



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 : 63/2024-2025 (Steel).

Copy No : 01

Name of Client : AGE (Air) Air HQ (U).

Sample Specimen : Length 600mm , Dia 10mm

Ref.ltr.No : CE Air/213 of 2022-2023/32/E-6 Dt.06 Mar'2025.

Sample Grade : 60

Project Name : Construction of Boundary Wall, Guard Room & Gate.

Frog Mark : RSM B-420 DWR.

Dt. of Sample Collection : 09 Mar'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	0.395 10.03	0.1217 78.5398	0.417 0.620	0.417 0.620	14125.77 62.83	116035 800	110152 760	16938.61 75.35	139141 960	132461 914	1.20	14.5		15	
2	0.394 10.00	0.395 10.03	0.1217 78.5398	0.417 0.620		13095.00 58.25	107568 742		16054.44 71.41	131878 910		1.23	13.5			
3	0.394 10.00	0.395 10.03	0.1217 78.5398	0.417 0.620		13007.96 57.86	106853 737		15383.30 68.43	126365 871		1.18	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 character of the samples to be tested.
2. It is recommended that samples are sent in a secured 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.

Observation on Specimen(if any):

Minimum Standard Requirements (BDS/ISO 6935-2:1991(E))				Minimum Standard Requirements (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/mm ² or Mpa	N/mm ² or Mpa	%	Grade	Y/strength psi (kg/cm ²)	Ult.Str psi (kg/cm ²)	Grade	Y/strength Mpa (kg/cm ²)	Ult.Str Mpa (kg/cm ²)	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 : 63/2024-2025 (Steel).

Copy No : 02

Name of Client : AGE (Air) Air HQ (U).

Sample Specimen : Length 600mm , Dia 12mm

Ref.ltr.No : CE Air/213 of 2022-2023/32/E-6 Dt.06 Mar'2025.

Sample Grade : 60

Project Name : Construction of Boundary Wall, Guard Room & Gate.

Frog Mark : RSM B-420 DWR.

Dt. of Sample Collection: 09 Mar'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	0.470 11.93	0.175 113.097	0.590 0.878	0.590 0.878	16986.71 75.56	96900 668	96904 668	20658.53 91.89	117846 813	116970 807	1.22	17.5		17	
2	0.472 12.00	0.470 11.93	0.175 113.097	0.590 0.878		16986.71 75.56	96900 668		20026.33 89.08	114240 788		1.18	14.5			
3	0.472 12.00	0.470 11.93	0.175 113.097	0.590 0.878		16989.00 75.57	96913 668		20830.32 92.66	118826 819		1.23	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 character of the samples to be tested.
2. It is recommended that samples are sent in a secured 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.

Observation 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 Requirements (ASTM A615/A616M-96a)									
Grade				ASTM A 615 M			ASTM A 615 M			ASTM A 615/A 615 M			
				Grade	Y/strength psi (kg/cm ²)	Ult.Str psi (kg/cm ²)	Grade	Y/strength Mpa (kg/cm ²)	Ult.Str Mpa (kg/cm ²)	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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Page no: 156

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

Job No : 63/2024-2025 (Steel).

Name of Client : AGE (Air) Air HQ (U).

Ref.ltr.No : CE Air/213 of 2022-2023/32/E-6 Dt.06 Mar'2025.

Project Name : Construction of Boundary Wall, Guard Room & Gate.

Dt. of Sample Collection: 09 Mar'2025

Copy No : 03

Sample Specimen : Length 600mm , Dia 16mm

Sample Grade : 60

Frog Mark : RSM B-420 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	0.629 15.98	0.312 201.062	1.059 1.575	1.059 1.575	26985.13 120.04	86589 597	88431 610	35283.94 156.95	113218 781	109129 753	1.31	19.5		20	
2	0.630 16.00	0.629 15.98	0.312 201.062	1.059 1.575		27250.84 121.22	87441 603		34823.53 154.90	111740 771		1.28	18.5			
3	0.630 16.00	0.629 15.98	0.312 201.062	1.059 1.575		28441.95 126.52	91263 629		31921.35 141.99	102428 706		1.12	22			

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):

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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