M/s Saad Hammad Associates
Lahore

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

Client Reference: **nil**
Dated: **16-09-2019**

SOM Lab Ref: **1389(Page-1/1)**
Dated: **16-09-2019**

Test: **Tension Test**

Test Specification: **ASTM-A-615 Deformed**

Gauge Length: **8 inch**

Sample Type: **Bar**

S.No.	Weight	Dia.		Area		Yield Load	Ultimate Load	Yield Stress		Ult. Stress		Elongation	Gauge Length	%age Elongation	Remarks
		Nominal	Calculated	Nominal	Calculated			(according to nominal area)	(according to measured area)	(according to nominal area)	(according to measured area)				
	lb/ft	#	in	in^2	in^2	Tons	Tons	psi	psi	psi	psi	in	in	%	
1	1.035	5	0.622	0.31	0.304	10.30	13.15	73250	74690	93550	95400	1.40	8.0	17.5	
2	0.669	4	0.501	0.20	0.197	6.88	8.56	75880	77030	94420	95860	1.30	8.0	16.3	
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BEND TEST:

--	No Bend test performed

Note:-

Only Two Samples Received and Tested

Note: Please always confirm the results of above report on web www.uet-civil.edu.pk

Muhammad Bilal
Managing Director, Bilal & Brothers, Gigit

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

Client Reference: **B & B/RBC/SKD**
Dated: **16-09-2019**

SOM Lab Ref: **1391(Page-1/1)**
Dated: **16-09-2019**

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

Gauge Length: **8 inch** **Sample Type:** **Bar**

S.No.	Weight	Dia.		Area		Yield Load	Ultimate Load	Yield Stress		Ult. Stress		Elongation	Gauge Length	%age Elongation	Remarks
		Nominal	Calculated	Nominal	Calculated			(according to nominal area)	(according to measured area)	(according to nominal area)	(according to measured area)				
	lb/ft	#	in	in^2	in^2	Tons	Tons	psi	psi	psi	psi	in	in	%	
1	1.493	6	0.748	0.44	0.439	12.20	16.79	61160	61300	84160	84350	1.30	8.0	16.3	
2	1.018	5	0.617	0.31	0.299	9.60	13.10	68320	70830	93190	96620	1.00	8.0	12.5	
3	0.652	4	0.494	0.20	0.192	6.63	8.36	73070	76110	92180	96020	0.80	8.0	10.0	
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BEND TEST:

# 6	Sample bend through 180 degrees Satisfactorily without any crack
# 5	Sample bend through 180 degrees Satisfactorily without any crack
# 4	Sample bend through 180 degrees Satisfactorily without any crack

Note:-

Only Six Samples Received and Tested

Note: Please always confirm the results of above report on web www.uet-civil.edu.pk

Muhammad Saleem **Test Performed By:** **Dr. /Engr.** **S. Asad Ali Gillani**

GM, Professional Construction Services (Pvt) Ltd. Lahore

Client Reference: **PCS/19/Eng-60-B** **SOM Lab Ref:** **1392(Page-1/1)**

Dated: **16-09-2019** **Dated:** **16-09-2019**

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

Guage Length: **8 inch** **Sample Type:** **Deformed Bar**

S.No.	Weight	Dia.		Area		Yield Load	Ultimate Load	Yield Stress		Ult. Stress		Elongation	Gauge Length	%age Elongation	Remarks
		Nominal	Calculated	Nominal	Calculated			(according to nominal area)	(according to measured area)	(according to nominal area)	(according to measured area)				
	lb/ft	#	in	in^2	in^2	Tons	Tons	psi	psi	psi	psi	in	in	%	
1	0.567	4	0.461	0.20	0.167	5.10	7.54	56210	67310	83180	99620	1.20	8.0	15.0	
2	0.591	4	0.471	0.20	0.174	5.08	7.92	55980	64350	87340	100390	1.20	8.0	15.0	
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BEND TEST:

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

Note: Please always confirm the results of above report on web www.uet-civil.edu.pk

Ilyas Khan
QC Engineer, Ravi Green Engineering (Pvt) Ltd.

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

Client Reference: **RG/MT/UET/2641**
Dated: **16-09-2019**

SOM Lab Ref: **1394(Page-1/1)**
Dated: **16-09-2019**

Test: **Tension Test**
Guage Length: **8 inch**

Test Specification: **ASTM-A-615**
Sample Type: **Deformed Bar**

S.No.	Weight	Dia.		Area		Yield Load	Ultimate Load	Yield Stress		Ult. Stress		Elongation	Gauge Length	%age Elongation	Remarks
		Nominal	Calculated	Nominal	Calculated			(according to nominal area)	(according to measured area)	(according to nominal area)	(according to measured area)				
	lb/ft	#	in	in^2	in^2	Tons	Tons	psi	psi	psi	psi	in	in	%	
1	1.016	5	0.617	0.31	0.299	9.94	13.51	70710	73310	96090	99630	0.90	8.0	11.3	
2	0.658	4	0.496	0.20	0.193	6.29	8.15	69360	71870	89930	93190	1.30	8.0	16.3	
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BEND TEST:

--	No Bend test performed

Note:-

Only Two Samples Received and Tested

Note: Please always confirm the results of above report on web www.uet-civil.edu.pk

Usman Ali **Test Performed By:** **Dr. /Engr.** **Nauman Khurram**

Project Manager, Maypole Lime Light Pvt. Ltd **Project: Maypole Lime Light(Front Building)**

Client Reference: **MLL-08** **SOM Lab Ref:** **1395(Page-1/1)**

Dated: **16-09-2019** **Dated:** **16-09-2019**

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

Gauge Length: **8 inch** **Sample Type:** **Bar**

S.No.	Weight	Dia.		Area		Yield Load	Ultimate Load	Yield Stress		Ult. Stress		Elongation	Gauge Length	%age Elongation	Remarks
		Nominal	Calculated	Nominal	Calculated			(according to nominal area)	(according to measured area)	(according to nominal area)	(according to measured area)				
	lb/ft	#	in	in^2	in^2	Tons	Tons	psi	psi	psi	psi	in	in	%	
1	2.696	8	1.004	0.79	0.792	34.15	40.08	95340	95090	111900	111610	1.00	8.0	12.5	
2	2.673	8	1.000	0.79	0.786	29.20	36.09	81530	81950	100740	101250	1.30	8.0	16.3	
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Witnessed By: **Yasir Abbas & M sohial Akhtar**

BEND TEST:

# 8	Sample bend through 180 degrees Satisfactorily without any crack

Note:-

Only Three Samples Received and Tested

Note: Please always confirm the results of above report on web www.uet-civil.edu.pk

Tahir Mahmood Ch **Test Performed By:** **Dr. /Engr.** **S. Asad Ali Gillani**

Project Manager, Gattwala Commercial Hub, Faisalabad

Client Reference: **G. C. H./MT-02** **SOM Lab Ref:** **1398(Page-1/1)**

Dated: **16-09-2019** **Dated:** **16-09-2019**

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

Guage Length: **8 inch** **Sample Type:** **Deformed Bar**

S.No.	Weight	Dia.		Area		Yield Load	Ultimate Load	Yield Stress		Ult. Stress		Elongation	Gauge Length	%age Elongation	Remarks
		Nominal	Calculated	Nominal	Calculated			(according to nominal area)	(according to measured area)	(according to nominal area)	(according to measured area)				
	lb/ft	#	in	in^2	in^2	Tons	Tons	psi	psi	psi	psi	in	in	%	
1	2.657	8	0.997	0.79	0.781	26.20	34.45	73140	73980	96190	97300	1.50	8.0	18.8	
2	2.588	8	0.984	0.79	0.761	24.11	32.87	67310	69870	91780	95280	1.50	8.0	18.8	
3	1.472	6	0.743	0.44	0.433	14.39	18.67	72150	73310	93610	95120	1.30	8.0	16.3	
4	1.486	6	0.746	0.44	0.437	15.62	19.24	78280	78820	96420	97080	1.40	8.0	17.5	
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BEND TEST:

# 8	Sample bend through 180 degrees Satisfactorily without any crack
# 6	Sample bend through 180 degrees Satisfactorily without any crack

Note:-

Only Six Samples Received and Tested

Note: Please always confirm the results of above report on web www.uet-civil.edu.pk

Malik Muhammad Adil
Director, Malik Steel Sales Depot, Lahore

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

Client Reference: **nil**
Dated: **14-09-2019**

SOM Lab Ref: **1401(Page-1/1)**
Dated: **16-09-2019**

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

Gauge Length: **8 inch**
Sample Type: **Bar**

S.No.	Weight	Dia.		Area		Yield Load	Ultimate Load	Yield Stress		Ult. Stress		Elongation	Gauge Length	%age Elongation	Remarks
		Nominal	Calculated	Nominal	Calculated			(according to nominal area)	(according to measured area)	(according to nominal area)	(according to measured area)				
	lb/ft	#	in	in^2	in^2	Tons	Tons	psi	psi	psi	psi	in	in	%	
1	2.572	8	0.981	0.79	0.756	18.40	27.54	51370	53680	76900	80350	1.70	8.0	21.3	
2	2.553	8	0.977	0.79	0.750	17.23	26.83	48100	50660	74900	78900	1.70	8.0	21.3	
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BEND TEST:

# 8	Sample bend through 180 degrees Satisfactorily without any crack

Note:-

Only Three Samples Received and Tested

Note: Please always confirm the results of above report on web www.uet-civil.edu.pk

Amjad Saeed **Test Performed By:** **Dr. /Engr.** **S. Asad Ali Gillani**

Resident Engineer, NESPAK (Pvt) Ltd. Lahore

Client Reference: **3994/103/AS/02/130** **SOM Lab Ref:** **1404(Page-1/1)**

Dated: **16-09-2019** **Dated:** **16-09-2019**

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

Gauge Length: **8 inch** **Sample Type:** **Deformed Bar (Kisan, Super Kisan Steel)**

S.No.	Weight	Dia.		Area		Yield Load	Ultimate Load	Yield Stress		Ult. Stress		Elongation	Gauge Length	%age Elongation	Remarks
		Nominal	Calculated	Nominal	Calculated			(according to nominal area)	(according to measured area)	(according to nominal area)	(according to measured area)				
	lb/ft	#	in	in^2	in^2	Tons	Tons	psi	psi	psi	psi	in	in	%	
1	1.471	6	0.742	0.44	0.432	14.75	19.62	73940	75310	98360	100180	1.30	8.0	16.3	Kisan
2	1.476	6	0.743	0.44	0.434	15.65	20.54	78430	79520	102960	104380	1.20	8.0	15.0	Kidan
3	0.998	5	0.611	0.31	0.293	11.47	14.32	81590	86320	101890	107810	1.20	8.0	15.0	S.Kisan
4	1.034	5	0.622	0.31	0.304	9.55	12.59	67960	69300	89570	91330	1.00	8.0	12.5	S. Kisan
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BEND TEST:

# 6	Sample bend through 180 degrees Satisfactorily without any crack
# 6	Sample bend through 180 degrees Satisfactorily without any crack
# 5	Sample bend through 180 degrees Satisfactorily without any crack
# 5	Sample bend through 180 degrees Satisfactorily without any crack

Note:-

Only Eight Samples Received and Tested

Note: Please always confirm the results of above report on web www.uet-civil.edu.pk

Usman Ali **Test Performed By:** **Dr. /Engr.** **Nauman Khurram**

Project Manager, Maypole Lime Light Pvt. Ltd **Project: Maypole Lime Light(Front Building)**

Client Reference: **MLL-09** **SOM Lab Ref:** **1405(Page-1/1)**

Dated: **17-09-2019** **Dated:** **16-09-2019**

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

Gauge Length: **8 inch** **Sample Type:** **Bar**

S.No.	Weight	Dia.		Area		Yield Load	Ultimate Load	Yield Stress		Ult. Stress		Elongation	Gauge Length	%age Elongation	Remarks
		Nominal	Calculated	Nominal	Calculated			(according to nominal area)	(according to measured area)	(according to nominal area)	(according to measured area)				
	lb/ft	#	in	in^2	in^2	Tons	Tons	psi	psi	psi	psi	in	in	%	
1	2.620	8	0.990	0.79	0.770	24.43	31.50	68220	69990	87940	90220	1.20	8.0	15.0	
2	2.603	8	0.987	0.79	0.765	24.31	31.52	67870	70090	87990	90870	1.20	8.0	15.0	
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Witnessed By: **Yasir Abbas & Umar Zahid**

BEND TEST:

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

Note: Please always confirm the results of above report on web www.uet-civil.edu.pk

Test Performed by: Dr. S. Asad Ali Gillani

Ali Hassan
Incharge QA/QC
IKAN Engineering Services (Pvt) Ltd.
Lahore

Client Reference No.: IK-2775-02 **Dated: 16-09-2019**

SOM Lab Ref: CED/SOM/1396(P-1/1) **Dated: 16-09-2019**

Test Type: Proof Load

Sample Type: Nut-Bolt (24 mm & 20mm Diameter)

Proof Load (Nut & Bolts)

Sr No.	Sample Type	Tested Dia	Specified Proof Load (given by client) (kN)	Operational condition of nut Bolt Assembly
1	Nut Bolt	24mm	134	OK
2	Nut Bolt	20mm	93	OK

Note: Please always confirm the results on web www.uet-civil.edu.pk

Test Performed by: Dr. S. Asad Ali Gillani

Resident Engineer (Infrastructure)
DKC
NESPAK (Pvt) Ltd. Lahore

Client Reference No.: SA-394/DKC/C. TEST/SM/111 **Dated: 12-09-2019**

SOM Lab Ref: CED/SOM/1399(Page-2/3) **Dated: 16-09-2019**

Test Type: Tensile Test

Sample Type: Nut-Bolt (Diameter: 12mm)

Tensile Test Results

Sample No.	Original Diameter of Bolt (mm)	Tested Diameter of Bolt (mm)	Ultimate Load (kN)	Ultimate Tensile Stress (MPa)	Elongation (%)
1	12.0	7.5	28.5	645	20.0

Note: Please always confirm the results on web www.uet-civil.edu.pk

Test Performed by: Dr. S. Asad Ali Gillani

Resident Engineer (Infrastructure)
DKC
NESPAK (Pvt) Ltd. Lahore

Client Reference No.: SA-394/DKC/C. TEST/SM/111 **Dated: 12-09-2019**

SOM Lab Ref: CED/SOM/1399(Page-3/3) **Dated: 16-09-2019**

Test Type: Hardness Test

Sample Type: Cost Iron

Hardness Test Details:

Machine used: Avery Rockwell Hardness Testing Machine
(Minor Load: 10 Kgf Major Load: 140.0 kgf Scale: C)

Hardness Test Results

Sample No.	Sample Type	Hardness
1	Cost Iron	HR – 37.66 – C

Note: Please always confirm the results on web www.uet-civil.edu.pk

Test Performed by: Dr. S. Asad Ali Gillani

Resident Engineer (Infrastructure)
DKC
NESPAK (Pvt) Ltd. Lahore

Client Reference No.: SA-394/DKC/C. TEST/SM/111 **Dated: 12-09-2019**
SOM Lab Ref: CED/SOM/1399(Page-2/3) **Dated: 16-09-2019**
Test Type: Tensile Test
Sample Type: Nut-Bolt (Diameter: 12mm)

Tensile Test Results

Sample No.	Original Diameter of Bolt (mm)	Tested Diameter of Bolt (mm)	Ultimate Load (kN)	Ultimate Tensile Stress (MPa)	Elongation (%)
1	12.0	7.5	28.5	725	20.0

Note: Please always confirm the results on web www.uet-civil.edu.pk

Test Performed by: Dr. S. Asad Ali Gillani

Resident Engineer (Infrastructure)
DKC
NESPAK (Pvt) Ltd. Lahore

Client Reference No.: SA-394/DKC/C. TEST/SM/111 **Dated: 12-09-2019**

SOM Lab Ref: CED/SOM/1399(Page-2/3) **Dated: 16-09-2019**

Test Type: Hardness Test

Sample Type: Nut-Bolt (Diameter: 12mm)

Test Performed by: Dr. S. Asad Ali Gillani

Resident Engineer (Infrastructure)

DKC

NESPAK (Pvt) Ltd. Lahore

Client Reference No.: SA-394/DKC/C. TEST/SM/111 **Dated: 12-09-2019**

SOM Lab Ref: CED/SOM/1399(Page-1/3) **Dated: 16-09-2019**

Test: Tensile Test, Tear Strength Test, Hardness Test & Comp. Set Test

Sample Type: Expansion Joint

TENSILE STRENGTH AND ELONGATION TEST. (AS PER ASTM-D-412)

S. No	Sample Size (mm)	Ultimate Load (kN)	Tensile Strength (Mpa)	Elongation at Break(%)
1	6.0 x 2.6	0.76	48.72	420

- COMPRESSION SET TEST (AS PER ASTM-D-395)

S. No.	Thickness of Sample (mm)	Final Thickness (mm)	Compression set (%)
1	**3.5.0**	**3.4**	**2.85**

- HARDNESS TEST (AS PER ASTM-D-2240)

S. No	Sample Type	Hardness (Shore A)
1	**Expension Joint**	**49.5**

Test Performed By: Dr S. Asad Ali Gillani

Resident Engineer,
NA's (North – Zone) Project.
PEAS CONSULTING (Pvt) Ltd.

Client Reference: RE/PEAS/NHA//BR-REHN/N-125/2017/037 Dated 29-06-2019
SOM Laboratory Reference: CED/SOM/1400(Page-1/1) Dated 03-09-2019
Test: Shear Modulus Test & Adhesion Test

Sample Type: Elastomeric Bearing Pad

TENSILE STRENGTH AND ELONGATION TEST. (AS PER ASTM-D-412)

S. No	Sample Size (mm)	Ultimate Load (kN)	Tensile Strength (Mpa)	Elongation at Break(%)
1	6.0 x 2.5	0.77	51.33	470

-- TEAR STRENGTH (AS PER ASTM-D-624)

S. No	Sample Size (mm)	Ultimate Load (kN)	Tear Strength (N/mm)
1	13.0 x 3.5	0.20	57.15

- COMPRESSION SET TEST (AS PER ASTM-D-395)

S. No.	Thickness of Sample (mm)	Final Thickness (mm)	Compression set (%)
1	**3.50**	**3.45**	**1.42**

- HARDNESS TEST (AS PER ASTM-D-2240)

S. No	Sample Type	Hardness (Shore A)
1	**Bearing Pad**	57.66
