

Engr. Karamat Ullah
Resident Engineer, NESPAK (Pvt) Ltd. Islamabad

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

Client Reference: 3968/OBR/P-01/RE/KU/140-A

Dated: 25-01-2019

SOM Lab Ref: CED/SOM/192 (Page-2/2)

Dated: 28-01-2019

Test: Tension Test & Bend Test

Test Specification: ASTM-A-615

Sample Type: Deformed Bar(Mughal Steel)

Gauge Length: 200 mm

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)				
	kg/m	mm	mm	mm ²	mm ²	kN	kN	MPa	MPa	MPa	MPa	mm	mm	%	
1	1.550	16	15.84	201	197	105.70	132.20	526	537	658	672	32.5	200	16.3	
2	1.566	16	15.94	201	200	106.70	133.20	531	535	662	668	32.5	200	16.3	
3	0.957	12	12.46	113	122	59.70	89.70	528	490	793	737	27.5	200	13.8	
4	0.859	12	11.81	113	109	53.00	80.50	469	485	712	736	32.5	200	16.3	
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BEND TEST:

16mm	Sample bend through 180 degrees Satisfactorily without any crack	Note:- Only Six Samples Received and Tested
12mm	Sample bend through 180 degrees Satisfactorily without any crack	

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

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Gauge Length: 200 mm

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)				
	kg/m	mm	mm	mm ²	mm ²	kN	kN	MPa	MPa	MPa	MPa	mm	mm	%	
1	3.940	25	25.28	491	502	319.00	384.50	650	636	783	766	27.5	200	13.8	
2	3.963	25	25.35	491	505	298.00	366.70	607	591	747	727	30.0	200	15.0	
3	4.008	25	25.50	491	511	301.00	400.70	613	590	816	785	25.0	200	12.5	
4	4.004	25	25.48	491	510	309.00	386.00	629	606	786	757	30.0	200	15.0	
5	2.172	20	18.77	314	277	196.00	208.20	624	709	663	753	27.5	200	13.8	
6	2.205	20	18.91	314	281	199.00	227.50	633	709	724	810	25.0	200	12.5	
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BEND TEST:

25mm	Sample bend through 180 degrees Satisfactorily without any crack	Note:- Only Eleven Samples Received and Tested
25mm	Sample bend through 180 degrees Satisfactorily without any crack	
25mm	Sample bend through 180 degrees Satisfactorily without any crack	
20mm	Sample bend through 180 degrees Satisfactorily without any crack	
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	kg/m	mm	mm	mm ²	mm ²	kN	kN	MPa	MPa	MPa	MPa	mm	mm	%	
1	1.550	16	15.84	201	197	105.70	132.20	526	537	658	672	32.5	200	16.3	
2	1.566	16	15.94	201	200	106.70	133.20	531	535	662	668	32.5	200	16.3	
3	0.957	12	12.46	113	122	59.70	89.70	528	490	793	737	27.5	200	13.8	
4	0.859	12	11.81	113	109	53.00	80.50	469	485	712	736	32.5	200	16.3	
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