



# MATERIAL TESTING LABORATORY

## MILITARY ENGINEER SERVICES (MES)

### TEST RESULTS FOR TENSILE STRENGTH OF PLAIN/DEFORMED/RIBBED COLD TWISTED M.S. BARS

Job No	: 173/19-20(Steel).	Copy No.	: 04
Name of Client	: AGE (Army) Momenshahi.	Sample Specimen	: Length 600 mm Dia 20mm
Ref Itr No	: CEA/01 of 2019-2020/04/E-6 Dt.24 September'2019.	Sample Grade	: 72
Project Name	: CEA/01 of 2019-2020.	Frog Mark	: AKS TMT 500W
Date of Collection	: Wednesday, 25 September, 2019		

Sample No	Nominal Dia	Actual Dia	Area Under Test	Actual Weight	Average Actual Unit Weight	Yield or Proof Load	Yield or Proof Strength	Average Yield or Proof Strength	Ultimate Load	Ultimate Strength	Average Ultimate Strength	Elongation % (gauge length)		Average Elongation % (gauge length)	
	inch mm	inch mm	sq.inch sq.mm	lb/ft kg/m	lb/ft kg/m	lb kn	psi Mpa	psi Mpa	lb kn	psi Mpa	psi Mpa	8inch	5d**	8inch	5d**
1	0.787 20	0.783 19.876	0.4869 314.1593	1.637 2.436	1.637 2.436	40119.59 178.46	82390 568	82378 568	48223.99 214.51	99033 683	99078 683	23.5		23	
2	0.787 20	0.783 19.876	0.4869 314.1593	1.637 2.436		40211.76 178.87	82579 569		48266.71 214.7	99121 683		20.5			
3	0.787 20	0.783 19.876	0.4869 314.1593	1.637 2.436		40009.44 177.97	82164 566		48246.47 214.61	99080 683		25.5			

#### **Cautions:**

1. Samples as supplied to the laboratory have been tested. The laboratory authority does not bear any responsibility as to the representative character of the samples to be tested.
2. It is recommended that the samples are sent in a secure and sealed cover/packet/container under signature of the competent authority.
3. In order to avoid fraudulent fabrication of the test results, it is recommended that all test reports should be collected by duly authorized person and not by the contractor/supplier.

#### **Observation on Specimen(if any):**

1. Diameter & Unit weight of 20 mm bar is less than the standard value but within tolerance limit according to MES Schedule of Rates-2016.

Minimum Standard Requirements (BDS/ISO 6935-2:1991(E))				Minimum Standard Requirements (ASTM A615/A616M-96a)									
Grade	Y/strength N/mm2 or Mpa	Ult.Str N/mm2 or Mpa	Elongation %	ASTM A 615 M		ASTM A 615 M		ASTM A 615/A 615 M					
				Grade	Y/strength psi (kg/cm2)	Ult.Str psi (kg/cm2)	Grade	Y/strength Mpa (kg/cm2)	Ult.Str Mpa (kg/cm2)	Minimum Elongation in 8"(203.2 mm) GL (%)			
									10 mm	13,16,19 mm	22,25 mm	29,32,36 mm	
300	300	330	16	40	40000(2810)	70000(4910)	300	300(3050)	500(5090)	11	12	..	..
400/400w	400	440	14	60	60000(4210)	90000(6310)	420	420(4275)	620(6295)	9	9	8	7
500/500w	500	550	14	75	75000(5255)	100000(7015)	520	520(5275)	690(7010)	..	7	7	6

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No signature is required

Note : [1 Mpa = 145 Psi, 1 kg/cm2 = 14.223 psi]

Laboratory Technician

Test Performed By

Vetted By