



MATERIALS TESTING LABORATORY MILITARY ENGINEER SERVICES(MES)

Page no: 365

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

Job No : 58/2025-2026 (Steel).

Copy No : 01

Name of Client : GE (Army)Savar.

Sample Specimen : Length 600mm , Dia 10mm

Ref.ltr.No : CEA/391 of 2024-2025/10/E-6 Dt.04 Sep'2025.

Sample Grade : 60

Project Name : Construction of 1 x SMBK

Frog Mark : RSM B-420 DWR.

Dt. of Sample Collection : 08 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	0.399 10.14	0.1217 78.5398	0.426 0.635	0.426 0.635	13871.98 61.71	113950 786	111968 772	17013.44 75.68	139756 964	138635 956	1.23	18		19	
2	0.394 10.00	0.399 10.14	0.1217 78.5398	0.426 0.635		13529.62 60.18	111138 766		16816.81 74.80	138141 953		1.24	18.5			
3	0.394 10.00	0.399 10.14	0.1217 78.5398	0.426 0.635		13490.29 60.01	110815 764		16800.62 74.73	138008 952		1.25	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	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 : 58/2025-2026 (Steel).

Copy No : 02

Name of Client : GE (Army)Savar.

Sample Specimen : Length 600mm , Dia 12mm

Ref.ltr.No : CEA/391 of 2024-2025/10/E-6 Dt.04 Sep'2025.

Sample Grade : 60

Project Name : Construction of 1 x SMBK

Frog Mark : RSM B-420 DWR.

Dt. of Sample Collection: 08 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	0.476 12.10	0.175 113.097	0.607 0.903	0.607 0.903	16645.62 74.04	94954 655	94668 653	21584.51 96.01	123128 849	122816 847	1.30	16.5		18	
2	0.472 12.00	0.476 12.10	0.175 113.097	0.607 0.903		16428.18 73.08	93714 646		21385.57 95.13	121993 841		1.30	17.5			
3	0.472 12.00	0.476 12.10	0.175 113.097	0.607 0.903		16712.71 74.34	95337 657		21619.21 96.17	123326 851		1.29	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):

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 : 58/2025-2026 (Steel).

Copy No : 03

Name of Client : GE (Army)Savar.

Sample Specimen : Length 600mm , Dia 16mm

Ref.ltr.No : CEA/391 of 2024-2025/10/E-6 Dt.04 Sep'2025.

Sample Grade : 60

Project Name : Construction of 1 x SMBK

Frog Mark : RSM B-420 DWR.

Dt. of Sample Collection: 08 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	0.636 16.14	0.312 201.062	1.080 1.607	1.080 1.607	25290.41 112.50	81151 560	82836 571	33102.40 147.25	106218 733	107853 744	1.31	22		19	
2	0.630 16.00	0.636 16.14	0.312 201.062	1.080 1.607		26504.89 117.90	85048 587		34418.67 153.10	110441 762		1.30	18			
3	0.630 16.00	0.636 16.14	0.312 201.062	1.080 1.607		25651.28 114.10	82309 568		33315.23 148.19	106901 737		1.30	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):

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 : 58/2025-2026 (Steel).

Copy No : 04

Name of Client : GE (Army)Savar.

Sample Specimen : Length 600mm , Dia 20mm

Ref.ltr.No : CEA/391 of 2024-2025/10/E-6 Dt.04 Sep'2025.

Sample Grade : 60

Project Name : Construction of 1 x SMBK

Frog Mark : RSM B-420 DWR.

Dt. of Sample Collection: 08 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	0.791 20.10	0.4869 314.1593	1.674 2.491	1.674 2.491	38848.63 172.81	79780 550	80445 555	50209.22 223.34	103110 711	104141 718	1.29	21.5		20	
2	0.787 20.00	0.791 20.10	0.4869 314.1593	1.674 2.491		39003.62 173.50	80098 552		50718.15 225.60	104155 718		1.30	19.5			
3	0.787 20.00	0.791 20.10	0.4869 314.1593	1.674 2.491		39665.22 176.44	81457 562		51206.25 227.78	105158 725		1.29	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	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 : 58/2025-2026 (Steel).

Copy No : 05

Name of Client : GE (Army)Savar.

Sample Specimen : Length 600mm , Dia 25mm

Ref.ltr.No : CEA/391 of 2024-2025/10/E-6 Dt.04 Sep'2025.

Sample Grade : 60

Project Name : Construction of 1 x SMBK

Frog Mark : RSM B-420 DWR.

Dt. of Sample Collection: 08 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	0.984 25.00	0.990 25.14	0.7609 490.8739	2.618 3.896	2.618 3.896	56901.58 253.11	74786 516	75254 519	77163.73 343.24	101417 699	101314 699	1.36	22		23	
2	0.984 25.00	0.990 25.14	0.7609 490.8739	2.618 3.896		57813.02 257.16	75984 524		77397.38 344.28	101724 702		1.34	22			
3	0.984 25.00	0.990 25.14	0.7609 490.8739	2.618 3.896		57058.89 253.81	74993 517		76694.13 341.15	100800 695		1.34	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 (%)			
										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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