



Mob: (880) 55167100, 55167228-57 Ext. 7226, Info: http://brtc.ce.buet.ac.bd/home, Report verification: http://verify.ce.buet.ac.bd

TEST OF DEFORMED M.S. BARS (ASTM A615M-16)

Sent by: BARS (ASTM A615M-16)

Project: Construction of Approach Road of 304.0m Long PSC Girder Bridge at Pirganj Upazila, Rangpur under CIB Project.

BRTC No.: 1103-44978/CE/24-25; DL 20/2/2025

Ref.: 16.02.8500.000.99.015.19.493; DL 13/2/2025

Date of Test: 23/2/2025

Contractor/supplier: Barendra Construction Ltd.

Samples were received in SEALED condition.

Table with 16 columns: Sl. No., Frog Mark / Identification, Bar Desig./Nominal dia, Actual bar dia, Unit Weight, Average Unit Weight, Yield or Proof Load, Yield or Proof Strength, Average Yield or Proof Strength (YS), Tensile Load, Tensile Strength, Average Tensile Strength (TS), TS/YS, Elongation (%), Average Elongation (%), Bend Test.

ASTM A615M-16 Weight Requirements and Nominal Area of bars (Table A1.1)

Table with 12 columns: Bar design/Nominal dia., mm; 8, 10, 12, 15, 20, 22, 25, 28, 32, 36, 40, 50, 60. Rows: Nominal area, sq.mm; Nominal weight, kg/m.

Conversion factor: 1.0 MPa = 1.0 N/mm² = 145 psi. Strengths are based on nominal area

Measured unit weight shall not be less than 94% of the nominal weight. 8mm bar size is not covered in ASTM A615M-16. Area and weight of 8mm and 22mm dia. bars are derived based on principle followed for other sizes in Table A1.1. Actual dia. and TS/YS ratio are provided for informative purpose only. These are not requirements of ASTM A615M-16. Actual diameter is the diameter of a perfectly round plain bar having same mass per unit length.

ASTM A615M-16 Tensile Requirements for Common Steel Grades

Table with 3 columns: Grade 60 [420], Grade 75 [520], Grade 80 [550]. Rows: Tensile strength, min. psi [MPa]; Yield strength, min. psi [MPa].

Elongation in 8 in. [200 mm], min. %

Table with 3 columns: 9, 7, 7; 8, 7, 7; 7, 6, 6. Rows: Bar Designation No. 10, 12, 16, 20; 25, 22; 28, 32, 36, 40, 50, 60.

Countersigned by: Prof. Dr. Moazzem Hossain, Test-in-Charge, Dept. of Civil Engg., BUET, Dhaka-1000, Bangladesh

Test performed by: Dr. Md. Mafizur Rahman, Professor, Dept. of Civil Engg.



bCtWAPMmG



24 February 2025

Important Note: Samples as supplied to us have been tested. BRTC does not have any responsibility as to the representative character of the samples required to be tested. It is recommended that the samples are sent in a secure and sealed cover packet/container under the signature of a competent authority. In order to avoid fraudulent fabrication of test results, this report has been printed on a security paper. It is also recommended that the test results be collected by a duly authorized person.

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