



MATERIALS TESTING LABORATORY MILITARY ENGINEER SERVICES(MES)

Page no: 371

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

Job No : 46/2025-2026 (Steel).

Copy No : 01

Name of Client : GE (Army) Cumilla.

Sample Specimen : Length 600mm , Dia 10mm

Ref.ltr.No : CEA/421 of 2024-2025/08/E-6 Dt.17 Aug'2025.

Sample Grade : 60

Project Name : Construction of 1 x SMBK and CH/DH with Recreation Room.

Frog Mark : Baizid B-420 DWR

Dt. of Sample Collection : 21 Aug'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	0.397 10.08	0.1217 78.5398	0.421 0.627	0.421 0.627	13633.71 60.65	111993 772	113241 781	16525.33 73.51	135746 936	136677 943	1.21	19		20	
2	0.394 10.00	0.397 10.08	0.1217 78.5398	0.421 0.627		13871.98 61.71	113950 786		16717.34 74.36	137323 947		1.21	20.5			
3	0.394 10.00	0.397 10.08	0.1217 78.5398	0.421 0.627		13851.16 61.61	113779 785		16673.38 74.17	136962 945		1.20	19.5			

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

Job No : 46/2025-2026 (Steel).

Copy No : 02

Name of Client : GE (Army) Cumilla.

Sample Specimen : Length 600mm , Dia 12mm

Ref.ltr.No : CEA/421 of 2024-2025/08/E-6 Dt.17 Aug'2025.

Sample Grade : 60

Project Name : Construction of 1 x SMBK and CH/DH with Recreation Room.

Frog Mark : Baizid B-420 DWR

Dt. of Sample Collection: 21 Aug'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	0.477 12.13	0.175 113.097	0.609 0.907	0.609 0.907	16641.00 74.02	94928 655	94712 653	21374.00 95.08	121927 841	121417 837	1.28	20.5		20	
2	0.472 12.00	0.477 12.13	0.175 113.097	0.609 0.907		16409.67 72.99	93608 646		21177.37 94.20	120806 833		1.29	18.5			
3	0.472 12.00	0.477 12.13	0.175 113.097	0.609 0.907		16758.98 74.55	95601 659		21302.29 94.76	121518 838		1.27	21.5			

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 : 46/2025-2026 (Steel).

Copy No : 03

Name of Client : GE (Army) Cumilla.

Sample Specimen : Length 600mm , Dia 16mm

Ref.ltr.No : CEA/421 of 2024-2025/08/E-6 Dt.17 Aug'2025.

Sample Grade : 60

Project Name : Construction of 1 x SMBK and CH/DH with Recreation Room.

Frog Mark : Baizid B-420 DWR

Dt. of Sample Collection: 21 Aug'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	0.633 16.09	0.312 201.062	1.072 1.595	1.072 1.595	27050.83 120.33	86800 599	86075 594	33895.86 150.78	108764 750	108558 749	1.25	20		20	
2	0.630 16.00	0.633 16.09	0.312 201.062	1.072 1.595		26539.59 118.05	85159 587		33398.51 148.56	107168 739		1.26	17			
3	0.630 16.00	0.633 16.09	0.312 201.062	1.072 1.595		26884.27 119.59	86265 595		34201.22 152.13	109744 757		1.27	24			

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 : 46/2025-2026 (Steel).

Copy No : 04

Name of Client : GE (Army) Cumilla.

Sample Specimen : Length 600mm , Dia 20mm

Ref.ltr.No : CEA/421 of 2024-2025/08/E-6 Dt.17 Aug'2025.

Sample Grade : 60

Project Name : Construction of 1 x SMBK and CH/DH with Recreation Room.

Frog Mark : Baizid B-420 DWR

Dt. of Sample Collection: 21 Aug'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	1.702 2.533	1.702 2.533	40981.49 182.29	84160 580	82505 569	53119.35 236.29	109086 752	107496 741	1.30	21		20	
2	0.787 20.00	0.798 20.27	0.4869 314.1593	1.702 2.533		39771.63 176.91	81675 563		51863.23 230.70	106507 735		1.30	19.5			
3	0.787 20.00	0.798 20.27	0.4869 314.1593	1.702 2.533		39773.95 176.92	81680 563		52052.92 231.54	106896 737		1.31	20.5			

Cautions:

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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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Page no: 375

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

Job No : 46/2025-2026 (Steel).

Copy No : 05

Name of Client : GE (Army) Cumilla.

Sample Specimen : Length 600mm , Dia 25mm

Ref.ltr.No : CEA/421 of 2024-2025/08/E-6 Dt.17 Aug'2025.

Sample Grade : 60

Project Name : Construction of 1 x SMBK and CH/DH with Recreation Room.

Frog Mark : Baizid B-420 DWR

Dt. of Sample Collection: 21 Aug'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	0.984 25.00	1.000 25.39	0.7609 490.8739	2.671 3.974	2.671 3.974	59971.32 266.76	78821 544	79062 545	76802.86 341.63	100943 696	103233 712	1.28	24.5		23	
2	0.984 25.00	1.000 25.39	0.7609 490.8739	2.671 3.974		62906.90 279.82	82679 570		81628.39 363.10	107285 740		1.30	23.5			
3	0.984 25.00	1.000 25.39	0.7609 490.8739	2.671 3.974		57586.32 256.16	75686 522		77205.37 343.42	101472 700		1.34	20.5			

Cautions:

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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	Ult.Str	Grade	Y/strength	Ult.Str	Minimum Elongation in 8"(203.2 mm) GL (%)			
					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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