



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 : 68/2025-2026 (Steel).

Copy No : 01

Name of Client : AGE (Army) Rajendrapur.

Sample Specimen : Length 600mm , Dia 08mm

Ref.ltr.No : CEA/437 of 2024-2025/15/E-6 Dt.31 Aug'2025.

Sample Grade : 72.5

Project Name : Construction of 1 x Composite Workshop.

Frog Mark : GPH B-500 DWR.

Dt. of Sample Collection: 21 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	0.315 8.00	0.316 8.03	0.0779 50.2655	0.267 0.398	0.267 0.398	11551.75 51.3845	148267 1023	148307 1023	14637.68 65.1114	187875 1296	182571 1259	1.27	16		15	
2	0.315 8.00	0.316 8.03	0.0779 50.2655	0.267 0.398		11561.00 51.42566	148386 1023		13490.29 60.0075	173149 1194		1.17	14.5			
3	0.315 8.00	0.316 8.03	0.0779 50.2655	0.267 0.398		11551.75 51.3845	148267 1023		14545.15 64.6998	186688 1288		1.26	13.5			

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.

Obsvervation 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)	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 : 68/2025-2026 (Steel). Copy No : 02
Name of Client : AGE (Army) Rajendrapur. Sample Specimen : Length 600mm , Dia 10mm
Ref.ltr.No : CEA/437 of 2024-2025/15/E-6 Dt.31 Aug'2025. Sample Grade : 72.5
Project Name : Construction of 1 x Composite Workshop. Frog Mark : BRSM B-500 DWR.
Dt. of Sample Collection : 21 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	0.392 9.96	0.1217 78.5398	0.411 0.612	0.411 0.612	14024.66 62.38	115205 795	112209 774	16738.16 74.45	137494 948	134986 931	1.19	13.5		14	
2	0.394 10.00	0.392 9.96	0.1217 78.5398	0.411 0.612		13633.71 60.65	111993 772		16610.93 73.89	136449 941		1.22	14			
3	0.394 10.00	0.392 9.96	0.1217 78.5398	0.411 0.612		13321.42 59.26	109428 755		15949.32 70.95	131015 904		1.20	13.5			

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

Job No : 68/2025-2026 (Steel).
Name of Client : AGE (Army) Rajendrapur.
Ref.ltr.No : CEA/437 of 2024-2025/15/E-6 Dt.31 Aug'2025.
Project Name : Construction of 1 x Composite Workshop.
Dt. of Sample Collection: 21 Sep'2025

Copy No : 03
Sample Specimen : Length 600mm , Dia 12mm
Sample Grade : 72.5
Frog Mark : GPH B-500 DWR.

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	0.471 11.97	0.175 113.097	0.594 0.884	0.594 0.884	18151.58 80.74	103545 714	102767 709	22192.91 98.72	126599 873	127725 881	1.22	13.5		15	
2	0.472 12.00	0.471 11.97	0.175 113.097	0.594 0.884		18028.98 80.20	102846 709		22914.65 101.93	130716 901		1.27	15.5			
3	0.472 12.00	0.471 11.97	0.175 113.097	0.594 0.884		17864.73 79.47	101909 703		22063.36 98.14	125860 868		1.24	15			

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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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 : 68/2025-2026 (Steel).

Copy No : 04

Name of Client : AGE (Army) Rajendrapur.

Sample Specimen : Length 600mm , Dia 16mm

Ref.ltr.No : CEA/437 of 2024-2025/15/E-6 Dt.31 Aug'2025.

Sample Grade : 72.5

Project Name : Construction of 1 x Composite Workshop.

Frog Mark : GPH B-500 DWR.

Dt. of Sample Collection: 21 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	0.629 15.97	0.312 201.062	1.057 1.573	1.057 1.573	28589.17 127.17	91736 633	92458 638	36965.61 164.43	118614 818	119250 822	1.29	21		20	
2	0.630 16.00	0.629 15.97	0.312 201.062	1.057 1.573		28899.15 128.55	92731 640		37326.48 166.04	119772 826		1.29	18.5			
3	0.630 16.00	0.629 15.97	0.312 201.062	1.057 1.573		28954.67 128.80	92909 641		37199.25 165.47	119364 823		1.28	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.

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

Job No : 68/2025-2026 (Steel). Copy No : 05
Name of Client : AGE (Army) Rajendrapur. Sample Specimen : Length 600mm , Dia 20mm
Ref.ltr.No : CEA/437 of 2024-2025/15/E-6 Dt.31 Aug'2025. Sample Grade : 72.5
Project Name : Construction of 1 x Composite Workshop. Frog Mark : GPH B-500 DWR.
Dt. of Sample Collection: 21 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	0.783 19.89	0.4869 314.1593	1.639 2.438	1.639 2.438	44335.76 197.21	91048 628	89197 615	55217.50 245.62	113395 782	112651 777	1.25	20.5		22	
2	0.787 20.00	0.783 19.89	0.4869 314.1593	1.639 2.438		44169.21 196.47	90706 626		54581.35 242.79	112089 773		1.24	21.5			
3	0.787 20.00	0.783 19.89	0.4869 314.1593	1.639 2.438		41798.08 185.93	85837 592		54766.41 243.61	112469 776		1.31	22.5			

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 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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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 : 68/2025-2026 (Steel). Copy No : 06
Name of Client : AGE (Army) Rajendrapur. Sample Specimen : Length 600mm , Dia 25mm
Ref.ltr.No : CEA/437 of 2024-2025/15/E-6 Dt.31 Aug'2025. Sample Grade : 72.5
Project Name : Construction of 1 x Composite Workshop. Frog Mark : RSM B-420 DWR.
Dt. of Sample Collection: 21 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	0.984 25.00	0.7609 490.8739	2.591 3.855	2.591 3.855	67741.68 301.33	89034 614	89444 617	88179.64 392.24	115895 799	116002 800	1.30	21.5		21	
2	0.984 25.00	0.984 25.00	0.7609 490.8739	2.591 3.855		67730.12 301.28	89018 614		88253.67 392.57	115993 800		1.30	21			
3	0.984 25.00	0.984 25.00	0.7609 490.8739	2.591 3.855		68690.13 305.55	90280 623		88348.51 392.99	116117 801		1.29	21			

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.

Oservation 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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