MR. USAMA Test Performed By: Dr. /Engr. M Rizwan Riaz

Client Engineer, Stylers Internatinal (Pvt) Ltd. 20 KM Ferozpur Road Lahore.

Client Reference: nil Dated: 06-03-2019

SOM Lab Ref: CED/SOM/409(Page-1/1) Dated: 06-03-2019
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		_	L C	
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	3.922	25	25.23	491	500	310.00	381.20	632	620	777	763	30.0	200	15.0	
2	0.969	12	12.54	113	123	59.00	83.00	522	478	734	673	30.0	200	15.0	
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## **BEND TEST:**

25mm	Sample bend through 180 degrees Satisfactorily without any crack	Note:-
12mm	Sample bend through 180 degrees Satisfactorily without any crack	
		Only Four Samples
		Received and Tested

Qurban Ali Khan Test Performed By: Dr. /Engr. M Rizwan Riaz

Resident Engineer, Techno Consultant International (Pvt) Itd. D. I. Khan

 Client Reference:
 RE/CPEC/DIK/2019/479
 Dated:
 27-02-2019

 SOM Lab Ref:
 CED/SOM/411 (Page-1/1)
 Dated:
 06-03-2019

Test: Tension Test Test Specification: ASTM-F-1554

Sample Type: J - Bolt Gauge Length: 200 mm

		D	ia.	Ar	ea	Yield	Ultimate	Yield	Stress	Ult. S	Stress		_	- u	
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	4.059	25	25.66	491	517	321.50	373.50	655	622	761	723	27.5	200	13.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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## **BEND TEST:**

 No Bend test performed	Note:-
	Only One Sample
	Received and Tested

Qurban Ali Khan Test Performed By: Dr. /Engr. M Rizwan Riaz

Resident Engineer, Techno Consultant International (Pvt) Itd. D. I. Khan

 Client Reference:
 RE/CPEC/DIK/2019/479
 Dated:
 27-02-2019

 SOM Lab Ref:
 CED/SOM/411 (Page-1/1)
 Dated:
 06-03-2019

Test: Tension Test Test Specification: ASTM-F-1554

Sample Type: J - Bolt Gauge Length: 200 mm

		D	ia.	Ar	ea	Yield	Ultimate	Yield	Stress	Ult. S	Stress		_	- u	
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	4.059	25	25.66	491	517	321.50	373.50	655	622	761	723	27.5	200	13.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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## **BEND TEST:**

 No Bend test performed	Note:-
	Only One Sample
	Received and Tested

Aftab A. Mughal Test Performed By: Dr. /Engr. M Rizwan Riaz

Resident Engineer, NESPAK (Pvt) Ltd. Lahore

**SOM Lab** 

Client Reference: <u>3836/13/9A/AA/C-1-MTR-224</u> Ref: 410(Page-2/3)

Dated: 06-03-2019 Dated: 06-03-2019

**Deformed Bar(Kamran** 

Gauge Length: 8 inch Sample Type: Steel)

		D	ia.	Α	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	1.452	6	0.737	0.44	0.427	12.92	18.71	64740	66710	93760	96610	1.40	8.0	17.5	
2	1.483	6	0.745	0.44	0.436	13.89	21.05	69640	70280	105510	106480	1.20	8.0	15.0	
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# **BEND TEST:**

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

Aftab A. Mughal **Test Performed By:** Dr. /Engr. M Rizwan Riaz

Resident Engineer, NESPAK (Pvt) Ltd. Lahore

**SOM Lab** 

3836/13/9A/AA/C-1-MTR-225 410(Page-3/3) **Client Reference:** Ref: 06-03-2019

06-03-2019 Dated: Dated:

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

**Deformed Bar(Kamran** 

Gauge Length: Sample Type: 8 inch Steel)

		D	ia.	Α	rea	Yield	Ultimate	Yield	Stress	Ult. S	tress		_	2	
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	2.622	8	0.991	0.79	0.771	24.46	34.32	68300	69980	95820	98180	1.60	8.0	20.0	
2	2.645	8	0.995	0.79	0.777	24.64	33.97	68790	69940	94820	96410	1.60	8.0	20.0	
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## **BEND TEST:**

Test:

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

**Qurban Ali Khan Test Performed By:** Dr. /Engr. M Rizwan Riaz

Resident Engineer, Techno Consultant International (Pvt) Itd. D. I. Khan

**SOM Lab** 

RE/CPEC/DIK/2019/479 411(Page-1/1) **Client Reference:** Ref: 06-03-2019

Dated: 27-02-2019 Dated:

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

> > Deformed

Gauge Length: Sample Type: 8 inch Bar

		D	ia.	Α	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	2.615	8	0.989	0.79	0.768	24.67	34.37	68870	70840	95960	98710	1.30	8.0	16.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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# **BEND TEST:**

Test:

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