



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

To,
 Chief Engineer (HVDC) NTDC
 National Transmission & Despatch Company Ltd
 ±600kV Matiari-Lahore HVDC Transmission Line (CPEC Project)(Lot-4)

Reference # CED/TFL **33686** (Dr. Safer Abbas)
 Reference of the request letter #6510-12/CE/HVDC/LHR

Dated: 05-08-2019
 Dated: 05-08-2019

Tension Test Report (Page -1/1)

Date of Test 06-08-2019
 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	0.368	3	0.371	0.11	0.108	3200	5000	64200	65200	100200	101900	1.10	13.8	
2	0.375	3	0.375	0.11	0.110	3600	4900	72200	72010	98200	98100	1.10	13.8	
3	0.365	3	0.370	0.11	0.107	3100	4600	62200	63700	92200	94600	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only three samples for tensile and three samples for bend test														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														
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I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

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To,
 Executive Engineer
 Highway Division Okara
 (Rural Accessibility Programme)

Reference # CED/TFL **33688** (Dr. Safer Abbas)
 Reference of the request letter # 367/M

Dated: 05-08-2019
 Dated: 28-07-2019

Tension Test Report (Page -1/1)

Date of Test 06-08-2019
 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	2800	4300	56200	56580	86200	86900	1.30	16.3	
2	0.368	3	0.371	0.11	0.108	2700	4300	54100	54960	86200	87600	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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To,
 Project Coordinator
 Sinaco Engineers (Pvt) Ltd
 Retrofitting Works at 12-L Gulberg, Lahore
 (FF Steel)

Reference # CED/TFL **33689** (Dr. Safer Abbas)
 Reference of the request letter # SEL/LHR/C-441/10278

Dated: 05-08-2019
 Dated: 03-08-2019

Tension Test Report (Page -1/2)

Date of Test 06-08-2019
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile Test as per ASTM-A615

Sr. No.	Weight (lbs/ft)	Diameter/ Size (inch)		Area (in ²)		Yield load (kg)	Breaking Load (kg)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
		Nominal	Actual	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.377	3/8	0.376	0.11	0.111	3400	5400	68200	67670	108200	107500	1.10	13.8	
2	0.378	3	0.376	0.11	0.111	3300	5300	66200	65510	106200	105300	1.10	13.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile test														
Bend Test														

I/C Testing Laboratoires
UET Lahore, Pakistan.

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To,
 Project Coordinator
 Sinaco Engineers (Pvt) Ltd
 Retrofitting Works at 12-L Gulberg, Lahore
 (City Steel)

Reference # CED/TFL **33689** (Dr. Safer Abbas)
 Reference of the request letter # SEL/LHR/C-441/10278

Dated: 05-08-2019
 Dated: 03-08-2019

Tension Test Report (Page -2/2)

Date of Test 06-08-2019
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile Test as per ASTM-A615

Sr. No.	Weight (lbs/ft)	Diameter/ Size (inch)		Area (in ²)		Yield load (kg)	Breaking Load (kg)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
		Nominal	Actual	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.373	3/8	0.374	0.11	0.110	4000	5900	80200	80350	118300	118600	0.80	10.0	
2	0.378	3/8	0.376	0.11	0.111	3300	5400	66200	65440	108200	107100	1.10	13.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile test														
Bend Test														

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To,
 Assistant Executive Engineer
 Pakistan Railways, Faisalabad
 Up-Gradation of Class-III Unmanned L-Xing into Class-II L-Xing No. 5,5/A in The Section of
 Sub Division FSLD

Reference # CED/TFL **33692** (Dr. Safer Abbas)
 Reference of the request letter # W/3/Spl/2019

Dated: 06-08-2019
 Dated: 05-08-2019

Tension Test Report (Page -1/1)

Date of Test 06-08-2019
 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	0.362	3/8	0.368	0.11	0.106	3600	4700	72200	74540	94200	97400	0.90	11.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only one sample for tensile and one sample for bend test														
Bend Test														
3/8" Dia Bar Bend Test Through 180° is Satisfactory														

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