



MATERIALS TESTING LABORATORY MILITARY ENGINEER SERVICES(MES)

Page no: 340

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

Job No : 108/2024-2025 (Steel).

Copy No : 01

Name of Client : GE (Army) Sylhet.

Sample Specimen : Length 600mm , Dia 12mm

Ref.ltr.No : CEA/340 of 2024-2025/02/E-6 Dt.29 May'2025.

Sample Grade : 60

Project Name : Construction of 300 Bedded Combined Military Hospital.

Frog Mark : RSM B-420 DWR.

Dt. of Sample Collection: 01 Jun'2025

Sample No	Nominal Dia	Actual Dia	Area Under Test	Actual Unit Weight	Average Actual Unit Weight	Yield or Proof load	Yield or Proof Strength	Average Yield or Proof load	Ultimate load	Ultimate Strength	Average Ultimate Strength	Ratio	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	(Fult/Fy)	8inch	5d	8inch	5d
1	0.472 12.00	0.473 12.02	0.175 113.097	0.599 0.891	0.599 0.891	22424.24 99.75	127918 882	121501 838	26458.62 117.69	150932 1041	144435 996	1.18	13		16	
2	0.472 12.00	0.473 12.02	0.175 113.097	0.599 0.891		20721.65 92.17	118206 815		24719.02 109.96	141009 972		1.19	18.5			
3	0.472 12.00	0.473 12.02	0.175 113.097	0.599 0.891		20751.72 92.31	118378 816		24781.48 110.23	141365 975		1.19	17.5			

Cautions:

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

Ovservation on Specimen(if any):

Minimum Standard Requirements (BDS/ISO 6935-2:1991(E))				Minimum Standard Requirments(ASTM A615/A616M-96a)									
Grade	Y/strength	Ult.Str	Elongation	ASTM A 615 M			ASTM A 615 M			ASTM A 615/A 615 M			
	N/mm2 or Mpa	N/mm2 or Mpa	%	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 (%)			
300	300	330	16	40	40000(2810)	70000(4910)	300	300(3050)	500(5090)	10 mm	13,16,19 mm	22,25 mm	29,32,36 mm
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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MATERIALS TESTING LABORATORY MILITARY ENGINEER SERVICES(MES)

Page no: 341

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

Job No : 108/2024-2025 (Steel).

Copy No : 02

Name of Client : GE (Army) Sylhet.

Sample Specimen : Length 600mm , Dia 16mm

Ref.ltr.No : CEA/340 of 2024-2025/02/E-6 Dt.29 May'2025.

Sample Grade : 60

Project Name : Construction of 300 Bedded Combined Military Hospital.

Frog Mark : RSM B-420 DWR.

Dt. of Sample Collection: 01 Jun'2025

Sample No	Nominal Dia	Actual Dia	Area Under Test	Actual Unit Weight	Average Actual Unit Weight	Yield or Proof load	Yield or Proof Strength	Average Yield or Proof load	Ultimate load	Ultimate Strength	Average Ultimate Strength	Ratio (Fult/Fy)	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	0.630 16.00	0.625 15.89	0.312 201.062	1.046 1.556	1.046 1.556	32059.11 142.61	102870 709	106562 735	35711.80 158.85	114591 790	122357 844	1.11	11		13	
2	0.630 16.00	0.625 15.89	0.312 201.062	1.046 1.556		35429.58 157.60	113685 784		40803.36 181.50	130928 903		1.15	12.5			
3	0.630 16.00	0.625 15.89	0.312 201.062	1.046 1.556		32140.07 142.97	103130 711		37881.67 168.51	121553 838		1.18	14.5			

Cautions:

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

Ovservation on Specimen(if any):

1. Diameter & Unit weight of 16 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 Requirments(ASTM A615/A616M-96a)									
				ASTM A 615 M			ASTM A 615 M			ASTM A 615/A 615 M			
Grade	Y/strength	Ult.Str	Elongation	Grade	Y/strength	Ult.Str	Grade	Y/strength	Ult.Str	Minimum Elongation in 8"(203.2 mm) GL (%)			
	N/mm2 or Mpa	N/mm2 or Mpa			psi (kg/cm2)	psi (kg/cm2)		Mpa (kg/cm2)	Mpa (kg/cm2)	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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Page no: 342

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

Job No : 108/2024-2025 (Steel).	Copy No : 03
Name of Client : GE (Army) Sylhet.	Sample Specimen : Length 600mm , Dia 20mm
Ref.ltr.No : CEA/340 of 2024-2025/02/E-6 Dt.29 May'2025.	Sample Grade : 60
Project Name : Construction of 300 Bedded Combined Military Hospital.	Frog Mark : RSM B-420 DWR.
Dt. of Sample Collection: 01 Jun'2025	

Sample No	Nominal Dia	Actual Dia	Area Under Test	Actual Unit Weight	Average Actual Unit Weight	Yield or Proof load	Yield or Proof Strength	Average Yield or Proof load	Ultimate load	Ultimate Strength	Average Ultimate Strength	Ratio	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	(Fult/Fy)	8inch	5d	8inch	5d
1	0.787 20.00	0.775 19.70	0.4869 314.1593	1.607 2.392	1.607 2.392	37833.09 168.29	77694 536	76770 529	47747.87 212.39	98055 676	97504 672	1.26	14.5		16	
2	0.787 20.00	0.775 19.70	0.4869 314.1593	1.607 2.392		37691.98 167.66	77405 534		47493.41 211.26	97533 673		1.26	16.5			
3	0.787 20.00	0.775 19.70	0.4869 314.1593	1.607 2.392		36623.24 162.91	75210 519		47197.31 209.94	96925 668		1.29	15.5			

Cautions:

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

Ovservation 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 Requirments(ASTM A615/A616M-96a)									
Grade	Y/strength	Ult.Str	Elongation	ASTM A 615 M			ASTM A 615 M			ASTM A 615/A 615 M			
	N/mm2 or Mpa	N/mm2 or Mpa	%	Grade	Y/strength psi (kg/cm2)	Ult.Str psi (kg/cm2)	Grade	Y/strength psi (kg/cm2)	Ult.Str psi (kg/cm2)	Minimum Elongation in 8"(203.2 mm) GL (%)			
300	300	330	16	40	40000(2810)	70000(4910)	300	300(3050)	500(5090)	10 mm	13,16,19 mm	22,25 mm	29,32,36 mm
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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