83/MI-II

Dated: 26-02-2019
 Dated: 08-01-2019

Tension Test Report (Page -1/1)

Date of Test 28-02-2019
 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	0.073	5/32	0.165	-----	0.021	720	920	-----	74160	-----	94800	0.30	15.0	
2	0.097	3/16	0.190	-----	0.028	1000	1480	-----	77510	-----	114800	0.40	20.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and two 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														

I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

- 1- You can See your reports On Internet in the following web site
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
2. The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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
 Public Health Engg: Sub Division-II
 Mianwali
 (Sewerage Drainage Scheme Mouch Tehsil & District Mianwali)

Reference # CED/TFL **32703** (Dr. Usman Akmal)
 Reference of the request letter # 81/MI-II

Dated: 26-02-2019
 Dated: 08-01-2019

Tension Test Report (Page -1/1)

Date of Test 28-02-2019
 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	0.079	5/32	0.172	-----	0.023	1000	1440	-----	94350	-----	135900	0.30	15.0	
2	0.095	3/16	0.188	-----	0.028	720	900	-----	57090	-----	71400	0.50	25.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and two 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														

I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

- 1- You can See your reports On Internet in the following web site
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
- 2- The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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
 Public Health Engg: Sub Division-II
 Mianwali
 (Sewerage and Sanitation Scheme Daud Khel District Mianwali)

Reference # CED/TFL **32704** (Dr. Usman Akmal)
 Reference of the request letter # 77

Dated: 26-02-2019
 Dated: 08-01-2019

Tension Test Report (Page -1/1)

Date of Test 28-02-2019
 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	0.072	5/32	0.165	-----	0.021	600	760	-----	62110	-----	78700	0.40	20.0	
2	0.099	3/16	0.192	-----	0.029	720	960	-----	54640	-----	72900	0.60	30.0	
3	0.168	1/4	0.251	-----	0.049	1560	1720	-----	69660	-----	76800	0.50	25.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	

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.

Note:

- 1- You can See your reports On Internet in the following web site
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
2. The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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
 Public Health Engg: Sub Division-II
 Mianwali
 (Sewerage and Drainage Scheme U.C Rokhri District Mianwali)

Reference # CED/TFL **32705** (Dr. Usman Akmal)
 Reference of the request letter # 151/MI-II

Dated: 26-02-2019
 Dated: 08-06-2018

Tension Test Report (Page -1/1)

Date of Test 28-02-2019
 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	0.078	5/32	0.171	-----	0.023	1040	1240	-----	99580	-----	118800	0.20	10.0	
2	0.087	3/16	0.180	-----	0.025	820	960	-----	70910	-----	83100	0.50	25.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and two 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														

I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

- 1- You can See your reports On Internet in the following web site
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
- 2- The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
 District Controller of Purchase/ Inspection
 Pakistan Railways General Store MGPR

Reference # CED/TFL **32706** (Dr. Usman Akmal)
 Reference of the request letter # CSF/503/P/2018/R.S.

Dated: 26-02-2019

Dated: 23-02-2019

Tension Test Report (Page -1/1)

Date of Test 28-02-2019
 Gauge length 8 inches
 Description M.S Round Bar Tensile Test

Sr. No.	Weight (kg/m)	Diameter/ size		Area (mm ²)		Yield load (kg)	Breaking Load (kg)	Yield Stress (MPa) Actual	Ultimate Stress (MPa) Actual	Elongation (inch)	% Elongation	Remarks
		Nominal (mm)	Actual (mm)	Nominal	Actual							
1	0.204	5.5	5.75	-----	26.0	700	1000	264	378	1.2	15.0	
2	0.206	5.5	5.78	-----	26.2	600	900	224	337	1.5	18.8	
3	0.187	5.5	5.51	-----	23.8	600	900	247	370	1.2	15.0	
4	0.209	5.5	5.82	-----	26.6	600	900	222	332	1.2	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	
Note: only four samples for tensile test												
Bend Test												

I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

- 1- You can See your reports On Internet in the following web site
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
- 2- The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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 of Ph-IX (Pkg-II, III & IV) DHA Lahore)(M/s NLC)

Reference # CED/TFL **32708** (Dr. Usman Akmal)
Reference of the request letter # 408/241/E/Lab/457/998

Dated: 26-02-2019
Dated: 22-02-2019

Tension Test Report (Page -1/1)

Date of Test 28-02-2019
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	0.351	3	0.362	0.11	0.103	3700	4900	74200	79040	98200	104700	0.90	11.3	SJ Steel
2	0.357	3	0.366	0.11	0.105	3400	4600	68200	71380	92200	96600	1.00	12.5	
3	4.191	10	1.252	1.27	1.232	38600	56200	67000	69070	97600	100600	1.30	16.3	
4	4.208	10	1.255	1.27	1.237	38200	52800	66300	68080	91700	94100	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only Four samples for tensile and two samples for bend test														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														
#10 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
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
2. The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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 Al-Habib Construction Company (Pvt) Ltd
Lahore
(CMPAK GSM Project Pahse- IX – Site ID: 42611, 42613, 42615, 42657, 42621)

Reference # CED/TFL **32710** (Dr. Usman Akmal)
Reference of the request letter # AHCC/CMPAK/014

Dated: 26-02-2019
Dated: 01-02-2019

Tension Test Report (Page -1/1)

Date of Test 28-02-2019
Gauge length 8 inches
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight (lbs/ft)	Diameter/ Size (mm)		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	10	9.49	0.11	0.110	3600	4500	72200	72410	90200	90600	1.00	12.5	
.	
.	
.	
.	
.	
Note: only one sample for tensile and one sample for bend test														
Bend Test														
10mm Dia 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
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
- 2- The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
 Additional Director Development
 DHA Phase-XI (Rahbar)
 Construction of Mosque in Block-‘A’ Sector-I, DHA Phase-XI (Rahbar)

Reference # CED/TFL **32711** (Dr. Usman Akmal) Dated: 26-02-2019
 Reference of the request letter # 700/3/Mosque A/Sec-I/Ph-XI/Projs/636 Dated: 26-02-2019

Tension Test Report (Page -1/1)

Date of Test 28-02-2019
 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	0.367	3/8	0.370	0.11	0.108	3100	4800	62200	63410	96200	98200	1.20	15.0	Saeed Kasur
2	0.352	3/8	0.363	0.11	0.104	3100	4800	62200	65990	96200	102200	1.00	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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:

- 1- You can See your reports On Internet in the following web site
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
- 2- The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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/02/32712

Dated: 26-02-19

To
Equipment & Material Department
CGGC Suki Kinari Project Management in Pakistan
874 MW Suki Kinari Hydro Power Project

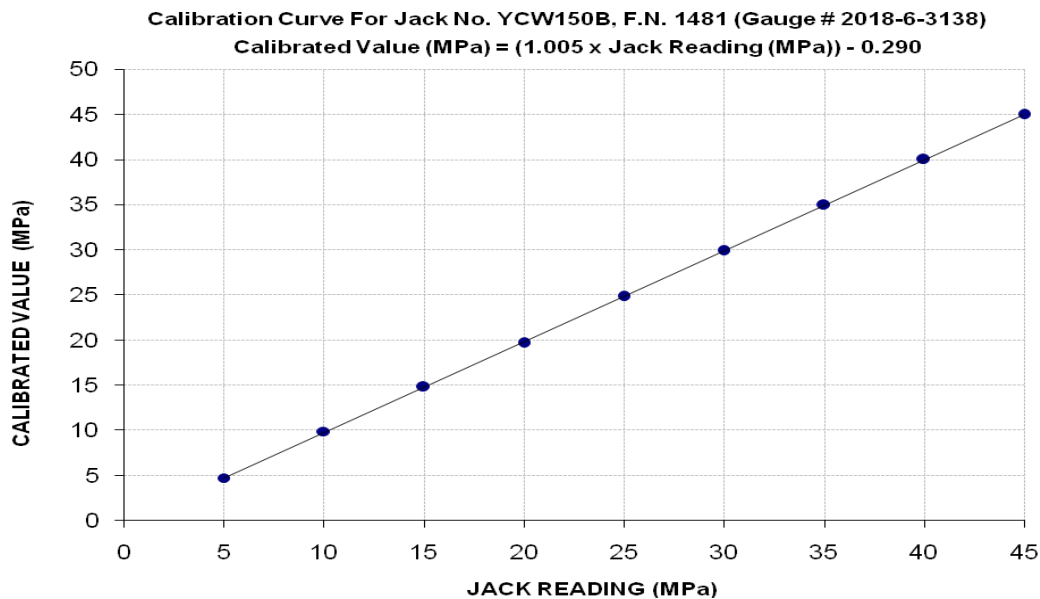
Subject: - CALIBRATION OF HYDRAULIC JACK (MARK: TFL/02/32712) (Page -1/16)

Reference to your Letter No. Nil, dated: 26/02/2019 on the subject cited above. One Hydraulic Jack (Jack No. YCW150B, Factor No. 1481, Gauge No. 2018.6.3138, Pump No. ZB4-500A.0) 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	30000	45000	59800	75400	90800	106200	121600	136600
Calibrated Pressure (Mpa)	4.74	9.87	14.81	19.68	24.81	29.88	34.95	40.02	44.95

The Ram Area of Jack = 298 cm²



I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

- 1- You can See your reports On Internet in the following web site
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
- 2- The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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/02/32712

Dated: 26-02-19

To
Equipment & Material Department
CGGC Suki Kinari Project Management in Pakistan
874 MW Suki Kinari Hydro Power Project

Subject: - CALIBRATION OF HYDRAULIC JACK (MARK: TFL/02/32712) (Page -2/16)

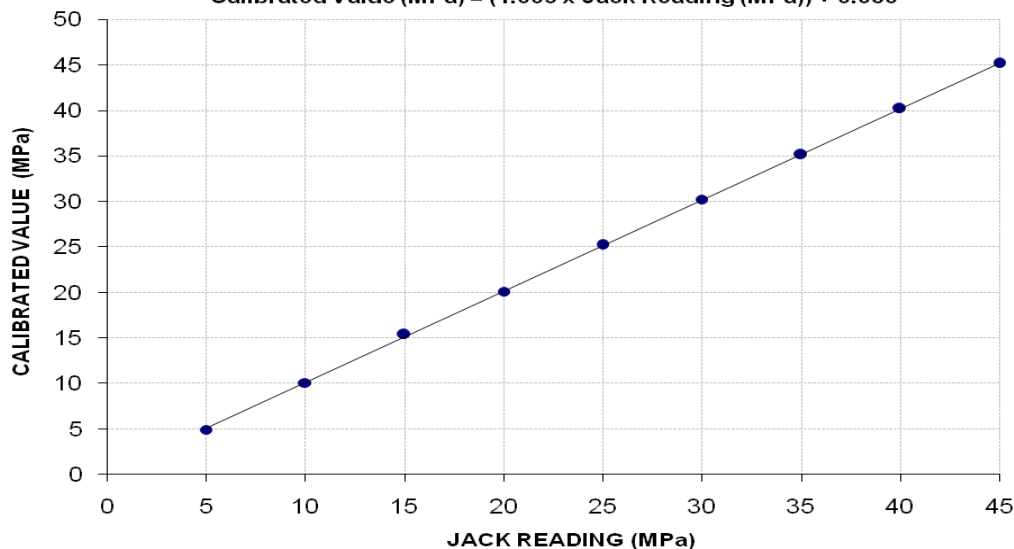
Reference to your Letter No. Nil, dated: 26/02/2019 on the subject cited above. One Hydraulic Jack (Jack No. YCW150B, Factor No. 1481, Gauge No. 2018.4.2716, Pump No. ZB4-500A.0) as received by us has been calibrated. The results are tabulated as under:

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)	15000	30600	46800	61000	76600	91800	106800	122200	137200
Calibrated Pressure (Mpa)	4.94	10.07	15.40	20.07	25.21	30.21	35.15	40.22	45.15

The Ram Area of Jack = 298 cm²

Calibration Curve For Jack No. YCW150B, F.N. 1481 (Gauge # 2018-6-2716)
Calibrated Value (MPa) = (1.003 x Jack Reading (MPa)) + 0.080



I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

- 1- You can See your reports On Internet in the following web site
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
2. The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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/02/32712

Dated: 26-02-19

To
Equipment & Material Department
CGGC Suki Kinari Project Management in Pakistan
874 MW Suki Kinari Hydro Power Project

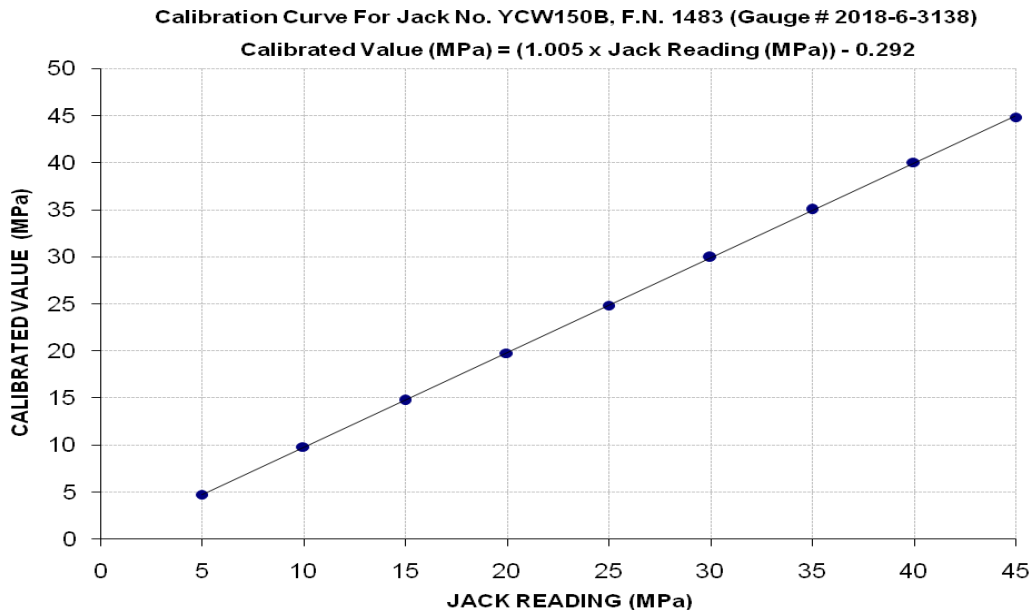
Subject: - CALIBRATION OF HYDRAULIC JACK (MARK: TFL/02/32712) (Page -3/16)

Reference to your Letter No. Nil, dated: 26/02/2019 on the subject cited above. One Hydraulic Jack (Jack No. YCW150B, Factor No. 1483, Gauge No. 2018.6.3138, Pump No. ZB4-500A.0) 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	29800	44800	60000	75400	91000	106400	121600	136200
Calibrated Pressure (Mpa)	4.74	9.81	14.74	19.75	24.81	29.95	35.02	40.02	44.82

The Ram Area of Jack = 298 cm²



I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

- 1- You can See your reports On Internet in the following web site
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
- 2- The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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/02/32712

Dated: 26-02-19

To
Equipment & Material Department
CGGC Suki Kinari Project Management in Pakistan
874 MW Suki Kinari Hydro Power Project

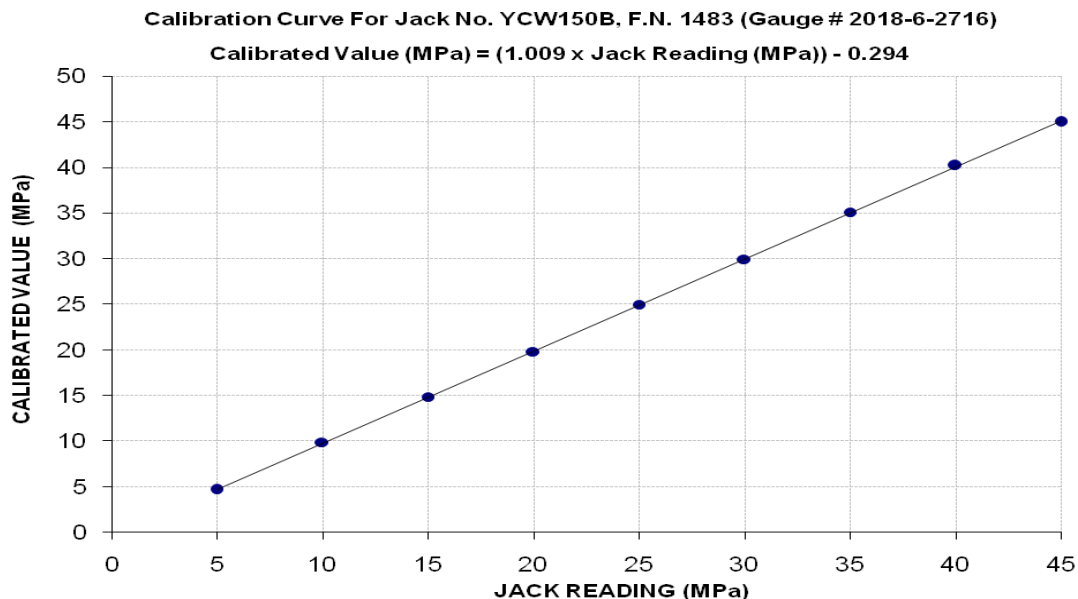
Subject: - CALIBRATION OF HYDRAULIC JACK (MARK: TFL/02/32712) (Page -4/16)

Reference to your Letter No. Nil, dated: 26/02/2019 on the subject cited above. One Hydraulic Jack (Jack No. YCW150B, Factor No. 1483, Gauge No. 2018.4.2716, Pump No. ZB4-500A.0) 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)	14200	30000	45200	60200	75800	91000	106600	122200	136600
Calibrated Pressure (Mpa)	4.67	9.87	14.88	19.81	24.95	29.95	35.08	40.22	44.95

The Ram Area of Jack = 298 cm²



I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

- 1- You can See your reports On Internet in the following web site
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
- 2- The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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/02/32712

Dated: 26-02-19

To
Equipment & Material Department
CGGC Suki Kinari Project Management in Pakistan
874 MW Suki Kinari Hydro Power Project

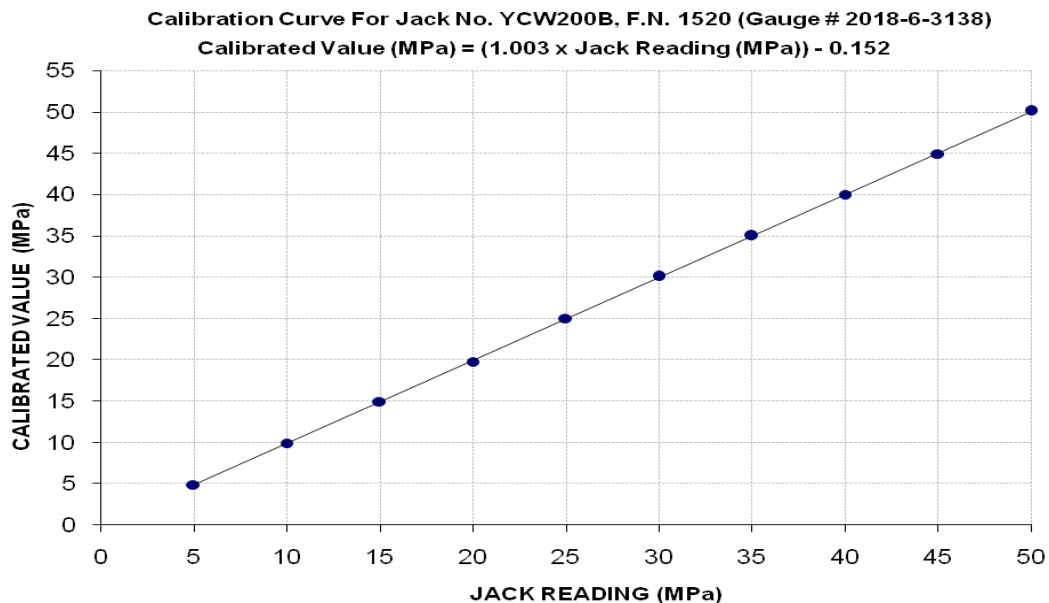
Subject: - CALIBRATION OF HYDRAULIC JACK (MARK: TFL/02/32712) (Page -5/16)

Reference to your Letter No. Nil, dated: 26/02/2019 on the subject cited above. One Hydraulic Jack (Jack No. YCW200B, Factor No. 1520, Gauge No. 2018.6.3138, Pump No. ZB4-500A.0) as received by us has been calibrated. The results are tabulated as under:

Total Range : Zero - 60 (MPa)
Calibrated Range : Zero - 50 (MPa)

Hydraulic Jack Reading (MPa)	5	10	15	20	25	30	35	40	45	50
Calibrated Load (Kg)	18800	38000	57400	76000	96000	115600	134600	153800	172600	192600
Calibrated Pressure (Mpa)	4.89	9.89	14.93	19.77	24.97	30.07	35.01	40.01	44.90	50.10

The Ram Area of Jack = 377 cm²



I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

- 1- You can See your reports On Internet in the following web site
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
- 2- The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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/02/32712

Dated: 26-02-19

To
Equipment & Material Department
CGGC Suki Kinari Project Management in Pakistan
874 MW Suki Kinari Hydro Power Project

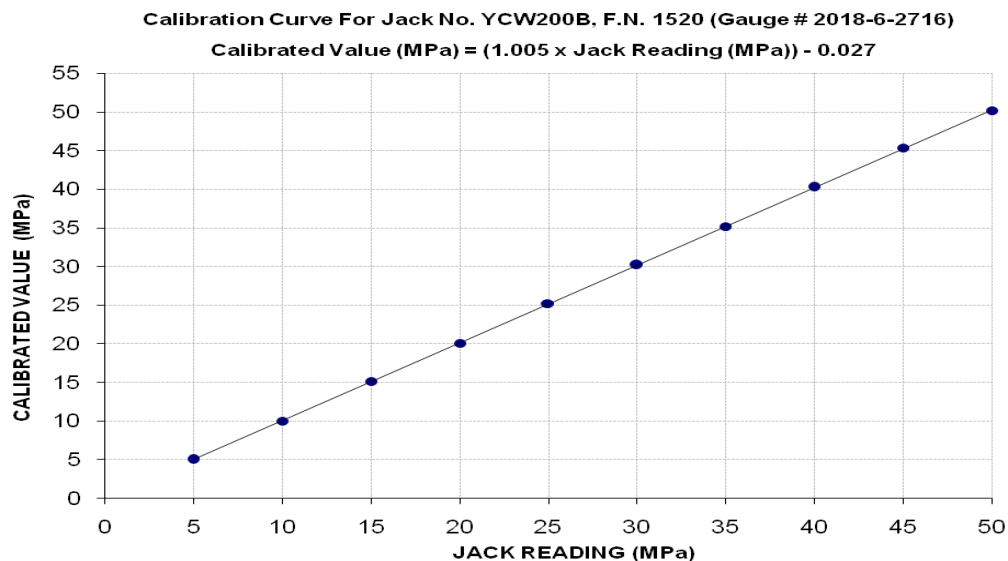
Subject: - CALIBRATION OF HYDRAULIC JACK (MARK: TFL/02/32712) (Page -6/16)

Reference to your Letter No. Nil, dated: 26/02/2019 on the subject cited above. One Hydraulic Jack (Jack No. YCW200B, Factor No. 1520, Gauge No. 2018.4.2716, Pump No. ZB4-500A.0) as received by us has been calibrated. The results are tabulated as under:

Total Range : Zero - 60 (MPa)
Calibrated Range : Zero - 50 (MPa)

Hydraulic Jack Reading (MPa)	5	10	15	20	25	30	35	40	45	50
Calibrated Load (Kg)	19200	38400	58000	77000	96800	116000	135200	154600	174200	192800
Calibrated Pressure (Mpa)	4.99	9.99	15.09	20.03	25.18	30.18	35.17	40.22	45.32	50.15

The Ram Area of Jack = 377 cm^2



I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

- 1- You can See your reports On Internet in the following web site
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
- 2- The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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/02/32712

Dated: 26-02-19

To
Equipment & Material Department
CGGC Suki Kinari Project Management in Pakistan
874 MW Suki Kinari Hydro Power Project

Subject: - CALIBRATION OF HYDRAULIC JACK (MARK: TFL/02/32712) (Page -7/16)

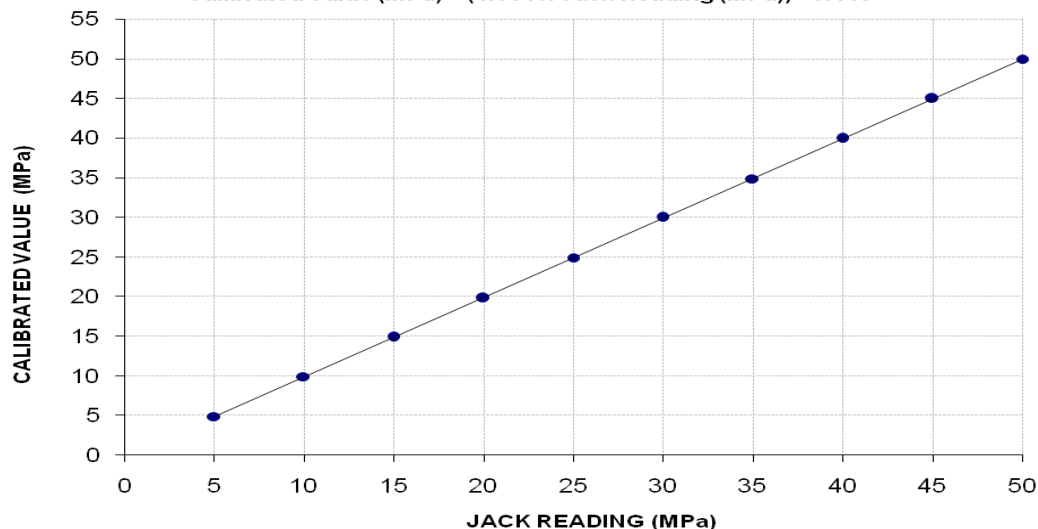
Reference to your Letter No. Nil, dated: 26/02/2019 on the subject cited above. One Hydraulic Jack (Jack No. YCW200B, Factor No. 1709, Gauge No. 2018.6.3138, Pump No. ZB4-500A.0) as received by us has been calibrated. The results are tabulated as under:

Total Range : Zero - 60 (MPa)
Calibrated Range : Zero - 50 (MPa)

Hydraulic Jack Reading (MPa)	5	10	15	20	25	30	35	40	45	50
Calibrated Load (Kg)	18800	38000	57200	76200	95600	115200	134000	153600	172800	192000
Calibrated Pressure (Mpa)	4.89	9.89	14.88	19.82	24.87	29.97	34.86	39.96	44.95	49.95

The Ram Area of Jack = 377 cm²

Calibration Curve For Jack No. YCW200B, F.N. 1709 (Gauge # 2018-6-3138)
Calibrated Value (MPa) = (1.001 x Jack Reading (MPa)) - 0.149



I/C Testing Laboratories
UET Lahore, Pakistan.

Note:

- 1- You can See your reports On Internet in the following web site
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
- 2- The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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/02/32712

Dated: 26-02-19

To
Equipment & Material Department
CGGC Suki Kinari Project Management in Pakistan
874 MW Suki Kinari Hydro Power Project

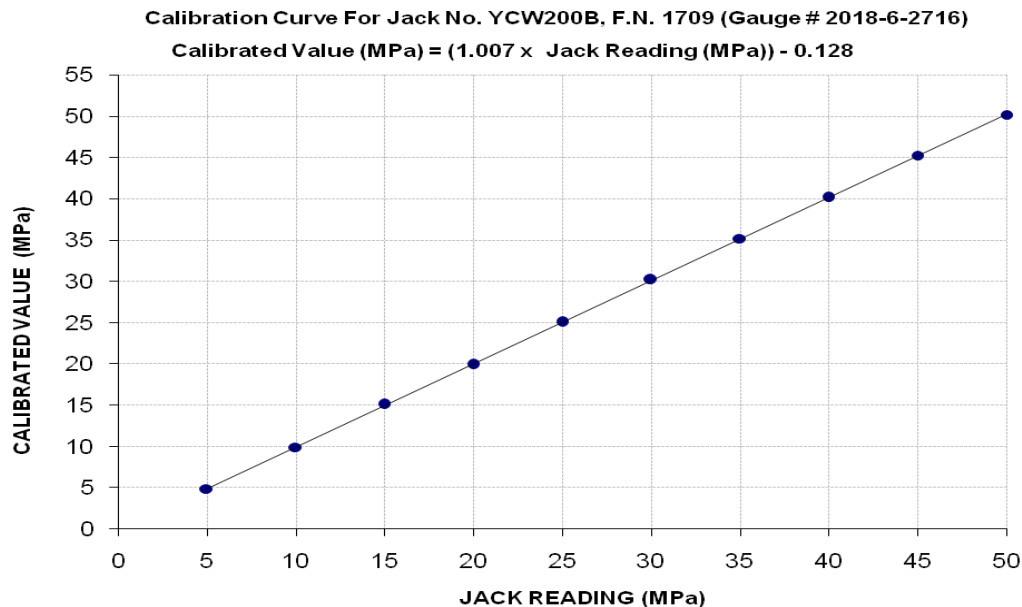
Subject: - CALIBRATION OF HYDRAULIC JACK (MARK: TFL/02/32712) (Page -8/16)

Reference to your Letter No. Nil, dated: 26/02/2019 on the subject cited above. One Hydraulic Jack (Jack No. YCW200B, Factor No. 1709, Gauge No. 2018.4.2716, Pump No. ZB4-500A.0) as received by us has been calibrated. The results are tabulated as under:

Total Range : Zero - 60 (MPa)
Calibrated Range : Zero - 50 (MPa)

Hydraulic Jack Reading (MPa)	5	10	15	20	25	30	35	40	45	50
Calibrated Load (Kg)	18800	38000	58000	76600	96400	116000	135200	154400	174000	192800
Calibrated Pressure (Mpa)	4.89	9.89	15.09	19.93	25.08	30.18	35.17	40.16	45.26	50.15

The Ram Area of Jack = 377 cm²



I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

- 1- You can See your reports On Internet in the following web site
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
- 2- The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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/02/32712

Dated: 26-02-19

To
Equipment & Material Department
CGGC Suki Kinari Project Management in Pakistan
874 MW Suki Kinari Hydro Power Project

Subject: - CALIBRATION OF HYDRAULIC JACK (MARK: TFL/02/32712) (Page -9/16)

Reference to your Letter No. Nil, dated: 26/02/2019 on the subject cited above. One Hydraulic Jack (Jack No. YDC240 QXB-200, Factor No. 18176, Gauge No. 2018.4.2715, Pump No. ZB4-500A.0) as received by us has been calibrated. The results are tabulated as under:

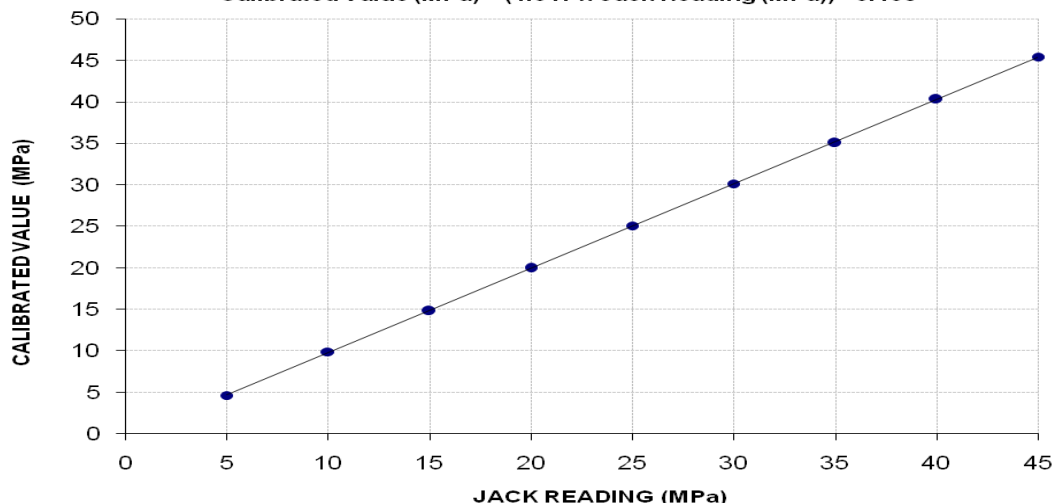
Total Range : Zero - 60 (MPa)
Calibrated Range : Zero - 45 (MPa)

Hydraulic Jack Reading (MPa)	5	10	15	20	25	30	35	40	45
Calibrated Load (Kg)	2250	4800	7200	9700	12200	14650	17050	19600	22100
Calibrated Pressure (Mpa)	4.62	9.87	14.80	19.94	25.08	30.11	35.05	40.29	45.43

The Ram Area of Jack = 47.71 cm²

Calibration Curve For Jack No. YDC240QXB-200, F.N. 18176 (Gauge # 2018-4-2715)

Calibrated Value (MPa) = (1.017 × Jack Reading (MPa)) - 0.408



I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

- 1- You can See your reports On Internet in the following web site
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
- 2- The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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/02/32712

Dated: 26-02-19

To
Equipment & Material Department
CGGC Suki Kinari Project Management in Pakistan
874 MW Suki Kinari Hydro Power Project

Subject: - CALIBRATION OF HYDRAULIC JACK (MARK: TFL/02/32712) (Page - 10/16)

Reference to your Letter No. Nil, dated: 26/02/2019 on the subject cited above. One Hydraulic Jack (Jack No. YDC240 QXB-200, Factor No. 18176, Gauge No. 2018.6.3143, Pump No. ZB4-500A.0) as received by us has been calibrated. The results are tabulated as under:

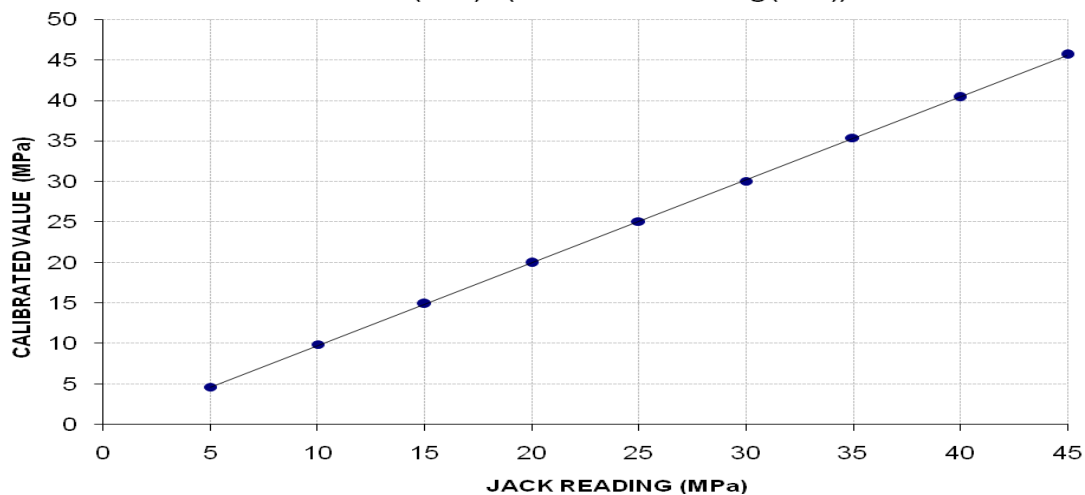
Total Range : Zero - 60 (MPa)
Calibrated Range : Zero - 45 (MPa)

Hydraulic Jack Reading (MPa)	5	10	15	20	25	30	35	40	45
Calibrated Load (Kg)	2250	4800	7250	9700	12200	14600	17200	19650	22200
Calibrated Pressure (Mpa)	4.62	9.87	14.90	19.94	25.08	30.01	35.36	40.39	45.63

The Ram Area of Jack = 47.71 cm²

Calibration Curve For Jack No. YDC240QXB-200, F.N. 18176 (Gauge # 2018-6-3143)

Calibrated Value (MPa) = (1.021 x Jack Reading (MPa)) - 0.459



I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

- 1- You can See your reports On Internet in the following web site
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
- 2- The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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/02/32712

Dated: 26-02-19

To
Equipment & Material Department
CGGC Suki Kinari Project Management in Pakistan
874 MW Suki Kinari Hydro Power Project

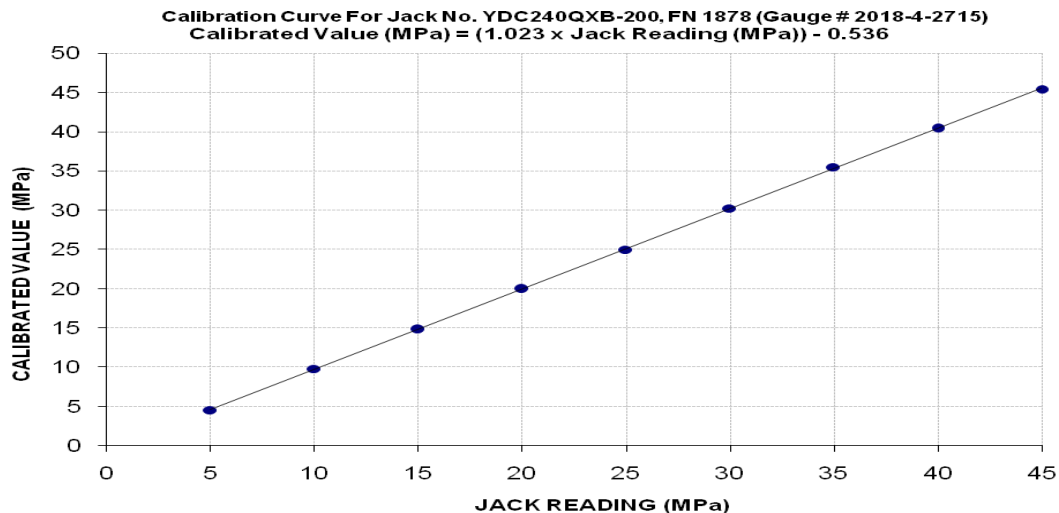
Subject: - CALIBRATION OF HYDRAULIC JACK (MARK: TFL/02/32712) (Page - 11/16)

Reference to your Letter No. Nil, dated: 26/02/2019 on the subject cited above. One Hydraulic Jack (Jack No. YDC240 QXB-200, Factor No. 1878, Gauge No. 2018.4.2715, Pump No. ZB4-500A.0) 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)	2200	4750	7200	9700	12150	14700	17250	19650	22100
Calibrated Pressure (Mpa)	4.52	9.76	14.80	19.94	24.97	30.22	35.46	40.39	45.43

The Ram Area of Jack = 47.71 cm²



I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

- 1- You can See your reports On Internet in the following web site
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
- 2- The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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/02/32712

Dated: 26-02-19

To
Equipment & Material Department
CGGC Suki Kinari Project Management in Pakistan
874 MW Suki Kinari Hydro Power Project

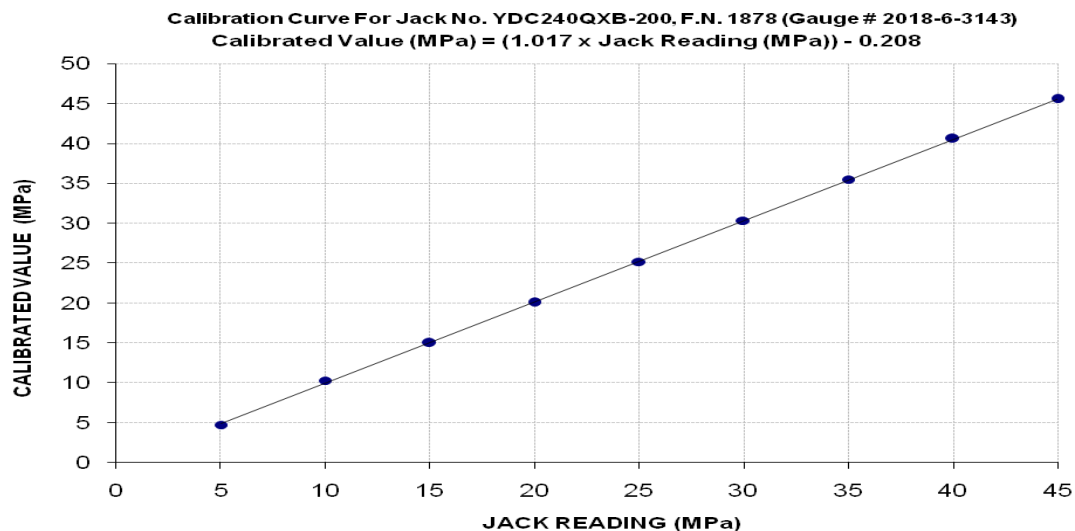
Subject: - CALIBRATION OF HYDRAULIC JACK (MARK: TFL/02/32712) (Page - 12/16)

Reference to your Letter No. Nil, dated: 26/02/2019 on the subject cited above. One Hydraulic Jack (Jack No. YDC240 QXB-200, Factor No. 1878, Gauge No. 2018.6.3143, Pump No. ZB4-500A.0) 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)	2300	5000	7300	9750	12250	14750	17250	19750	22150
Calibrated Pressure (Mpa)	4.73	10.28	15.01	20.04	25.18	30.32	35.46	40.60	45.53

The Ram Area of Jack = 47.71 cm²



I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

- 1- You can See your reports On Internet in the following web site
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
- 2- The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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/02/32712

Dated: 26-02-19

To
Equipment & Material Department
CGGC Suki Kinari Project Management in Pakistan
874 MW Suki Kinari Hydro Power Project

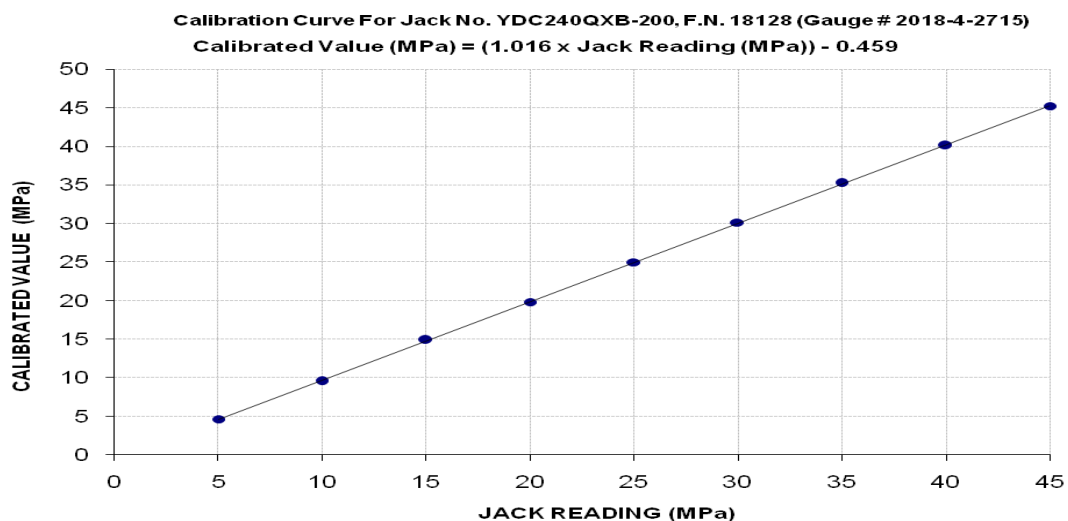
Subject: - CALIBRATION OF HYDRAULIC JACK (MARK: TFL/02/32712) (Page - 13/16)

Reference to your Letter No. Nil, dated: 26/02/2019 on the subject cited above. One Hydraulic Jack (Jack No. YDC240 QXB-200, Factor No. 18128, Gauge No. 2018.4.2715, Pump No. ZB4-500A.0) 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)	2250	4650	7250	9650	12150	14650	17150	19500	22000
Calibrated Pressure (Mpa)	4.62	9.56	14.90	19.84	24.97	30.11	35.25	40.08	45.22

The Ram Area of Jack = 47.71 cm²



I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

- 1- You can See your reports On Internet in the following web site
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
- 2- The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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/02/32712

Dated: 26-02-19

To
Equipment & Material Department
CGGC Suki Kinari Project Management in Pakistan
874 MW Suki Kinari Hydro Power Project

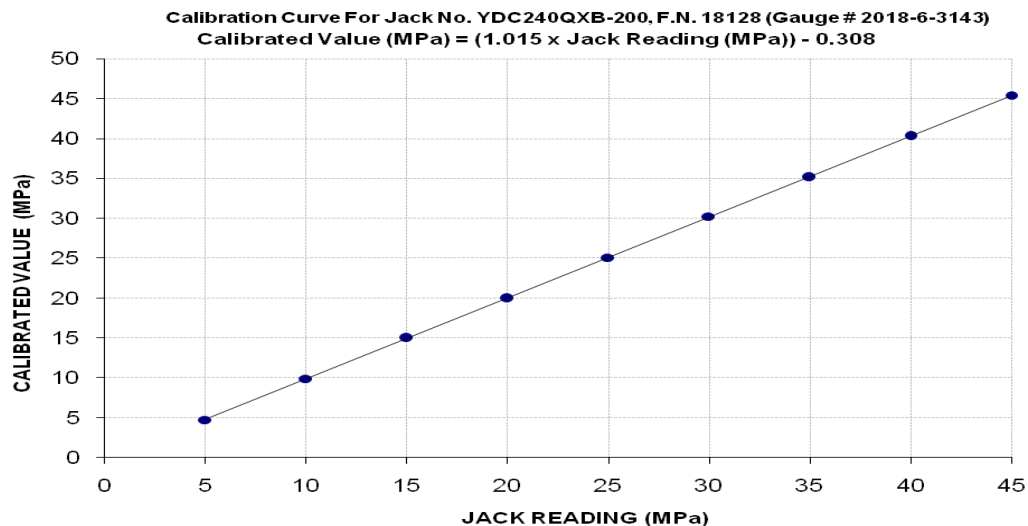
Subject: - CALIBRATION OF HYDRAULIC JACK (MARK: TFL/02/32712) (Page - 14/16)

Reference to your Letter No. Nil, dated: 26/02/2019 on the subject cited above. One Hydraulic Jack (Jack No. YDC240 QXB-200, Factor No. 18128, Gauge No. 2018.6.3143, Pump No. ZB4-500A.0) 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)	2300	4800	7300	9700	12200	14700	17100	19600	22100
Calibrated Pressure (Mpa)	4.73	9.87	15.01	19.94	25.08	30.22	35.15	40.29	45.43

The Ram Area of Jack = 47.71 cm²



I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

- 1- You can See your reports On Internet in the following web site
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
- 2- The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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/02/32712

Dated: 26-02-19

To
Equipment & Material Department
CGGC Suki Kinari Project Management in Pakistan
874 MW Suki Kinari Hydro Power Project

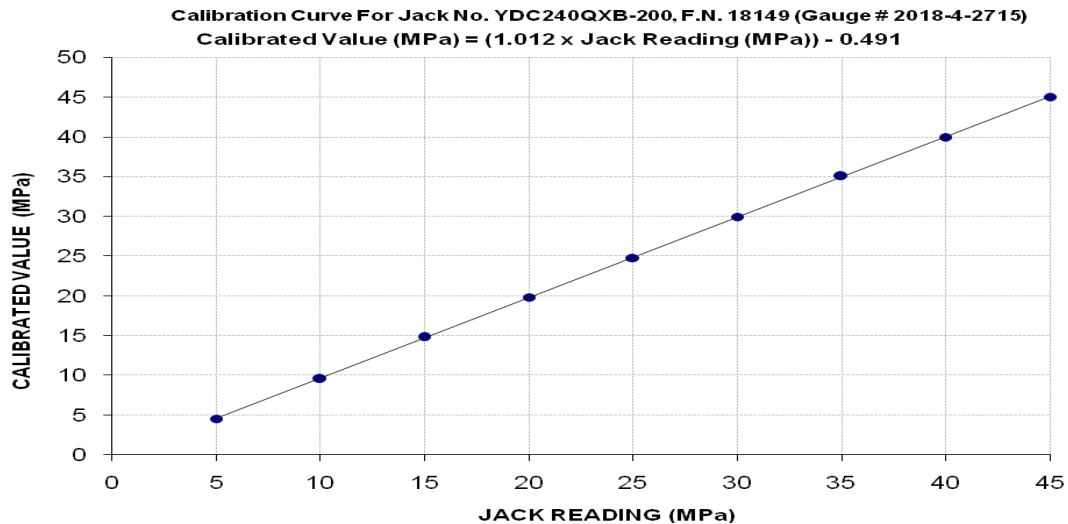
Subject: - CALIBRATION OF HYDRAULIC JACK (MARK: TFL/02/32712) (Page - 15/16)

Reference to your Letter No. Nil, dated: 26/02/2019 on the subject cited above. One Hydraulic Jack (Jack No. YDC240 QXB-200, Factor No. 18149, Gauge No. 2018.4.2715, Pump No. ZB4-500A.0) 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)	2200	4650	7200	9650	12050	14550	17050	19450	21900
Calibrated Pressure (Mpa)	4.52	9.56	14.80	19.84	24.77	29.91	35.05	39.98	45.02

The Ram Area of Jack = 47.71 cm²



I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

- 1- You can See your reports On Internet in the following web site
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
- 2- The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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/02/32712

Dated: 26-02-19

To
Equipment & Material Department
CGGC Suki Kinari Project Management in Pakistan
874 MW Suki Kinari Hydro Power Project

Subject: - CALIBRATION OF HYDRAULIC JACK (MARK: TFL/02/32712) (Page - 16/16)

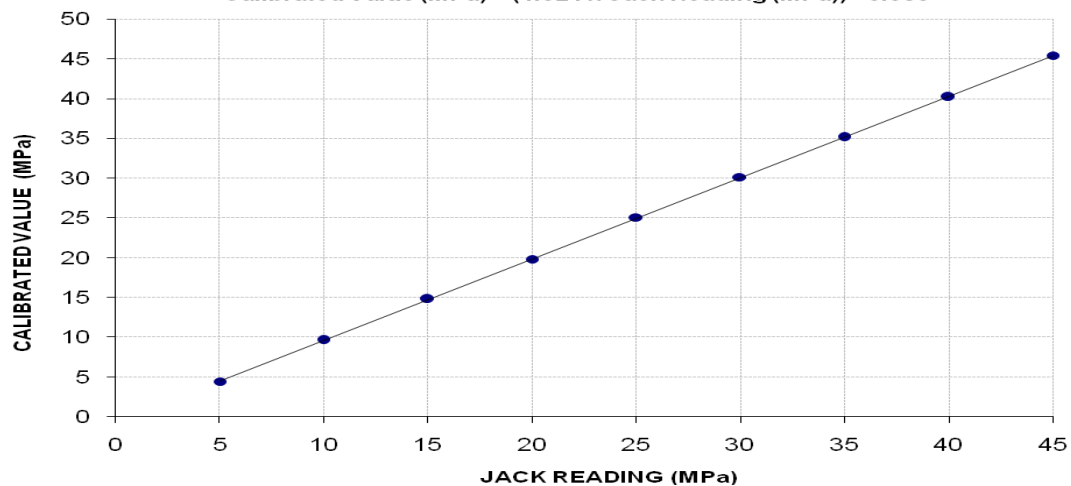
Reference to your Letter No. Nil, dated: 26/02/2019 on the subject cited above. One Hydraulic Jack (Jack No. YDC240 QXB-200, Factor No. 18149, Gauge No. 2018.6.3143, Pump No. ZB4-500A.0) as received by us has been calibrated. The results are tabulated as under:

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)	2150	4700	7200	9650	12200	14650	17100	19550	22100
Calibrated Pressure (Mpa)	4.42	9.66	14.80	19.84	25.08	30.11	35.15	40.19	45.43

The Ram Area of Jack = 47.71 cm²

Calibration Curve For Jack No. YDC240QXB-200, F.N. 18149 (Gauge # 2018-6-3143)
Calibrated Value (MPa) = (1.021 × Jack Reading (MPa)) - 0.585



I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

- 1- You can See your reports On Internet in the following web site
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
- 2- The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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
 NESPAK

Construction of Bridge at Chak Nizam on River Jhelum in District Mandi Bahauddin
 (Mughal Steel)

Reference # CED/TFL **32716** (Dr. Usman Akmal)

Dated: 27-02-2019

Reference of the request letter # 4004/03/NA/19/012

Dated: 25-02-2019

Tension Test Report (Page -1/1)

Date of Test 28-02-2019

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	0.370	3	0.372	0.11	0.109	4000	5100	80200	80980	102200	103300	1.10	13.8	
2	0.378	3	0.376	0.11	0.111	4000	5100	80200	79260	102200	101100	0.90	11.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
2. The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
 Senior Resident Engineer
 Promag Pvt Ltd
 DHA Multan Sector – A

Reference # CED/TFL **32718** (Dr. Usman Akmal)
 Reference of the request letter # CRE/Sec-A/223

Dated: 27-02-2019
 Dated: 23-02-2019

Tension Test Report (Page -1/1)

Date of Test 28-02-2019
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight (lbs/ft)	Diameter/ Size (mm)		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	0.424	10	10.12	0.11	0.125	3800	5700	76200	67220	114300	100900	1.20	15.0	
2	0.427	10	10.15	0.11	0.125	3800	5700	76200	66770	114300	100200	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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 Laboratoires
UET Lahore, Pakistan.

Note:

- 1- You can See your reports On Internet in the following web site
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
- 2- The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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
 Mascon Associates (Pvt) Ltd
 Musfir Khana (Thokar Niaz Baig Chowk)

Reference # CED/TFL **32720** (Dr. Usman Akmal)
 Reference of the request letter # MASC-RE/PG/18/5071

Dated: 27-02-2019
 Dated: 25-02-2019

Tension Test Report (Page -1/1)

Date of Test 28-02-2019
 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	0.444	3	0.408	0.11	0.131	4100	5100	82200	69230	102200	86200	1.10	13.8	
2	0.456	3	0.413	0.11	0.134	4000	5100	80200	65760	102200	83900	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:

- 1- You can See your reports On Internet in the following web site
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
- 2- The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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/02/32721

Dated: 27-02-2019

To,
M/S Sibbi Pole Plant
Quetta

Subject: - CALIBRATION OF DYNAMOMETER (MARK: TFL/02/32721)

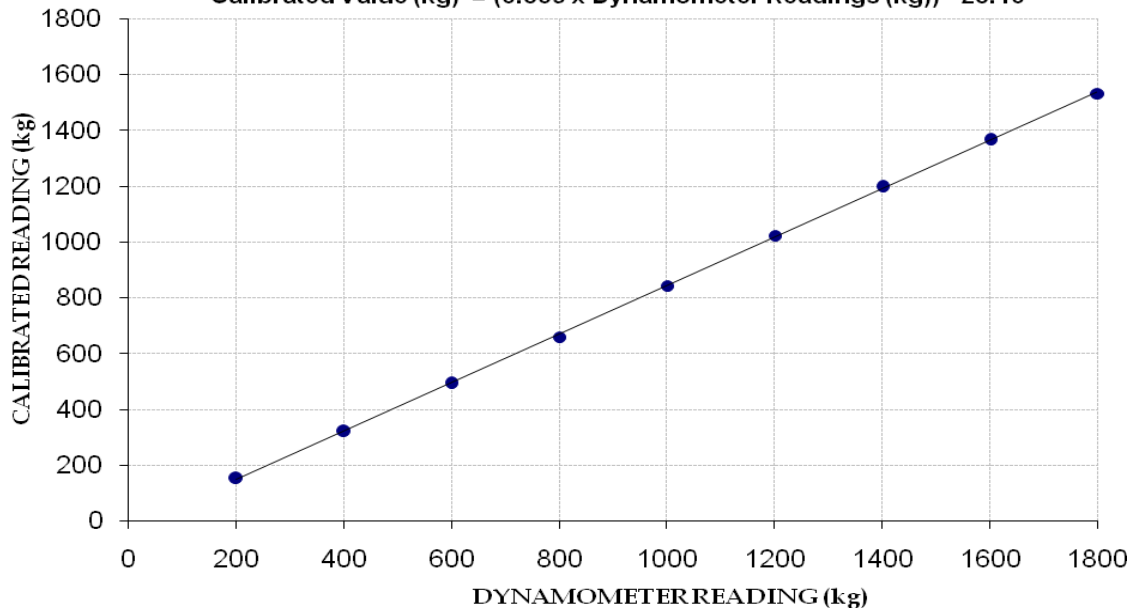
Ref: Your letter No. Nil, dated: 26/02/2019 on the subject cited above. One Dynamometer as received by us has been calibrated. The results are tabulated as under:

Total Range : Zero - 2000 (kg)
Calibrated Range : Zero - 1800 (kg)

Dynamometer Readings (kg)	200	400	600	800	1000	1200	1400	1600	1800	
Calibrated Readings	(kN)	1.48	3.13	4.83	6.45	8.25	10.03	11.73	13.39	15.03
	(kg)	150	319	492	657	841	1022	1195	1364	1532

Calibration Curve for Dynamometer

$$\text{Calibrated Value (kg)} = (0.869 \times \text{Dynamometer Readings (kg)}) - 28.10$$



I/C Testing Laboratories
UET Lahore, Pakistan.

Note:

- 1- You can See your reports On Internet in the following web site
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
- 2- The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
 Assistant Engineer
 B&W Department, U.E.T Lahore
 (Workshop and Design Center in UET Lahore)

Reference # CED/TFL **32722** (Dr. Usman Akmal)
 Reference of the request letter # B&W/AEN/769

Dated: 27-02-2019
 Dated: 25-02-2019

Tension Test Report (Page -1/1)

Date of Test 28-02-2019
 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	0.371	3	0.373	0.11	0.109	3500	4900	70200	70790	98200	99100	1.20	15.0	
2	0.371	3	0.373	0.11	0.109	3600	4900	72200	72810	98200	99100	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
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
- 2- The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
 Project Manager
 Buch International Hospital
 Multan

Reference # CED/TFL **32723** (Dr. Usman Akmal)
 Reference of the request letter # BUH/BV/21/1907

Dated: 27-02-2019
 Dated: 21-02-2019

Tension Test Report (Page -1/1)

Date of Test 28-02-2019
 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	0.367	3	0.371	0.11	0.108	4300	5200	86200	87900	104200	106300	0.90	11.3	
2	0.376	3	0.375	0.11	0.110	3200	4400	64200	63880	88200	87900	1.20	15.0	
3	0.381	3	0.378	0.11	0.112	3400	4900	68200	66920	98200	96500	1.20	60.0	
4	0.377	3	0.376	0.11	0.111	3200	4700	64200	63630	94200	93500	1.30	16.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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.

Note:

- 1- You can See your reports On Internet in the following web site
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
2. The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
 Project Manager
 Arshad & Co
 Civil Infrastructure Works for Package – C DHA

Reference # CED/TFL **32725** (Dr. Usman Akmal)

Dated: 27-02-2019

Reference of the request letter # DHA/AC/SC/PMG/SITE/708

Dated: 25-01-2019

Tension Test Report (Page -1/1)

Date of Test 28-02-2019

Gauge length 8 inches

Description Deformed Steel Bar Tensile and Bend Test

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	0.099	3/16	0.192	-----	0.029	840	1040	-----	63910	-----	79200	0.80	10.0	
2	0.069	3/16	0.161	-----	0.020	1000	1120	-----	108060	-----	121100	0.90	11.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	

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

Bend Test

3/16" Dia 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
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
- 2- The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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 Latif Company & Co
Lahore
(Model Housing Project in Dream Gardens Lahore PH-II)

Reference # CED/TFL **32728** (Dr. Usman Akmal)
Reference of the request letter # Nil

Dated: 27-02-2019
Dated: 26-02-2019

Tension Test Report (Page -1/1)

Date of Test 28-02-2019
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	0.380	3	0.377	0.11	0.112	3200	4500	64200	63200	90200	88900	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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.

Note:

- 1- You can See your reports On Internet in the following web site
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
- 2- The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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 of Ph-IX (Pkg-II, III & IV) DHA Lahore)(M/s NLC)

Reference # CED/TFL **32730** (Dr. Usman Akmal)
Reference of the request letter # 408/241/E/Lab/462/993

Dated: 27-02-2019
Dated: 27-02-2019

Tension Test Report (Page -1/1)

Date of Test 28-02-2019
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	4.267	10	1.264	1.27	1.254	43200	59000	75000	75910	102400	103700	1.40	17.5	SJ Steel
2	4.308	10	1.270	1.27	1.266	43600	58200	75700	75880	101100	101300	0.90	11.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only Four samples for tensile and two samples for bend test														
Bend Test														
#10 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
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
- 2- The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
 CEO
 Royal Real Estate and Builders Pvt Ltd
 PAF Hospital Diagnostic Center Lahore
 (SJ Steel)
 Reference # CED/TFL **32731** (Dr. Usman Akmal)
 Reference of the request letter # Nil

Dated: 27-02-2019
 Dated: 27-02-2019

Tension Test Report (Page -1/1)

Date of Test 28-02-2019
 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	0.372	3	0.373	0.11	0.109	3100	5000	62200	62460	100200	100800	1.20	15.0	
2	0.366	3	0.370	0.11	0.108	3100	4900	62200	63480	98200	100400	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
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
- 2- The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
 DAD (Svcs) Ask-XI
 Lahore
 (Drain & Culvert and Boundary Wall Foundation at Askari-XI, Sctor-B Lahore)

Reference # CED/TFL **32732** (Dr. Usman Akmal)
 Reference of the request letter # 504/DADS (Svcs)

Dated: 27-02-2019
 Dated: 22-02-2019

Tension Test Report (Page -1/1)

Date of Test 28-02-2019
 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	0.379	3	0.377	0.11	0.111	2900	4400	58200	57330	88200	87000	1.50	18.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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.

Note:

- 1- You can See your reports On Internet in the following web site
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
- 2- The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
Dy. Manager (Transport)
GEPCO Ltd Gujranwala

Reference # CED/TFL **32733** (Dr. Ali Ahmed)
Reference of the request letter # 64076

Dated: 27-02-2019

Dated: 21-02-2019

Yield Test Report (Page -1/2)

Date of Test 28-02-2019
Gauge length -----
Description Pin Yield Test

Sr. No.	Diameter / size	Reduced Dia	Reduced Area	Yield load	Breaking Load	Yield Stress	Ultimate Stress	Elongation	% Elongation	Remarks
	(inch)	(inch)	(in ²)	(kg)	(kg)	(Psi)	(Psi)	(inch)		
1	1.26	0.98	0.754	34200	-----	99957.15	-----	-----	-----	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
Note: only one sample for tensile test										
-	-	-	-	-	-	-	-	-	-	
Bend Test										

Witness by Malik Muhammad Junaid Dy. Manager (P&E) GEPCO Gujranwala

I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

- 1- You can See your reports On Internet in the following web site
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
- 2- The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
Dy. Manager (Transport)
GEPCO Ltd Gujranwala

Reference # CED/TFL **32733** (Dr. Ali Ahmed)
Reference of the request letter # 64076

Dated: 27-02-2019

Dated: 21-02-2019

Yield Test Report (Page -2/2)

Date of Test 28-02-2019
Gauge length -----
Description Steel Strip Tensile Test

Sr. No.	Designation	Size of Strip	X Section Area	Yield load	Breaking Load	Yield Stress	Ultimate Stress	Elongation	% Elongation	Remarks
	-----	(inch)	(in ²)	(kg)	(kg)	(Psi)	(Psi)	(in)		
1	Steel Strip	1.004x0.197	0.198	5700	-----	63533.78	-----	----	-----	
.	
.	
.	
.	
.	
Only One Sample for Tensile Test										
Bend Test										

Witness by Malik Muhammad Junaid Dy. Manager (P&E) GEPCO Gujranwala

I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

- 1- You can See your reports On Internet in the following web site
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
- 2- The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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/02/32741

Dated: 28-02-19

To
Resident Engineer
Minconsult International Ltd Jv Creative Engineering Consultants
Khyber Pakhtunkhwa Provincial Roads Improvement Project (KP-PRI)
Haripur - Hattar - Taxila Section Road Section (21.97km)

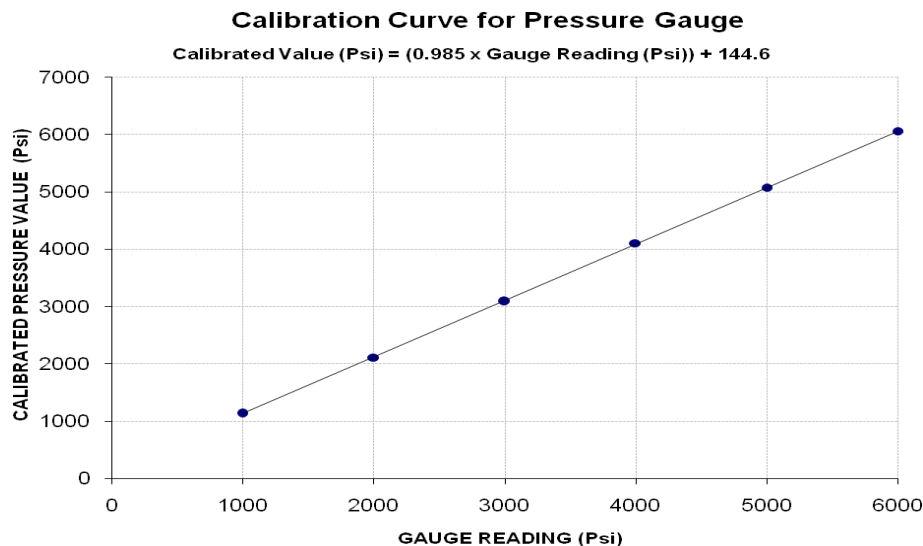
Subject: - **CALIBRATION OF PRESSURE GAUGE (MARK: TFL/02/32741)** (Page – 1/1)

Reference to your Letter No. JV Min-CEC/PRIP/RE-II/HHR/2019/172, dated: 28/02/2019 on the subject cited above. One Pressure Gauge as received by us has been calibrated. The results are tabulated as under:

Total Range : Zero - 15000 (Psi)
Calibrated Range : Zero - 6000 (Psi)

Pressure Gauge Reading (Psi)	1000	2000	3000	4000	5000	6000
Calibrated Load (kg)	15800	29400	43000	57100	70600	84300
Calibrated Pressure (Psi)	1134.97	2111.90	3088.83	4101.68	5071.43	6055.55

The Ram Area of Calibration = 198 cm²



I/C Testing Laboratories
UET Lahore, Pakistan.

Note:

- 1- You can See your reports On Internet in the following web site
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
- 2- The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

I/C Testing Laboratories
UET Lahore, Pakistan.

Note:

- 1- You can See your reports On Internet in the following web site
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
2. The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples