MATERRIALS TESTING LABORATORY
MILITARY ENGINEER SERVICES(MES)

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

Job No : 94(D)/2025-2026 (Steel).
Name of Client : AGE (Army) Bhatiary.
Ref.ltr.No : EinC/08 of 2025-2026/08/E-6 Dt.28 Oct'2025.
Project Name : Construction of 1 x 50 Bedded Hospital.
Dt. of Sample Collection : 30 Oct'2025

Copy No : 01
Sample Specimen : Length 600mm , Dia 10mm
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	0.394 10.00	0.395 10.02	0.1217 78.5398	0.416 0.620		13915.94 61.90	114312 788		17182.31 76.43	141143 973		1.23	17.5			
2	0.394 10.00	0.395 10.02	0.1217 78.5398	0.416 0.620	0.416 0.620	13925.19 61.94	114388 789	114635 791	17119.85 76.15	140630 970	140978 972	1.23	18.5		19	
3	0.394 10.00	0.395 10.02	0.1217 78.5398	0.416 0.620		14024.66 62.38	115205 795		17184.62 76.44	141162 974		1.23	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/supplyer.

Ovservation on Specimen(if any):

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 N/mm2 or Mpa	Ult.Str N/mm2 or Mpa	Elongation %	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

Laboratory Technician Test Performed By Vetted By

MATERRIALS TESTING LABORATORY
MILITARY ENGINEER SERVICES(MES)

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

Job No : 94(D)/2025-2026 (Steel).
Name of Client : AGE (Army) Bhatiary.
Ref.ltr.No : EinC/08 of 2025-2026/08/E-6 Dt.28 Oct'2025.
Project Name : Construction of 1 x 50 Bedded Hospital.
Dt. of Sample Collection: 30 Oct'2025

Copy No : 02
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	0.472 11.99	0.175 113.097	0.595 0.886		17904.06 79.64	102133 704		22195.22 98.73	126612 873		1.24	17			
2	0.472 12.00	0.472 11.99	0.175 113.097	0.595 0.886	0.595 0.886	17797.65 79.17	101526 700	101289 699	22320.14 99.28	127324 878	126682 874	1.25	17		17	
3	0.472 12.00	0.472 11.99	0.175 113.097	0.595 0.886		17566.32 78.14	100206 691		22107.31 98.34	126110 870		1.26	17.5			

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/supplyer.

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)									
				ASTM A 615 M			ASTM A 615 M			ASTM A 615/A 615 M			
Grade	Y/strength N/mm2 or Mpa	Ult.Str N/mm2 or Mpa	Elongation %	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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MATERRIALS TESTING LABORATORY
MILITARY ENGINEER SERVICES(MES)

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

Job No : 94(D)/2025-2026 (Steel).
Name of Client : AGE (Army) Bhatiary.
Ref.ltr.No : EinC/08 of 2025-2026/08/E-6 Dt.28 Oct'2025.
Project Name : Construction of 1 x 50 Bedded Hospital.
Dt. of Sample Collection: 30 Oct'2025

Copy No : 03
Sample Specimen : Length 600mm , Dia 16mm
Sample Grade : 60
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	0.630 16.00	0.627 15.93	0.312 201.062	1.052 1.565		28917.65 128.63	92790 640		36986.43 164.52	118681 818		1.28	18.5			
2	0.630 16.00	0.627 15.93	0.312 201.062	1.052 1.565	1.052 1.565	28630.81 127.36	91869 634	92612 639	36711.14 163.30	117797 812	118703 819	1.28	20.5		20	
3	0.630 16.00	0.627 15.93	0.312 201.062	1.052 1.565		29037.95 129.17	93176 643		37282.53 165.84	119631 825		1.28	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/supplyer.

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 N/mm2 or Mpa	Ult.Str N/mm2 or Mpa	Elongation %	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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MATERRIALS TESTING LABORATORY
MILITARY ENGINEER SERVICES(MES)

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

Job No : 94(D)/2025-2026 (Steel).
Name of Client : AGE (Army) Bhatiary.
Ref.ltr.No : EinC/08 of 2025-2026/08/E-6 Dt.28 Oct'2025.
Project Name : Construction of 1 x 50 Bedded Hospital.
Dt. of Sample Collection: 30 Oct'2025

Copy No : 04
Sample Specimen : Length 600mm , Dia 20mm
Sample Grade : 60
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	0.787 20.00	0.784 19.92	0.4869 314.1593	1.643 2.445		41983.14 186.75	86217 595		54220.47 241.18	111348 768		1.29	21.5			
2	0.787 20.00	0.784 19.92	0.4869 314.1593	1.643 2.445	1.643 2.445	40928.28 182.06	84051 580	85538 590	54158.01 240.91	111219 767	111305 768	1.32	23.5		23	
3	0.787 20.00	0.784 19.92	0.4869 314.1593	1.643 2.445		42045.60 187.03	86345 595		54220.47 241.18	111348 768		1.29	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/supplyer.

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)									
				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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MATERRIALS TESTING LABORATORY
MILITARY ENGINEER SERVICES(MES)

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

Job No : 94(D)/2025-2026 (Steel).
Name of Client : AGE (Army) Bhatiary.
Ref.ltr.No : EinC/08 of 2025-2026/08/E-6 Dt.28 Oct'2025.
Project Name : Construction of 1 x 50 Bedded Hospital.
Dt. of Sample Collection: 30 Oct'2025

Copy No : 05
Sample Specimen : Length 600mm , Dia 25mm
Sample Grade : 60
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	0.984 25.00	0.983 24.97	0.7609 490.8739	2.583 3.843		66376.84 295.26	87240 602		87268.20 388.19	114697 791		1.31	22.5			
2	0.984 25.00	0.983 24.97	0.7609 490.8739	2.583 3.843	2.583 3.843	66575.78 296.14	87501 603	87327 602	87140.97 387.62	114530 790	114624 791	1.31	21.5		23	
3	0.984 25.00	0.983 24.97	0.7609 490.8739	2.583 3.843		66376.84 295.26	87240 602		87228.88 388.01	114646 791		1.31	23.5			

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/supplyer.

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)										
				ASTM A 615 M			ASTM A 615 M			ASTM A 615/A 615 M				
Grade	Y/strength N/mm2 or Mpa	Ult.Str N/mm2 or Mpa	Elongation %	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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