



MATERIALS TESTING LABORATORY MILITARY ENGINEER SERVICES(MES)

Page no: 253

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

Job No : 88/2024-2025 (Steel).

Copy No : 01

Name of Client : GE (Army) Bogura.

Sample Specimen : Length 600mm , Dia 10mm

Ref.ltr.No : CEA/377 of 2022-2023/62/E-6 Dt.05 May'2025.

Sample Grade : 60

Project Name : Construction of 1 x 10 'B' Type Officer's Qtr.

Frog Mark : SCRM B-420 DWR.

Dt. of Sample Collection : 07 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	0.394 10.00	0.398 10.11	0.1217 78.5398	0.424 0.631	0.424 0.631	13406.52 59.63	110127 759	110422 762	16959.23 75.44	139310 961	138708 957	1.26	21.5		22	
2	0.394 10.00	0.398 10.11	0.1217 78.5398	0.424 0.631		13470.66 59.92	110654 763		16824.08 74.84	138200 953		1.25	20.5			
3	0.394 10.00	0.398 10.11	0.1217 78.5398	0.424 0.631		13450.04 59.83	110484 762		16874.47 75.06	138614 956		1.25	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/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 : 88/2024-2025 (Steel).

Copy No : 02

Name of Client : GE (Army) Bogura.

Sample Specimen : Length 600mm , Dia 12mm

Ref.ltr.No : CEA/377 of 2022-2023/62/E-6 Dt.05 May'2025.

Sample Grade : 60

Project Name : Construction of 1 x 10 'B' Type Officer's Qtr.

Frog Mark : SCRM B-420 DWR.

Dt. of Sample Collection: 07 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	0.472 12.00	0.471 11.97	0.175 113.097	0.594 0.884	0.594 0.884	15843.71 70.48	90380 623	94017 648	22227.58 98.87	126797 874	123939 855	1.40	24.5		22	
2	0.472 12.00	0.471 11.97	0.175 113.097	0.594 0.884		16237.69 72.23	92627 639		21414.42 95.26	122158 842		1.32	23			
3	0.472 12.00	0.471 11.97	0.175 113.097	0.594 0.884		17362.37 77.23	99043 683		21538.11 95.81	122863 847		1.24	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):

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

Job No : 88/2024-2025 (Steel).

Copy No : 03

Name of Client : GE (Army) Bogura.

Sample Specimen : Length 600mm , Dia 16mm

Ref.ltr.No : CEA/377 of 2022-2023/62/E-6 Dt.05 May'2025.

Sample Grade : 60

Project Name : Construction of 1 x 10 'B' Type Officer's Qtr.

Frog Mark : SCRM B-420 DWR.

Dt. of Sample Collection: 07 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	0.630 16.00	0.638 16.19	0.312 201.062	1.086 1.617	1.086 1.617	27067.60 120.40	86853 599	86853 599	37240.10 165.65	119495 824	119899 827	1.38	25		24	
2	0.630 16.00	0.638 16.19	0.312 201.062	1.086 1.617		27067.60 120.40	86853 599		37114.12 165.09	119090 821		1.37	26.5			
3	0.630 16.00	0.638 16.19	0.312 201.062	1.086 1.617		27067.60 120.40	86853 599		37744.03 167.89	121112 835		1.39	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.

Obsvervation 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 : 88/2024-2025 (Steel).

Copy No : 04

Name of Client : GE (Army) Bogura.

Sample Specimen : Length 600mm , Dia 20mm

Ref.ltr.No : CEA/377 of 2022-2023/62/E-6 Dt.05 May'2025.

Sample Grade : 60

Project Name : Construction of 1 x 10 'B' Type Officer's Qtr.

Frog Mark : SCRM B-420 DWR.

Dt. of Sample Collection: 07 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	0.787 20.00	0.795 20.18	0.4869 314.1593	1.688 2.512	1.688 2.512	38978.66 173.38	80047 552	81301 561	54850.15 243.98	112641 777	113246 781	1.41	23.5		25	
2	0.787 20.00	0.795 20.18	0.4869 314.1593	1.688 2.512		39894.90 177.46	81928 565		55376.99 246.33	113723 784		1.39	25			
3	0.787 20.00	0.795 20.18	0.4869 314.1593	1.688 2.512		39894.90 177.46	81928 565		55207.48 245.57	113375 782		1.38	25.5			

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 psi (kg/cm ²)	Ult.Str psi (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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Page no: 257

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

Job No : 88/2024-2025 (Steel).

Copy No : 05

Name of Client : GE (Army) Bogura.

Sample Specimen : Length 600mm , Dia 25mm

Ref.ltr.No : CEA/377 of 2022-2023/62/E-6 Dt.05 May'2025.

Sample Grade : 60

Project Name : Construction of 1 x 10 'B' Type Officer's Qtr.

Frog Mark : SCRM B-420 DWR.

Dt. of Sample Collection: 07 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	0.991 25.17	0.7609 490.8739	2.625 3.906	2.625 3.906	61655.49 274.26	81034 559	81034 559	86565.65 385.06	113774 785	113949 786	1.40	23		25	
2	0.984 25.00	0.991 25.17	0.7609 490.8739	2.625 3.906		61655.49 274.26	81034 559		86817.61 386.18	114105 787		1.41	26.5			
3	0.984 25.00	0.991 25.17	0.7609 490.8739	2.625 3.906		61655.49 274.26	81034 559		86712.25 385.71	113967 786		1.41	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 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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