



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 : 01/2025-2026 (Steel).

Copy No : 01

Name of Client : GE (Air) Tejgaon, Dhaka.

Sample Specimen : Length 600mm , Dia 10mm

Ref.ltr.No : CE (Air)/179 of 2024-2025/12/E-6 Dt.30 Jun'2025.

Sample Grade : 60

Project Name : Construction of 1 x Basement & BOQ.

Frog Mark : GPH B-420 DWR.

Dt. of Sample Collection : 01 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	0.395 10.04	0.1217 78.5398	0.418 0.622	0.418 0.622	14559.03 64.76	119594 825	113659 784	17311.85 77.01	142207 981	142492 983	1.19	18.5		18	
2	0.394 10.00	0.395 10.04	0.1217 78.5398	0.418 0.622		13548.12 60.26	111290 768		17267.90 76.81	141846 978		1.27	17.5			
3	0.394 10.00	0.395 10.04	0.1217 78.5398	0.418 0.622		13402.39 59.62	110093 759		17459.90 77.67	143423 989		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.

Obsvervation 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	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
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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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 : 01/2025-2026 (Steel).

Copy No : 02

Name of Client : GE (Air) Tejgaon, Dhaka.

Sample Specimen : Length 600mm , Dia 12mm

Ref.ltr.No : CE (Air)/179 of 2024-2025/12/E-6 Dt.30 Jun'2025.

Sample Grade : 60

Project Name : Construction of 1 x Basement & BOQ.

Frog Mark : GPH B-420 DWR.

Dt. of Sample Collection: 01 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	0.475 12.06	0.175 113.097	0.602 0.896	0.602 0.896	17540.87 78.03	100061 690	100765 695	22489.01 100.04	128288 885	128939 889	1.28	18		20	
2	0.472 12.00	0.475 12.06	0.175 113.097	0.602 0.896		17737.50 78.90	101183 698		22681.01 100.89	129383 892		1.28	22.5			
3	0.472 12.00	0.475 12.06	0.175 113.097	0.602 0.896		17714.37 78.80	101051 697		22639.37 100.70	129146 891		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.

Ovservation on Specimen(if any):

Minimum Standard Requirements (BDS/ISO 6935-2:1991(E))				Minimum Standard Requirments(ASTM A615/A616M-96a)									
Grade	Y/strength N/mm2 or Mpa	Ult.Str N/mm2 or Mpa	Elongation %	ASTM A 615 M			ASTM A 615 M			ASTM A 615/A 615 M			
				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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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 : 01/2025-2026 (Steel).

Copy No : 03

Name of Client : GE (Air) Tejgaon, Dhaka.

Sample Specimen : Length 600mm , Dia 16mm

Ref.ltr.No : CE (Air)/179 of 2024-2025/12/E-6 Dt.30 Jun'2025.

Sample Grade : 60

Project Name : Construction of 1 x Basement & BOQ.

Frog Mark : GPH B-420 DWR.

Dt. of Sample Collection: 01 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	0.630 16.00	0.312 201.062	1.060 1.578	1.060 1.578	26844.94 119.41	86139 594	86330 595	36306.32 161.50	116498 803	116795 805	1.35	24.5		23	
2	0.630 16.00	0.630 16.00	0.312 201.062	1.060 1.578		26935.16 119.81	86429 596		36477.50 162.26	117048 807		1.35	22.5			
3	0.630 16.00	0.630 16.00	0.312 201.062	1.060 1.578		26932.85 119.80	86421 596		36412.73 161.97	116840 806		1.35	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.

Obsvervation on Specimen(if any):

Minimum Standard Requirements (BDS/ISO 6935-2:1991(E))				Minimum Standard Requirments(ASTM A615/A616M-96a)									
Grade				ASTM A 615 M			ASTM A 615 M			ASTM A 615/A 615 M			
				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 (%)			
Y/strength N/mm2 or Mpa	Ult.Str N/mm2 or Mpa	Elongation %								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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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 : 01/2025-2026 (Steel).

Copy No : 04

Name of Client : GE (Air) Tejgaon, Dhaka.

Sample Specimen : Length 600mm , Dia 20mm

Ref.ltr.No : CE (Air)/179 of 2024-2025/12/E-6 Dt.30 Jun'2025.

Sample Grade : 60

Project Name : Construction of 1 x Basement & BOQ.

Frog Mark : GPH B-420 DWR.

Dt. of Sample Collection: 01 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	0.787 19.98	0.4869 314.1593	1.655 2.462	1.655 2.462	38924.97 173.15	79937 551	79633 549	51842.41 230.61	106464 734	106524 735	1.33	23.5		25	
2	0.787 20.00	0.787 19.98	0.4869 314.1593	1.655 2.462		38381.34 170.73	78820 544		51738.31 230.14	106250 733		1.35	25			
3	0.787 20.00	0.787 19.98	0.4869 314.1593	1.655 2.462		39024.44 173.59	80141 553		52034.41 231.46	106858 737		1.33	26.5			

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 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 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)

Page no: 5

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

Job No : 01/2025-2026 (Steel). Copy No : 05
Name of Client : GE (Air) Tejgaon, Dhaka. Sample Specimen : Length 600mm , Dia 25mm
Ref.ltr.No : CE (Air)/179 of 2024-2025/12/E-6 Dt.30 Jun'2025. Sample Grade : 60
Project Name : Construction of 1 x Basement & BOQ. Frog Mark : GPH B-420 DWR.
Dt. of Sample Collection: 28 May'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	0.985 25.01	0.7609 490.8739	2.591 3.856	2.591 3.856	57123.66 254.10	75078 518	75102 518	78672.00 349.95	103399 713	103203 712	1.38	29.5		31	
2	0.984 25.00	0.985 25.01	0.7609 490.8739	2.591 3.856		57123.66 254.10	75078 518		78521.64 349.28	103202 712		1.37	31.5			
3	0.984 25.00	0.985 25.01	0.7609 490.8739	2.591 3.856		57179.18 254.34	75151 518		78373.59 348.62	103007 710		1.37	31			

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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