



MATERIALS TESTING LABORATORY MILITARY ENGINEER SERVICES(MES)

Page no: 323

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

Job No : 34/2025-2026 (Steel).

Copy No : 01

Name of Client : GE (Navy) Patuakhali.

Sample Specimen : Length 600mm , Dia 10mm

Ref.ltr.No : EinC/104 of 2023-2024/20/E-6 Dt.07 Aug'2025.

Sample Grade : 72.5

Project Name : Construction of 6 x Watch Tower.

Frog Mark : AKS B-500 DWR.

Dt. of Sample Collection : 10 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	0.393 9.99	0.1217 78.5398	0.414 0.616	0.414 0.616	16016.41 71.24	131566 907	131800 909	18859.45 83.89	154920 1068	155217 1070	1.18	21		19	
2	0.394 10.00	0.393 9.99	0.1217 78.5398	0.414 0.616		16250.05 72.28	133485 921		19009.81 84.56	156155 1077		1.17	17.5			
3	0.394 10.00	0.393 9.99	0.1217 78.5398	0.414 0.616		15868.36 70.59	130350 899		18817.81 83.71	154578 1066		1.19	18.5			

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 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	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 : 34/2025-2026 (Steel).

Copy No : 02

Name of Client : GE (Navy) Patuakhali.

Sample Specimen : Length 600mm , Dia 12mm

Ref.ltr.No : EinC/104 of 2023-2024/20/E-6 Dt.07 Aug'2025.

Sample Grade : 72.5

Project Name : Construction of 6 x Watch Tower.

Frog Mark : AKS B-500 DWR.

Dt. of Sample Collection: 10 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 12.11	0.175 113.097	0.608 0.905	0.608 0.905	20175.71 89.75	115092 794	114775 792	24506.20 109.01	139795 964	139276 961	1.21	19.5		20	
2	0.472 12.00	0.477 12.11	0.175 113.097	0.608 0.905		20092.43 89.38	114617 790		24339.64 108.27	138845 958		1.21	19.5			
3	0.472 12.00	0.477 12.11	0.175 113.097	0.608 0.905		20092.43 89.38	114617 790		24399.79 108.54	139188 960		1.21	20.5			

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 : 34/2025-2026 (Steel).

Copy No : 03

Name of Client : GE (Navy) Patuakhali.

Sample Specimen : Length 600mm , Dia 16mm

Ref.ltr.No : EinC/104 of 2023-2024/20/E-6 Dt.07 Aug'2025.

Sample Grade : 72.5

Project Name : Construction of 6 x Watch Tower.

Frog Mark : AKS B-500 DWR.

Dt. of Sample Collection: 10 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	0.630 16.00	0.629 15.97	0.312 201.062	1.057 1.573	1.057 1.573	30728.96 136.69	98602 680	98256 678	38270.31 170.23	122800 847	121098 835	1.25	22		22	
2	0.630 16.00	0.629 15.97	0.312 201.062	1.057 1.573		30520.77 135.76	97934 675		37474.53 166.69	120247 829		1.23	21.5			
3	0.630 16.00	0.629 15.97	0.312 201.062	1.057 1.573		30613.30 136.17	98231 677		37474.53 166.69	120247 829		1.22	22			

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.

Obsverson 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	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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Page no: 326

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

Job No : 34/2025-2026 (Steel).

Copy No : 04

Name of Client : GE (Navy) Patuakhali.

Sample Specimen : Length 600mm , Dia 20mm

Ref.ltr.No : EinC/104 of 2023-2024/20/E-6 Dt.07 Aug'2025.

Sample Grade : 72.5

Project Name : Construction of 6 x Watch Tower.

Frog Mark : AKS B-500 DWR.

Dt. of Sample Collection: 10 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	0.793 20.13	0.4869 314.1593	1.679 2.498	1.679 2.498	45633.52 202.99	93713 646	93463 645	56554.59 251.57	116141 801	116185 801	1.24	22		23	
2	0.787 20.00	0.793 20.13	0.4869 314.1593	1.679 2.498		45804.71 203.75	94065 649		56767.41 252.51	116578 804		1.24	23.5			
3	0.787 20.00	0.793 20.13	0.4869 314.1593	1.679 2.498		45096.84 200.60	92611 639		56406.54 250.91	115837 799		1.25	23.5			

Cautions:

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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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