



MATERIALS TESTING LABORATORY MILITARY ENGINEER SERVICES(MES)

Page no: 348

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

Job No : 111/2024-2025 (Steel).

Copy No : 01

Name of Client : GE (Navy) Khulna.

Sample Specimen : Length 600mm , Dia 10mm

Ref.ltr.No : EinC/366 of 2023-2024/42/E-6 Dt.01 Jun'2025.

Sample Grade : 72.5

Project Name : Construction of 1 x BNS Mongla Main Guard Room.

Frog Mark : GPH B-500 DWR.

Dt. of Sample Collection : 02 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	0.394 10.00	0.393 9.98	0.1217 78.5398	0.413 0.614	0.413 0.614	15488.98 68.90	127233 877	124902 861	18648.94 82.95	153190 1056	148662 1025	1.20	15.5		16	
2	0.394 10.00	0.393 9.98	0.1217 78.5398	0.413 0.614		15024.01 66.83	123414 851		17802.27 79.19	146236 1009		1.18	16.5			
3	0.394 10.00	0.393 9.98	0.1217 78.5398	0.413 0.614		15102.66 67.18	124060 856		17841.60 79.36	146559 1011		1.18	17			

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

Job No : 111/2024-2025 (Steel).

Copy No : 02

Name of Client : GE (Navy) Khulna.

Sample Specimen : Length 600mm , Dia 12mm

Ref.ltr.No : EinC/366 of 2023-2024/42/E-6 Dt.01 Jun'2025.

Sample Grade : 72.5

Project Name : Construction of 1 x BNS Mongla Main Guard Room.

Frog Mark : GPH B-500 DWR.

Dt. of Sample Collection: 02 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	0.468 11.89	0.175 113.097	0.585 0.871	0.585 0.871	20110.94 89.46	114722 791	112180 774	23509.17 104.57	134107 925	134076 925	1.17	17		17	
2	0.472 12.00	0.468 11.89	0.175 113.097	0.585 0.871		19398.45 86.29	110658 763		23513.80 104.59	134134 925		1.21	18.5			
3	0.472 12.00	0.468 11.89	0.175 113.097	0.585 0.871		19486.35 86.68	111159 767		23488.35 104.48	133989 924		1.21	16.5			

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 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	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 : 111/2024-2025 (Steel).

Copy No : 03

Name of Client : GE (Navy) Khulna.

Sample Specimen : Length 600mm , Dia 16mm

Ref.ltr.No : EinC/366 of 2023-2024/42/E-6 Dt.01 Jun'2025.

Sample Grade : 72.5

Project Name : Construction of 1 x BNS Mongla Main Guard Room.

Frog Mark : GPH B-500 DWR.

Dt. of Sample Collection: 02 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	0.630 16.00	0.628 15.96	0.312 201.062	1.055 1.570	1.055 1.570	29107.34 129.48	93399 644	93851 647	37467.59 166.66	120225 829	120556 831	1.29	21.5		22	
2	0.630 16.00	0.628 15.96	0.312 201.062	1.055 1.570		29128.16 129.57	93465 645		37580.94 167.17	120588 832		1.29	22			
3	0.630 16.00	0.628 15.96	0.312 201.062	1.055 1.570		29509.86 131.27	94690 653		37664.22 167.54	120856 833		1.28	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):

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

Job No : 111/2024-2025 (Steel).

Copy No : 04

Name of Client : GE (Navy) Khulna.

Sample Specimen : Length 600mm , Dia 20mm

Ref.ltr.No : EinC/366 of 2023-2024/42/E-6 Dt.01 Jun'2025.

Sample Grade : 72.5

Project Name : Construction of 1 x BNS Mongla Main Guard Room.

Frog Mark : GPH B-500 DWR.

Dt. of Sample Collection: 02 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	0.784 19.91	0.4869 314.1593	1.642 2.443	1.642 2.443	43243.89 192.36	88806 612	89066 614	55536.74 247.04	114051 787	114040 786	1.28	20.5		21	
2	0.787 20.00	0.784 19.91	0.4869 314.1593	1.642 2.443		43243.89 192.36	88806 612		55626.96 247.44	114236 788		1.29	21.5			
3	0.787 20.00	0.784 19.91	0.4869 314.1593	1.642 2.443		43623.27 194.05	89585 618		55430.33 246.57	113832 785		1.27	20			

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 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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