



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

To,
 Project Director (HVDC)
 NTDC Lahore
 (Construction of 15 No. Security Watch Towers at 660 kV HVDC Converter Station Head
 Balloki District Nankana Sahib)

Reference # CED/TFL **33322** (Dr. Ali Ahmed)

Dated: 29-05-2019

Reference of the request letter # 1151-55/PD/HVDC/NTDC/LHR

Dated: 28-05-2019

Tension Test Report (Page -1/1)

Date of Test 31-05-2019

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	0.366	10	9.40	0.11	0.108	2600	4000	52100	53240	80200	82000	1.60	20.0	
2	0.365	10	9.38	0.11	0.107	2600	4000	52100	53480	80200	82300	1.50	18.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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:

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To,
 Resident Engineer (Civil)
 Jaggran-II Hydropower Consultants
 48MW Jaggran-II Hydropower Project

Reference # CED/TFL **33323** (Dr. Ali Ahmed)
 Reference of the request letter # E314-L-JHC-RE-EPCC-OC-098

Dated: 30-05-2019
 Dated: 18-05-2019

Tension Test Report (Page -1/1)

Date of Test 31-05-2019

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	Grade
		Nominal	Actual	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.360	10	9.32	0.11	0.106	2600	4400	52100	54170	88200	91700	1.00	12.5	40
2	0.364	10	9.38	0.11	0.107	3200	4900	64200	65910	98200	101000	1.50	18.8	60
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Note: only two samples for tensile and two samples for bend test														
Bend Test														
10mm Dia Bar Bend Test Through 180° is Satisfactory														
10mm Dia Bar Bend Test Through 180° is Satisfactory														

Witness by Murad Hussain (M.E. JHC)

I/C Testing Laboratoires
UET Lahore, Pakistan.

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STRUCTURAL ENGINEERING DIVISION
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Department of Civil Engineering
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To,
 Sub Divisional Officer
 Buildings Sub Division
 Shakargarh
 (Re-Construction of Dangerous School Building in Govt. Boys IT High School Shakargarh
 Tehsil Shakargarh District Narowal)
 Reference # CED/TFL **33325** (Dr. Ali Ahmed)
 Reference of the request letter # 1471/Sg

Dated: 30-05-2019
 Dated: 08-04-2019

Tension Test Report (Page -1/1)

Date of Test 31-05-2019
 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	0.375	3/8	0.374	0.11	0.110	3100	4700	62200	62060	94200	94100	1.30	16.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only one sample for tensile and one sample for bend test														
Bend Test														
3/8" Dia Bar Bend Test Through 180° is Satisfactory														

I/C Testing Laboratoires
UET Lahore, Pakistan.

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STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
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To,
 Sub Divisional Officer
 Buildings Sub Division
 Shakargarh
 (Re-Construction of Dangerous School Building in Govt. Boys IT High School Shakargarh
 Tehsil Shakargarh District Narowal)
 Reference # CED/TFL **33325** (Dr. Ali Ahmed) Dated: 30-05-2019
 Reference of the request letter # 1471/Sg Dated: 08-04-2019

Tension Test Report (Page -1/1)

Date of Test 31-05-2019
 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	0.375	3/8	0.374	0.11	0.110	3100	4700	62200	62060	94200	94100	1.30	16.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only one sample for tensile and one sample for bend test														
Bend Test														
3/8" Dia Bar Bend Test Through 180° is Satisfactory														

I/C Testing Laboratoires
UET Lahore, Pakistan.

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

To,
 Sr. Site Incharge
 Associated Technologies (Pvt) Ltd
 CM Pak Rollout Project Site ID: 42780, 42704, 42488, 42831, 42837 & 42838

Reference # CED/TFL **33331** (Dr. Ali Ahmed)
 Reference of the request letter # Nil

Dated: 30-05-2019
 Dated: 30-05-2019

Tension Test Report (Page -1/2)

Date of Test 31-05-2019

Gauge length 8 inches

Description Deformed Steel Bar Tensile 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	0.413	10	9.99	0.11	0.121	4600	5300	92200	83530	106200	96300	1.00	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only one sample for tensile test														
Bend Test														

I/C Testing Laboratoires
UET Lahore, Pakistan.

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University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
 Sr. Site Incharge
 Associated Technologies (Pvt) Ltd
 CM Pak Rollout Project Site ID: 42656

Reference # CED/TFL **33331** (Dr. Ali Ahmed)
 Reference of the request letter # Nil

Dated: 30-05-2019
 Dated: 30-05-2019

Tension Test Report (Page -2/2)

Date of Test 31-05-2019

Gauge length 8 inches

Description Deformed Steel Bar Tensile 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	0.419	10	10.06	0.11	0.123	4400	5100	88200	78770	102200	91300	1.00	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only one sample for tensile test														
Bend Test														

I/C Testing Laboratoires
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Pakistan. Ph: 92-42-99029202

To,
M/S Cotton Web Limited
Lahore
(Construction of Director House # 122 F (DHA Phase # 8))

Reference # CED/TFL 33335 (Dr. Ali Ahmed)
Reference of the request letter # Nil

Dated: 31-05-2019
Dated: 31-05-2019

Tension Test Report (Page -1/1)

Date of Test 31-05-2019

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	0.365	3	0.370	0.11	0.107	3400	4600	68200	69830	92200	94500	0.75	9.4	
2	0.358	3	0.366	0.11	0.105	3600	4600	72200	75410	92200	96400	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														

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