



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/07/5376, 5391

Dated: 22-07-2024

Dated of Test: 26-07-2024

To

Resident Engineer
Diamer Basha Consultants Group (DBCG)
NESPAK - ACE - MMP - MWH - POYRY - DOLSAR
Diamer Basha Dam Project

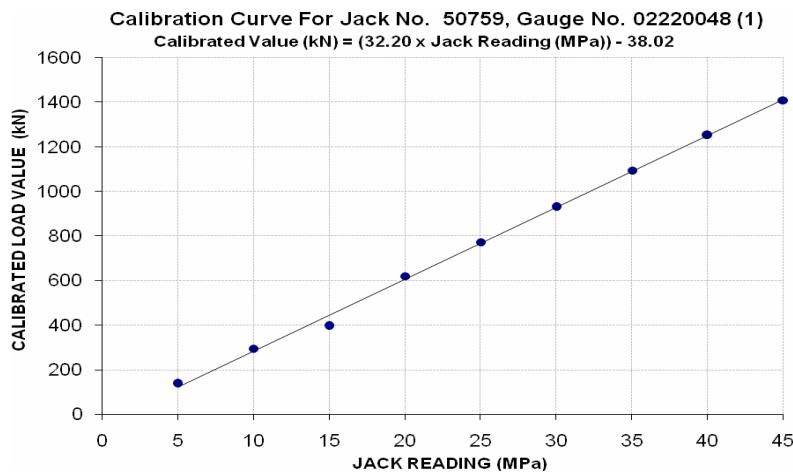
Subject: - CALIBRATION OF HYDRAULIC JACK (MARK: TFL/07/5376) (Page -1/4)

Reference to your Letter No. DBCG/Lab/PF-JV/2024/027, dated: 22/07/2024 on the subject cited above. One Hydraulic Jack (Jack No. 50759, Gauge No. 02220048(1)) with Load cell No. BGK4900-1500kN, Read out No. BGK-408VR as received by us has been calibrated as per client requirement. 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
Load Cell Reading	(kN)	130	272	406	561	699	854	1058	1155	1307
Calibrated Load	(kg)	14000	30000	40400	63200	78800	94800	111600	127600	143600
	(kN)	137	294	396	620	773	930	1094	1251	1408
Calibrated Pressure	(Mpa)	4.61	9.87	13.30	20.80	25.93	31.20	36.73	41.99	47.26

The Ram Area of Jack = 298 cm²



I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

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To

Resident Engineer
Diamer Basha Consultants Group (DBCG)
NESPAK - ACE - MMP - MWH - POYRY - DOLSAR
Diamer Basha Dam Project

Subject: - CALIBRATION OF HYDRAULIC JACK (MARK: TFL/07/5376) (Page -2/4)

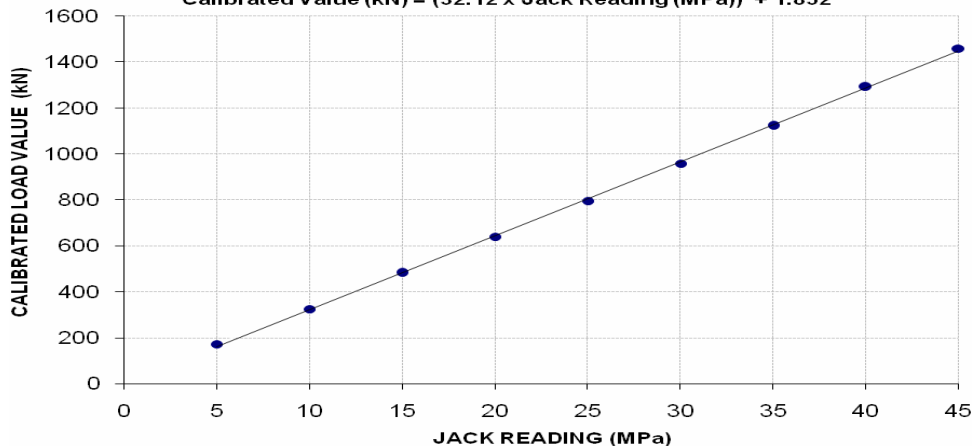
Reference to your Letter No. DBCG/Lab/PF-JV/2024/027, dated: 22/07/2024 on the subject cited above. One Hydraulic Jack (Jack No. 50759, Gauge No. 02220048(2)) with Load cell No. BGK4900-1500kN, Read out No. BGK-408VR as received by us has been calibrated as per client requirement. The results are tabulated 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
Load Cell Reading	(kN)	157	293	438	579	733	882	1037	1193	1358
Calibrated Load	(kg)	17600	33200	49200	65200	81200	97600	114400	131600	148800
	(kN)	173	326	483	639	796	957	1122	1291	1459
Calibrated Pressure	(Mpa)	5.79	10.93	16.19	21.46	26.72	32.12	37.65	43.31	48.97

The Ram Area of Jack = 298 cm²

Calibration Curve For Jack No. 50759, Gauge No. 02220048 (2)
Calibrated Value (kN) = (32.12 x Jack Reading (MPa)) + 1.852



I/C Testing Laboratoires
UET Lahore, Pakistan.

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Dated: 22-07-2024

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Diamer Basha Consultants Group (DBCG)
NESPAK - ACE - MMP - MWH - POYRY - DOLSAR
Diamer Basha Dam Project

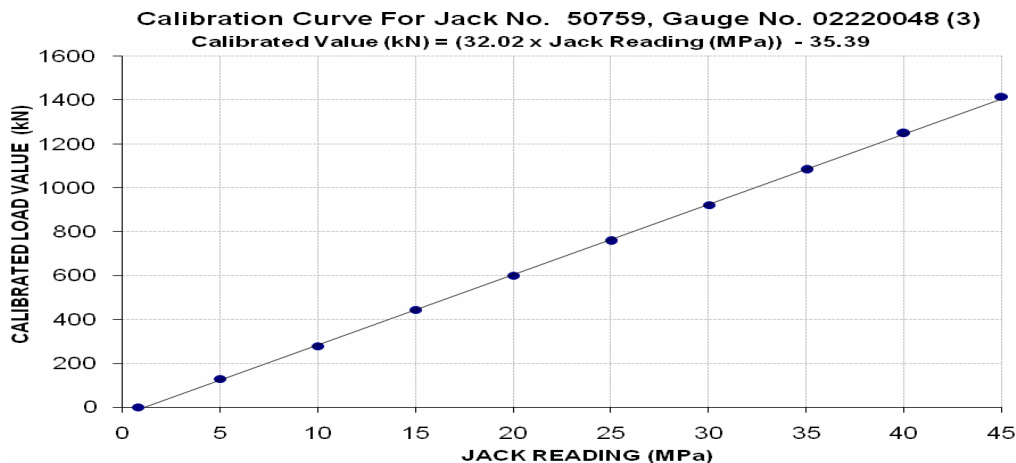
Subject: - CALIBRATION OF HYDRAULIC JACK (MARK: TFL/07/5376) (Page -3/4)

Reference to your Letter No. DBCG/Lab/PF-JV/2024/027, dated: 22/07/2024 on the subject cited above. One Hydraulic Jack (Jack No. 50759, Gauge No. 02220048(3)) with Load cell No. BGK4900-1500kN, Read out No. BGK-408VR as received by us has been calibrated as per client requirement. The results are tabulated as under:

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

Hydraulic Jack Reading	(MPa)	0.8	5	10	15	20	25	30	35	40	45
Load Cell Reading	(kN)	0	117	250	402	543	692	845	997	1152	1239
Calibrated Load	(kg)	0	13200	28400	45200	61200	77200	94000	110400	127200	144400
	(kN)	0	129	279	443	600	757	922	1083	1247	1416
Calibrated Pressure	(Mpa)	0	4.34	9.35	14.88	20.14	25.41	30.93	36.33	41.86	47.52

The Ram Area of Jack = 298 cm²



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Dated: 22-07-2024

Dated of Test: 26-07-2024

To

Resident Engineer
Diamer Basha Consultants Group (DBCG)
NESPAK - ACE - MMP - MWH - POYRY - DOLSAR
Diamer Basha Dam Project

Subject: - CALIBRATION OF HYDRAULIC JACK (MARK: TFL/07/5376) (Page -4/4)

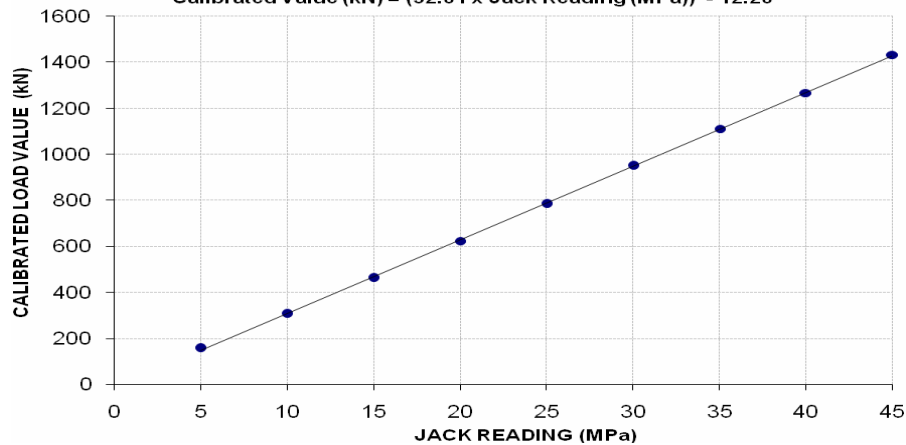
Reference to your Letter No. DBCG/Lab/PF-JV/2024/027, dated: 22/07/2024 on the subject cited above. One Hydraulic Jack (Jack No. 50759, Gauge No. 02220048(4)) with Load cell No. BGK4900-1500kN, Read out No. BGK-408VR as received by us has been calibrated as per client requirement. The results are tabulated 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
Load Cell Reading	(kN)	140	276	420	562	720	875	1023	1172	1329
Calibrated Load	(kg)	16000	31200	47200	63600	80000	96800	113200	129200	146000
	(kN)	157	306	463	624	785	949	1110	1267	1432
Calibrated Pressure	(Mpa)	5.27	10.27	15.53	20.93	26.33	31.86	37.25	42.52	48.05

The Ram Area of Jack = 298 cm²

Calibration Curve For Jack No. 50759, Gauge No. 02220048 (4)
Calibrated Value (kN) = (32.01 × Jack Reading (MPa)) - 12.20



I/C Testing Laboratoires
UET Lahore, Pakistan.

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

To,

Senior Project Manager
Infrastructure Development Authority of The Punjab
NSIC Sargodha
“Establishment of Naz=waz Sharif Institute of Cardiology, Sargodha.”

Reference # CED/TFL **5389** (Dr. M Rizwan Riaz)

Dated: 24-07-2024

Reference of the request letter # SPM(NSIC)/IDAP/2024/19600

Dated: 23-07-2024

Tension Test Report (Page -1/1)

Date of Test 26-07-2024

Gauge length 8 inches

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

Sr. No.	Weight	Diameter/ Size		Area (in ²)		Yield load	Breaking Load	Yield Stress (psi)		Ultimate Stress (psi)		Elongation	% Elongation	Remarks
	(lbs/ft)	Nominal (#)	Actual (inch)	Nominal	Actual	(kg)	(kg)	Nominal	Actual	Nominal	Actual	(inch)		
1	0.372	3	0.373	0.11	0.109	3330	4570	66800	67180	91600	92200	1.00	12.5	FF Steel
2	0.371	3	0.373	0.11	0.109	3330	4960	66800	67290	99400	100300	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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:

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STRUCTURAL ENGINEERING DIVISION
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Pakistan. Ph: 92-42-99029202

To,

Sub Divisional Officer
Buildings Sub Division No. I
Multan
(Establishment of District Court Complex Multan)

Reference # CED/TFL **5390** (Dr. M Rizwan Riaz)
Reference of the request letter # 7/1st

Dated: 24-07-2024
Dated: 02-07-2024

Tension Test Report (Page -1/1)

Date of Test 26-07-2024
Gauge length 8 inches
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight	Diameter/ Size (inch)		Area (in ²)		Yield load	Breaking Load	Yield Stress (psi)		Ultimate Stress (psi)		Elongation	% Elongation	Remarks
	(lbs/ft)	Nominal	Actual	Nominal	Actual	(kg)	(kg)	Nominal	Actual	Nominal	Actual	(inch)		
1	0.361	3/8	0.368	0.11	0.106	3380	4690	67800	70200	94000	97500	1.30	16.3	
2	0.361	3/8	0.368	0.11	0.106	3330	4640	66800	69150	93000	96400	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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.

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

Ref: CED/TFL/07/5392

Dated: 24-07-2024

Dated of Test: 26-07-2024

To

Resident Engineer
Diamer Basha Consultants Group (DBCG)
NESPAK - ACE - MMP - MWH - POYRY - DOLSAR
Diamer Basha Dam Project

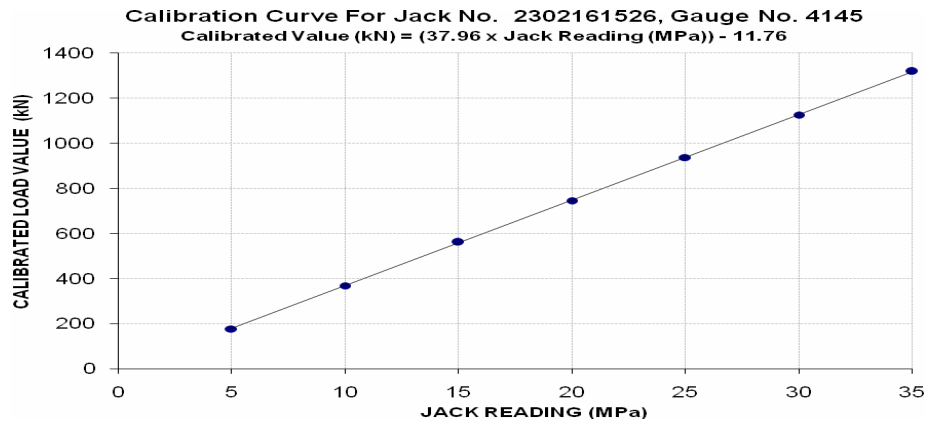
Subject: - CALIBRATION OF HYDRAULIC JACK (MARK: TFL/06/5260) (Page -1/1)

Reference to your Letter No. DBCG/Lab/PF-JV/2024/030, dated: 23/07/2024 on the subject cited above. One Hydraulic Jack (Jack No. 230216526, Gauge No. 4145) with Load cell No. BGK49000-1500kN as received by us has been calibrated as per client requirement. The results are tabulated as under:

Total Range : Zero - 60 (MPa)
Calibrated Range : Zero - 35 (MPa)

Hydraulic Jack Reading	(MPa)	5	10	15	20	25	30	35
Load Cell Reading	(kN)	158	331	514	681	858	1038	1215
Calibrated Load	(kg)	18000	37600	57200	76000	95600	114800	134400
	(kN)	177	369	561	745	938	1126	1318
Calibrated Pressure	(Mpa)	4.75	9.93	15.11	20.07	25.25	30.32	35.50

The Ram Area of Jack = 371.305 cm²



I/C Testing Laboratoires
UET Lahore, Pakistan.

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

To,

M/S Aziz Industries
Sheikhupura
(APS School Iqbal Campus Rahwali Gujranwala (Project Construction of Classes))

Reference # CED/TFL **5394** (Dr. M Rizwan Riaz)
Reference of the request letter # Nil

Dated: 24-07-2024
Dated: 24-07-2024

Tension Test Report (Page -1/1)

Date of Test 26-07-2024
Gauge length 8 inches
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight	Diameter/ Size		Area (in ²)		Yield load	Breaking Load	Yield Stress (psi)		Ultimate Stress (psi)		Elongation	% Elongation	Remarks
	(lbs/ft)	Nominal (#)	Actual (inch)	Nominal	Actual	(kg)	(kg)	Nominal	Actual	Nominal	Actual	(inch)		
1	0.381	3	0.378	0.11	0.112	3360	5070	67400	66060	101600	99700	1.30	16.3	Aziz Steel
2	0.379	3	0.377	0.11	0.112	3520	5200	70600	69570	104200	102800	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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 Laboratories
UET Lahore, Pakistan.

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STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
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Pakistan. Ph: 92-42-99029202

To,

Senior Estate Engineer
Sundar Industrial Estate
Lahore

“Repair & Maintenance of SIE Buildings, Construction of U-Tern near Colgate, Repair & Maintenance of Data Center at Rescue Building, Construction of Fire Hydrant Chambers at SIE & Development of Rescue Back Side Area.”

Reference # CED/TFL **5395** (Dr. M Rizwan Riaz)

Dated: 24-07-2024

Reference of the request letter # BOM/SIE/BCD 7-24/438

Dated: 24-07-2024

Tension Test Report (Page -1/1)

Date of Test 26-07-2024

Gauge length 8 inches

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

Sr. No.	Weight	Diameter/ Size		Area (in ²)		Yield load	Breaking Load	Yield Stress (psi)		Ultimate Stress (psi)		Elongation	% Elongation	Remarks
	(lbs/ft)	Nominal (#)	Actual (inch)	Nominal	Actual	(kg)	(kg)	Nominal	Actual	Nominal	Actual	(inch)		
1	0.372	3	0.373	0.11	0.109	3410	4540	68400	68670	91000	91500	1.30	16.3	Mughal Steel
2	0.370	3	0.372	0.11	0.109	3540	4480	71000	71700	89800	90800	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.

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STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
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Pakistan. Ph: 92-42-99029202

To,

Khurram Shahbaz Butt
Plot No. 395-B, EME Society (DHA),
Multan Road, Lahore

Reference # CED/TFL **5407** (Dr. M Rizwan Riaz)
Reference of the request letter # Nil

Dated: 25-07-2024
Dated: 25-07-2024

Tension Test Report (Page -1/1)

Date of Test 26-07-2024
Gauge length 8 inches
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight	Diameter/ Size		Area (in ²)		Yield load	Breaking Load	Yield Stress (psi)		Ultimate Stress (psi)		Elongation	% Elongation	Remarks
	(lbs/ft)	Nominal (#)	Actual (inch)	Nominal	Actual	(kg)	(kg)	Nominal	Actual	Nominal	Actual	(inch)		
1	0.363	3	0.369	0.11	0.107	3430	4480	68800	70770	89800	92500	1.40	17.5	
2	0.368	3	0.371	0.11	0.108	3620	4640	72600	73750	93000	94600	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														

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Test Floor Laboratory
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To,

Muhammad Ibraheem Hassan
Plot No. 394-B, EME Society (DHA),
Multan Road, Lahore

Reference # CED/TFL **5408** (Dr. M Rizwan Riaz)
Reference of the request letter # Nil

Dated: 25-07-2024
Dated: 25-07-2024

Tension Test Report (Page -1/1)

Date of Test 26-07-2024
Gauge length 8 inches
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight	Diameter/ Size		Area (in ²)		Yield load	Breaking Load	Yield Stress (psi)		Ultimate Stress (psi)		Elongation	% Elongation	Remarks
	(lbs/ft)	Nominal (#)	Actual (inch)	Nominal	Actual	(kg)	(kg)	Nominal	Actual	Nominal	Actual	(inch)		
1	0.365	3	0.370	0.11	0.107	3430	4480	68800	70410	89800	92000	1.10	13.8	
2	0.363	3	0.369	0.11	0.107	3430	4530	68800	70780	90800	93500	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 Laboratories
UET Lahore, Pakistan.

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