Muhammad Danish Khurshid Test Performed By: Dr. /Engr. Nauman Khurram

Manager Construction, Orient Electronice (Pvt) Ltd, Lahore

 Client Reference:
 OSH-SO/UET/Afco Steel Test/060521-09
 Dated:
 06-05-2021

 SOM Lab Ref:
 CED/SOM/4308 (Page-1/1)
 Dated:
 06-05-2021

Test: ONLY BEND TEST Test Specification: ASTM-A-615

Sample Deformed Br

Type: Deformed Bar Gauge Length: 200 mm

		Di	a.	Ar	ea	Yield	Ultimate	Yield	Stress	Ult. S	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 ²	mm ²	kN	kN	MPa	MPa	MPa	MPa	mm	mm	%	
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BEND TEST:

Sample bend through 180 degrees Satisfactorily without any crack	Note:-
Sample bend through 180 degrees Satisfactorily without any crack	
	Only Two Samples
	Received and Tested
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Aslam Zahid Test Performed By: Dr. /Engr. Nauman Khurram

Chief Executive Officer, Salman & Salman Associates Lahore

nil

05-05-2021

SOM Lab 4306, 4325(Page-

Ref: 1/1)

Dated: 06-05-2021

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

Gauge Length: 8 inch Sample Type: Deformed Bar(Mughal & FF Steel)

		D	ia.	А	rea	Yield	Ultimate	Yield	Stress	Ult. S	Stress			_	
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 ²	in ²	Tons	Tons	psi	psi	psi	psi	in	in	%	
1	0.672	4	0.501	0.20	0.197	7.44	9.63	82060	83310	106230	107840	1.00	8.0	12.5	Mughal
2	0.677	4	0.503	0.20	0.199	6.29	8.92	69360	69710	98360	98850	1.00	8.0	12.5	FF
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BEND TEST:

Client Reference:

Dated:

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

Amir Waris Test Performed By: Dr. /Engr. Nauman Khurram

Honda Car Site Lahore.

nil

Client Reference:

4307(Page-**SOM Lab**

1/1) Ref:

06-05-2021 Dated: 06-05-2021 Dated:

Test Specification: Tension Test & Bend Test Test: **ASTM-A-615** Sample Type: Gauge Length: 8 inch **Deformed Bar**

		D	ia.	А	rea	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
	lb/ft	#	in	in ²	in ²	Tons	Tons	psi	psi	psi	psi	in	in	%	
1	2.595	8	0.986	0.79	0.763	22.24	35.80	62100	64300	99950	103480	1.30	8.0	16.3	
2	2.610	8	0.988	0.79	0.767	22.14	35.85	61810	63670	100090	103090	1.40	8.0	17.5	
3	1.495	6	0.748	0.44	0.439	13.10	18.62	65660	65810	93350	93560	1.40	8.0	17.5	
4	1.514	6	0.753	0.44	0.445	13.78	18.86	69080	68310	94530	93460	1.00	8.0	12.5	
5	0.649	4	0.493	0.20	0.191	6.49	8.77	71610	74980	96670	101230	1.20	8.0	15.0	
6	0.693	4	0.510	0.20	0.204	6.27	8.61	69130	67780	94990	93120	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	
# 4	Sample bend through 180 degrees Satisfactorily without any crack	Only Nine Samples
		Received and Tested

Muhammad Shabbir Test Performed By: Dr. /Engr. Nauman Khurram

Construction Manager, Opal, Deevar Developers Pvt. Ltd. Lahore

SOM Lab 4309(Page-

<u>ZD/ZO/L/025</u> **Ref**: 1/1)

Dated: 06-05-2021 **Dated:** 06-05-2021

Test:Tension Test & Bend TestTest Specification:ASTM-A-615Gauge Length:8 inchSample Type:Deformed 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 ²	in ²	Tons	Tons	psi	psi	psi	psi	in	in	%	
1	0.651	4	0.493	0.20	0.191	6.01	8.21	66320	69450	90490	94750	1.20	8.0	15.0	
2	0.655	4	0.494	0.20	0.192	6.09	8.31	67110	69910	91610	95430	1.20	8.0	15.0	
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BEND TEST:

Client Reference:

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

Engr. Muddasir Tahir Test Performed By: Dr. /Engr. Nauman Khurram

Construction Manager, Zameen Quadrangle, Lahore

SOM Lab 4310(Page-

<u>ZD/ZQ/PILING/001</u> **Ref**: 1/1)

Dated: 06-05-2021 **Dated:** 06-05-2021

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

	Dia.	ia.	Α	rea	Yield	Ultimate	Yield	Stress	Ult. S	Stress			_		
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 ²	in ²	Tons	Tons	psi	psi	psi	psi	in	in	%	
1	1.530	6	0.757	0.44	0.450	15.24	20.64	76390	74690	103470	101170	1.30	8.0	16.3	
2	1.550	6	0.762	0.44	0.456	14.17	19.11	71020	68530	95800	92440	1.30	8.0	16.3	
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BEND TEST:

Client Reference:

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

Muhammad Shahbaz **Test Performed By:** Dr. /Engr. Nauman Khurram

Imperium Hospitality (Pvt) Ltd. Lahore

4311(Page-**SOM Lab**

1/1) Ref:

Client Reference: IHPL/Steel/071 06-06-2021 04-05-2021 Dated: Dated:

Test Specification: Tension Test & Bend Test Test: ASTM-A-615 Sample Type: Gauge Length: 8 inch **Deformed Bar**

		D	ia.	А	rea	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
	lb/ft	#	in	in ²	in ²	Tons	Tons	psi	psi	psi	psi	in	in	%	
1	2.581	8	0.982	0.79	0.758	26.71	35.09	74560	77710	97950	102090	1.00	8.0	12.5	
2	2.599	8	0.986	0.79	0.764	26.17	34.81	73050	75540	97190	100490	1.00	8.0	12.5	
3	2.595	8	0.986	0.79	0.763	26.20	34.81	73140	75730	97190	100620	1.20	8.0	15.0	
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BEND TEST:

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

Muhammad Shahbaz Test Performed By: Dr. /Engr. Nauman Khurram

Imperium Hospitality (Pvt) Ltd. Lahore

04-05-2021

Client Reference:

Dated:

SOM Lab 4311(Page-

Ref: 2/3)

Dated: 06-06-2021

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

IHPL/Steel/072

	Weight	Dia.		Area		Yield	Ultimate	Yield Stress		Ult. Stress				Ē	
S.No.		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 ²	in ²	Tons	Tons	psi	psi	psi	psi	in	in	%	
1	0.648	4	0.492	0.20	0.190	5.40	8.05	59580	62710	88800	93480	1.30	8.0	16.3	
2	0.646	4	0.492	0.20	0.190	5.61	8.87	61830	65080	97800	102940	1.00	8.0	12.5	
3	0.644	4	0.491	0.20	0.189	5.63	8.46	62050	65660	93300	98730	1.20	8.0	15.0	
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BEND TEST:

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

Muhammad Shahbaz Test Performed By: Dr. /Engr. Nauman Khurram

Imperium Hospitality (Pvt) Ltd. Lahore

Client Reference:

SOM Lab 4311(Page-

Ref: 3/3)

Dated: 04-05-2021 **Dated:** 06-06-2021

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

IHPL/Steel/070

	Weight	Dia.		Area		Yield	Ultimate	Yield Stress		Ult. Stress				٦	
S.No.		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 ²	in ²	Tons	Tons	psi	psi	psi	psi	in	in	%	
1	0.618	4	0.481	0.20	0.182	5.50	8.36	60700	66710	92180	101290	1.10	8.0	13.8	
2	0.631	4	0.485	0.20	0.185	5.40	8.51	59580	64410	93860	101470	1.10	8.0	13.8	
3	0.641	4	0.489	0.20	0.188	5.52	8.72	60930	64820	96110	102250	1.20	8.0	15.0	
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BEND TEST:

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