Muhamma Umar Test Performed By: Dr. /Engr. S. Asad Ali Gillani

Deputy Director (Maint.) National Highway Authority, Wazirabad (N-5)

 Client Reference:
 Gen/DD(Maint)/WZD/NHA/2020/612
 Dated:
 31-08-2020

 SOM Lab Ref:
 CED/SOM/2923(Page-1/2)
 Dated:
 07-09-2020

**Test:** Tension Test & Bend Test **Test Specification:** ASTM-A 615

Sample Type: Deformed Bar Gauge Length: 200 mm

		D	ia.	Ar	ea	Yield	Ultimate	Yield	Stress	Ult. S	Stress			Ē	
S.No.	Weight	Nominal	Calculated	Nominal	Calculated	Load	Load	(according to nominal area)	(according to measured area)	(according to nominal area)	(according to measured area)	Elongation	Gauge Length	%age Elongation	Remarks
	kg/m	mm	mm	mm <sup>2</sup>	mm <sup>2</sup>	kN	kN	MPa	MPa	MPa	MPa	mm	mm	%	
1	1.018	12	12.87	113	130	58.70	91.50	519	452	809	704	30.0	200	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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### **BEND TEST:**

12mm	Sample bend through 180 degrees Satisfactorily without any crack	Note:-
		Only Two Samples
		Received and Tested
Note: Pleas	se always confirm the results of above report on web www.uet-civil.edu.pk	

Muhamma Umar Test Performed By: Dr. /Engr. S. Asad Ali Gillani

Deputy Director (Maint.) National Highway Authority, Wazirabad (N-5)

 Client Reference:
 Gen/DD(Maint)/WZD/NHA/2020/615
 Dated:
 31-08-2020

 SOM Lab Ref:
 CED/SOM/2923(Page-21/2)
 Dated:
 07-09-2020

**Test:** Tension Test & Bend Test **Test Specification:** ASTM-A 615

Sample Type: Deformed Bar Gauge Length: 200 mm

		D	ia.	Ar	ea	Yield	Ultimate	Yield	Stress	Ult. 9	Stress			'n	
S.No.	Weight	Nominal	Calculated	Nominal	Calculated	Load	Load	(according to nominal area)	(according to measured area)	(according to nominal area)	(according to measured area)	Elongation	Gauge Length	%age Elongation	Remarks
	kg/m	mm	mm	mm <sup>2</sup>	mm²	kN	kN	MPa	MPa	MPa	MPa	mm	mm	%	
1	1.016	12	12.82	113	129	57.70	91.20	510	448	806	707	27.5	200	13.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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## **BEND TEST:**

Sample bend through 180 degrees Satisfactorily without any crack	Note:-
	Only Two Samples
	Received and Tested
	Sample bend through 180 degrees Satisfactorily without any crack

Abdullah Muhammad Khadim

**Test Performed By:** 

Dr. /Engr.

S. Asad Ali Gillani

Resident Engineer, DAR Engineering

**SOM Lab** 

**Client Reference:** DB-78/DAR/RE/ME/2020/0229

8 inch

Tension Test & Bend Test

Ref:

2921(Page-1/1)

07-09-2020 Dated:

Dated:

07-09-2020

Gauge Length:

Test:

**Test Specification:** 

Sample Type:

**ASTM-A-615** 

Deformed Bar(Kamran Steel)

		D	Dia. Area Yield Ultimate Yield Stress	Stress	Ult. S	tress			'n						
S.No.	Weight	Nominal	Calculated	Nominal	Calculated	Load	Load	(according to nominal area)	(according to measured area)	(according to nominal area)	(according to measured area)	Elongation	Gauge Length	%age Elongation	Remarks
	lb/ft	#	in	in <sup>2</sup>	in <sup>2</sup>	Tons	Tons	psi	psi	psi	psi	in	in	%	
1	1.478	6	0.743	0.44	0.434	13.32	18.73	66780	67710	93860	95160	1.30	8.0	16.3	P-405
2	1.478	6	0.743	0.44	0.434	13.63	18.55	68320	69260	92990	94280	1.50	8.0	18.8	P-405
3	1.044	5	0.625	0.31	0.307	9.94	14.14	70710	71400	100590	101570	1.30	8.0	16.3	P-486
4	1.048	5	0.626	0.31	0.308	9.65	13.88	68680	69130	98780	99420	1.40	8.0	17.5	P-486
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-	-	-	-	-	-	-	-	-	-	-	-	,	1	-	
-	-	-	1	-	-	-	-	-	-	-	-	1	1	-	_
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### **BEND TEST:**

# 6	Sample bend through 180 degrees Satisfactorily without any crack	Note:-
# 5	Sample bend through 180 degrees Satisfactorily without any crack	
		Only Six Samples
		Received and Tested

Umair Maqsood Test Performed By: Dr. /Engr. S. Asad Ali Gillani

Sub Divisional Officer, Building Sub Division, Assembly, Lahore

**SOM Lab** 

 Client Reference:
 2694 

 Dated:
 11-08-2020

 Ref:
 2924 (Page-1/1)

 Dated:
 07-09-2020

Test: Tension Test & Bens Test Test Specification: ASTM-A-615

Gauge Length: 8 inch Sample Type: Deformed Bar

		D	ia.	А	rea	Yield	Ultimate	Yield	Stress	Ult. S	tress			L	
S.No.	Weight	Nominal	Calculated	Nominal	Calculated	Load	Load	(according to nominal area)	(according to measured area)	(according to nominal area)	(according to measured area)	Elongation	Gauge Length	%age Elongation	Remarks
	lb/ft	#	in	in <sup>2</sup>	in <sup>2</sup>	Tons	Tons	psi	psi	psi	psi	in	in	%	
1	2.674	8	1.000	0.79	0.786	29.26	35.02	81680	82090	97750	98250	1.30	8.0	16.3	
2	2.680	8	1.002	0.79	0.788	27.32	33.91	76270	76460	94680	94920	1.20	8.0	15.0	
3	1.495	6	0.748	0.44	0.439	13.05	18.06	65400	65550	90540	90750	1.20	8.0	15.0	
4	1.496	6	0.748	0.44	0.440	13.25	18.17	66430	66430	91050	91050	1.10	8.0	13.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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### **BEND TEST:**

# 8	Sample bend through 180 degrees Satisfactorily without any crack	Note:-
# 6	Sample bend through 180 degrees Satisfactorily without any crack	
		Only Six Samples
		Received and Tested

Zeeshan Hussain Test Performed By: Dr. /Engr. s. Asad Ali Gillani

Asstt: Executive Engineer-JV, Central Civil Division No. I, Pak P.W.D. Lahore

**SOM Lab** 

Client Reference: AEE-IV/LCCD-I/CSA-WALTON/151 Ref: 2925(Page-1/1)

**Dated:** 03-09-2020 **Dated:** 07-09-2020

Test:Tension Test & Bend TestTest Specification:ASTM-A-615Gauge Length:8 inchSample Type:Deformed Bar

		D	ia.	A	rea	Yield	Ultimate	Yield	Stress	Ult. S	tress			'n	
S.No.	Weight	Nominal	Calculated	Nominal	Calculated	Load	Load	(according to nominal area)	(according to measured area)	(according to nominal area)	(according to measured area)	Elongation	Gauge Length	%age Elongation	Remarks
	lb/ft	#	in	in <sup>2</sup>	in <sup>2</sup>	Tons	Tons	psi	psi	psi	psi	in	in	%	
1	1.479	6	0.744	0.44	0.435	13.25	18.42	66430	67190	92330	93390	1.30	8.0	16.3	
2	1.494	6	0.748	0.44	0.439	13.12	17.94	65760	65910	89930	90130	1.10	8.0	13.8	
3	1.057	5	0.629	0.31	0.311	10.81	14.04	76880	76630	99860	99540	0.80	8.0	10.0	
4	1.063	5	0.630	0.31	0.312	10.88	14.19	77380	76890	100950	100300	0.90	8.0	11.3	
5	0.667	4	0.500	0.20	0.196	7.41	9.35	81720	83390	103080	105180	1.10	8.0	13.8	
6	0.668	4	0.500	0.20	0.196	7.21	8.97	79470	81100	98920	100940	1.00	8.0	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-		-	
-	-	-	-	-	-	1	-	-	-		-	1	-	-	
-	-	-	-	-	1	1	-	-	-		-	1	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

#### **BEND TEST:**

# 6	Sample bend through 180 degrees Satisfactorily without any crack	Note:-
# 5	Sample bend through 180 degrees Satisfactorily without any crack	
# 4	Sample bend through 180 degrees Satisfactorily without any crack	Only Nine Samples
		Received and Tested

Wajid Ali Shah Test Performed By: Dr. /Engr. S. Asad Ali Gillani

GM - Works, FF Steel Lahore

**SOM Lab** 

 Client Reference:
 Nil
 Ref:
 2926(Page-1/1)

 Dated:
 04-09-2020
 Dated:
 07-09-2020

Test:Tension TestTest Specification:ASTM-A-615Gauge Length:8 inchSample Type:Deformed Bar

		D	ia.	Α	rea	Yield	Ultimate	Yield	Stress	Ult. S	Stress			П	
S.No.	Weight	Nominal	Calculated	Nominal	Calculated	Load	Load	(according to nominal area)	(according to measured area)	(according to nominal area)	(according to measured area)	Elongation	Gauge Length	%age Elongation	Remarks
	lb/ft	#	in	in <sup>2</sup>	in <sup>2</sup>	Tons	Tons	psi	psi	psi	psi	in	in	%	
1	1.038	5	0.623	0.31	0.305	10.65	14.14	75790	77030	100590	102240	1.00	8.0	12.5	
2	1.041	5	0.624	0.31	0.306	10.77	14.34	76660	77660	102040	103370	1.10	8.0	13.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
4	0.379	3	0.376	0.11	0.111	3.10	4.79	62130	61570	96060	95190	1.40	8.0	17.5	
5	0.370	3	0.373	0.11	0.109	3.00	4.69	60150	60700	94020	94880	1.50	8.0	18.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	
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# **BEND TEST:**

 No Bend test performed	Note:-
	Only Two Samples
	Received and Tested