



MATERIALS TESTING LABORATORY MILITARY ENGINEER SERVICES(MES)

Page no: 433

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

Job No : 92(D)/2025-2026 (Steel).

Copy No : 01

Name of Client : GE (Army) Sylhet.

Sample Specimen : Length 600mm , Dia 10mm

Ref.ltr.No : CEA/445 of 2024-2025/12/E-6 Dt.28 Oct'2025.

Sample Grade : 60

Project Name : Construction of 1 x 104 OR's family Qtr.

Frog Mark : KSRM B-420 DWR.

Dt. of Sample Collection : 30 Oct'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	0.392 9.95	0.1217 78.5398	0.410 0.610	0.410 0.610	13788.71 61.33	113266 781	107464 741	15634.71 69.55	128430 886	131160 905	1.13	17.5		21	
2	0.394 10.00	0.392 9.95	0.1217 78.5398	0.410 0.610		12724.59 56.60	104525 721		16143.64 71.81	132611 915		1.27	21.5			
3	0.394 10.00	0.392 9.95	0.1217 78.5398	0.410 0.610		12733.84 56.64	104601 721		16122.82 71.72	132440 913		1.27	23			

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 10 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	psi (kg/cm2)	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: 434

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

Job No : 92(D)/2025-2026 (Steel).

Copy No : 02

Name of Client : GE (Army) Sylhet.

Sample Specimen : Length 600mm , Dia 12mm

Ref.ltr.No : CEA/445 of 2024-2025/12/E-6 Dt.28 Oct'2025.

Sample Grade : 60

Project Name : Construction of 1 x 104 OR's family Qtr.

Frog Mark : KSRM B-420 DWR.

Dt. of Sample Collection: 30 Oct'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	0.470 11.93	0.175 113.097	0.590 0.878	0.590 0.878	16178.34 71.96	92289 636	90758 626	21131.10 94.00	120542 831	118400 817	1.31	22.5		23	
2	0.472 12.00	0.470 11.93	0.175 113.097	0.590 0.878		16236.17 72.22	92619 639		21172.74 94.18	120779 833		1.30	24			
3	0.472 12.00	0.470 11.93	0.175 113.097	0.590 0.878		15315.48 68.13	87367 603		19962.89 88.80	113878 785		1.30	23			

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 12 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 N/mm2 or Mpa	Ult.Str N/mm2 or Mpa	Elongation %	ASTM A 615 M		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 (%)			
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: 435

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

Job No : 92(D)/2025-2026 (Steel). Copy No : 03
Name of Client : GE (Army) Sylhet. Sample Specimen : Length 600mm , Dia 16mm
Ref.ltr.No : CEA/445 of 2024-2025/12/E-6 Dt.28 Oct'2025. Sample Grade : 60
Project Name : Construction of 1 x 104 OR's family Qtr. Frog Mark : GPH B-420 DWR.
Dt. of Sample Collection: 30 Oct'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	0.624 15.84	0.312 201.062	1.039 1.547	1.039 1.547	25269.59 112.40	81084 559	81527 562	34185.03 152.06	109692 756	109531 755	1.35	23.5		26	
2	0.630 16.00	0.624 15.84	0.312 201.062	1.039 1.547		25366.75 112.84	81396 561		34226.67 152.25	109825 757		1.35	27.5			
3	0.630 16.00	0.624 15.84	0.312 201.062	1.039 1.547		25586.51 113.81	82101 566		33993.02 151.21	109076 752		1.33	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):

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)									
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	psi (kg/cm2)	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: 436

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

Job No : 92(D)/2025-2026 (Steel).

Copy No : 04

Name of Client : GE (Army) Sylhet.

Sample Specimen : Length 600mm , Dia 20mm

Ref.ltr.No : CEA/445 of 2024-2025/12/E-6 Dt.28 Oct'2025.

Sample Grade : 60

Project Name : Construction of 1 x 104 OR's family Qtr.

Frog Mark : GPH B-420 DWR.

Dt. of Sample Collection: 30 Oct'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	0.785 19.93	0.4869 314.1593	1.645 2.448	1.645 2.448	36347.96 161.68	74644 515	74584 514	50442.86 224.38	103590 714	103569 714	1.39	27.5	28		
2	0.787 20.00	0.785 19.93	0.4869 314.1593	1.645 2.448		36304.00 161.49	74554 514		50230.04 223.43	103153 711		1.38	28.5			
3	0.787 20.00	0.785 19.93	0.4869 314.1593	1.645 2.448		36304.00 161.49	74554 514		50625.61 225.19	103965 717		1.39	29			

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 N/mm2 or Mpa	Ult.Str N/mm2 or Mpa	Elongation %	ASTM A 615 M		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 (%)			
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: 437

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

Job No : 92(D)/2025-2026 (Steel).

Copy No : 05

Name of Client : GE (Army) Sylhet.

Sample Specimen : Length 600mm , Dia 25mm

Ref.ltr.No : CEA/445 of 2024-2025/12/E-6 Dt.28 Oct'2025.

Sample Grade : 60

Project Name : Construction of 1 x 104 OR's family Qtr.

Frog Mark : GPH B-420 DWR.

Dt. of Sample Collection: 30 Oct'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	0.983 24.98	0.7609 490.8739	2.585 3.846	2.585 3.846	54507.32 242.46	71639 494	71601 494	77163.73 343.24	101417 699	101603 701	1.42	30		30	
2	0.984 25.00	0.983 24.98	0.7609 490.8739	2.585 3.846		54595.23 242.85	71755 495		77249.32 343.62	101529 700		1.41	30			
3	0.984 25.00	0.983 24.98	0.7609 490.8739	2.585 3.846		54331.51 241.68	71408 492		77503.79 344.75	101864 703		1.43	29.5			

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 25 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 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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