



MATERIALS TESTING LABORATORY MILITARY ENGINEER SERVICES(MES)

Page no: 411

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

Job No : 69/2025-2026 (Steel).

Copy No : 01

Name of Client : GE (Army) Cumilla.

Sample Specimen : Length 600mm , Dia 10mm

Ref.ltr.No : CEA/289 of 2022-2023/47/E-6 Dt.23 Sep'2025.

Sample Grade : 60

Project Name : Construction of 1 x10 'B' type Qtr.

Frog Mark : SAS B-420 DWR.

Dt. of Sample Collection : 24 Sep'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	0.394 10.00	0.410 10.41	0.1217 78.5398	0.449 0.668	0.449 0.668	12298.94 54.71	101029 697	99933 689	15359.43 68.32	126169 870	129874 896	1.25	21.5		24	
2	0.394 10.00	0.410 10.41	0.1217 78.5398	0.449 0.668		10857.76 48.30	89190 615		14614.55 65.01	120050 828		1.35	25.5			
3	0.394 10.00	0.410 10.41	0.1217 78.5398	0.449 0.668		13339.93 59.34	109580 756		17457.59 77.65	143404 989		1.31	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 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)

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

Job No : 69/2025-2026 (Steel).

Copy No : 02

Name of Client : GE (Army) Cumilla.

Sample Specimen : Length 600mm , Dia 12mm

Ref.ltr.No : CEA/289 of 2022-2023/47/E-6 Dt.23 Sep'2025.

Sample Grade : 60

Project Name : Construction of 1 x10 'B' type Qtr.

Frog Mark : SAS B-420 DWR.

Dt. of Sample Collection: 24 Sep'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	0.486 12.35	0.175 113.097	0.632 0.941	0.632 0.941	18558.72 82.55	105868 730	105423 727	24314.20 108.15	138700 957	136329 940	1.31	23.5		25	
2	0.472 12.00	0.486 12.35	0.175 113.097	0.632 0.941		18824.75 83.74	107385 741		23763.63 105.71	135559 935		1.26	25.5			
3	0.472 12.00	0.486 12.35	0.175 113.097	0.632 0.941		18059.05 80.33	103017 710		23617.90 105.06	134728 929		1.31	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 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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TEST RESULT FOR TENSILE STRENGTH OF PLAIN/DEFORMED/RIBBED COLD TWISTED M.S BARS

Job No : 69/2025-2026 (Steel).

Copy No : 03

Name of Client : GE (Army) Cumilla.

Sample Specimen : Length 600mm , Dia 16mm

Ref.ltr.No : CEA/289 of 2022-2023/47/E-6 Dt.23 Sep'2025.

Sample Grade : 60

Project Name : Construction of 1 x10 'B' type Qtr.

Frog Mark : SAS B-420 DWR.

Dt. of Sample Collection: 24 Sep'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	0.630 16.00	0.644 16.35	0.312 201.062	1.107 1.647	1.107 1.647	28924.59 128.66	92812 640	92075 635	37347.30 166.13	119839 826	119972 827	1.29	18.5		18	
2	0.630 16.00	0.644 16.35	0.312 201.062	1.107 1.647		28200.53 125.44	90489 624		37199.25 165.47	119364 823		1.32	18			
3	0.630 16.00	0.644 16.35	0.312 201.062	1.107 1.647		28959.29 128.82	92923 641		37620.27 167.34	120715 833		1.30	18			

Cautions:

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

Job No : 69/2025-2026 (Steel).

Copy No : 04

Name of Client : GE (Army) Cumilla.

Sample Specimen : Length 600mm , Dia 20mm

Ref.ltr.No : CEA/289 of 2022-2023/47/E-6 Dt.23 Sep'2025.

Sample Grade : 60

Project Name : Construction of 1 x10 'B' type Qtr.

Frog Mark : SAS B-420 DWR.

Dt. of Sample Collection: 24 Sep'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	0.798 20.27	0.4869 314.1593	1.703 2.534	1.703 2.534	44946.47 199.93	92302 637	84009 579	59547.99 264.88	122288 843	116418 803	1.32	16.5		23	
2	0.787 20.00	0.798 20.27	0.4869 314.1593	1.703 2.534		38698.27 172.14	79471 548		54877.45 244.11	112697 777		1.42	25.5			
3	0.787 20.00	0.798 20.27	0.4869 314.1593	1.703 2.534		39079.96 173.84	80255 553		55643.15 247.51	114269 788		1.42	26			

Cautions:

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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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