



MATERIALS TESTING LABORATORY MILITARY ENGINEER SERVICES(MES)

Page no: 86

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

Job No : 21/2025-2026 (Steel).

Copy No : 01

Name of Client : AGE (Air) PKP.

Sample Specimen : Length 600mm , Dia 10mm

Ref.ltr.No : EinC/81 of 2023-2024/28/E-4 Dt.23 July'2025.

Sample Grade : 60

Project Name : Construction of Pump house & water reservoir.

Frog Mark : Purbachal B-500 DWR.

Dt. of Sample Collection : 28 July'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	0.398 10.11	0.1217 78.5398	0.423 0.630	0.423 0.630	17348.87 77.17	142511 983	144234 995	19858.79 88.34	163129 1125	164636 1135	1.14	13		13	
2	0.394 10.00	0.398 10.11	0.1217 78.5398	0.423 0.630		17714.37 78.80	145513 1004		20113.25 89.47	165219 1139		1.14	13			
3	0.394 10.00	0.398 10.11	0.1217 78.5398	0.423 0.630		17612.58 78.34	144677 998		20154.89 89.65	165561 1142		1.14	13			

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)

Page no: 87

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

Job No : 21/2025-2026 (Steel).

Copy No : 02

Name of Client : AGE (Air) PKP.

Sample Specimen : Length 600mm , Dia 12mm

Ref.ltr.No : EinC/81 of 2023-2024/28/E-4 Dt.23 July'2025.

Sample Grade : 60

Project Name : Construction of Pump house & water reservoir.

Frog Mark : Purbachal B-500 DWR.

Dt. of Sample Collection: 28 July'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 12.08	0.175 113.097	0.605 0.900	0.605 0.900	20580.54 91.55	117401 810	120427 831	23870.04 106.18	136166 939	140076 966	1.16	14.5		13	
2	0.472 12.00	0.476 12.08	0.175 113.097	0.605 0.900		21917.62 97.49	125028 862		25736.87 114.48	146815 1013		1.17	11.5			
3	0.472 12.00	0.476 12.08	0.175 113.097	0.605 0.900		20835.00 92.68	118853 820		24059.73 107.02	137248 947		1.15	12.5			

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)

Page no: 88

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

Job No : 21/2025-2026 (Steel).

Copy No : 03

Name of Client : AGE (Air) PKP.

Sample Specimen : Length 600mm , Dia 16mm

Ref.ltr.No : EinC/81 of 2023-2024/28/E-4 Dt.23 July'2025.

Sample Grade : 60

Project Name : Construction of Pump house & water reservoir.

Frog Mark : Purbachal B-500 DWR.

Dt. of Sample Collection: 28 July'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	0.632 16.05	0.312 201.062	1.067 1.588	1.067 1.588	31918.00 141.98	102417 706	103306 712	37983.46 168.96	121880 841	122909 848	1.19	15.5		16	
2	0.630 16.00	0.632 16.05	0.312 201.062	1.067 1.588		32225.67 143.35	103405 713		38436.86 170.97	123335 851		1.19	17.5			
3	0.630 16.00	0.632 16.05	0.312 201.062	1.067 1.588		32440.80 144.30	104095 718		38492.38 171.22	123513 852		1.19	16			

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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MATERIALS TESTING LABORATORY MILITARY ENGINEER SERVICES(MES)

Page no: 89

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

Job No : 21/2025-2026 (Steel).

Copy No : 04

Name of Client : AGE (Air) PKP.

Sample Specimen : Length 600mm , Dia 20mm

Ref.ltr.No : EinC/81 of 2023-2024/28/E-4 Dt.23 July'2025.

Sample Grade : 60

Project Name : Construction of Pump house & water reservoir.

Frog Mark : Purbachal B-500 DWR.

Dt. of Sample Collection: 28 July'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	0.792 20.11	0.4869 314.1593	1.675 2.493	1.675 2.493	47273.65 210.28	97082 670	96532 666	58613.42 260.72	120369 830	119579 825	1.24	19		18	
2	0.787 20.00	0.792 20.11	0.4869 314.1593	1.675 2.493		47151.04 209.74	96830 668		58414.48 259.84	119960 827		1.24	18			
3	0.787 20.00	0.792 20.11	0.4869 314.1593	1.675 2.493		46593.54 207.26	95685 660		57658.03 256.47	118407 817		1.24	17.5			

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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