Australian Standard™

AS 3572.8

Plastics—Glass filament reinforced plastics (GRP)—Methods of test

Method 8: Determination of long-term ring stiffness of glass filament reinforced plastic pipes

1 SCOPE

This Standard sets out a method for determining the long-term ring stiffness of glass filament reinforced plastics pipes.

2 PRINCIPLE

A section of pipe is subjected to a constant, diametral, compressive load and the deflection is measured as a function of time.

3 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS	
3572	Plastics — Glass filament reinforced plastics (GRP) — Methods of test
3572.1	Method 1: Preparation of glass filament reinforced plastics test specimens
3572.3	Method 3: Determination of loss on ignition of glass filament reinforced plastics pipes
3572.4	Method 4: Determination of the dimensions of glass filament reinforced plastics pipes
3572.10	Method 10: Determination of the initial ring stiffness of glass filament reinforced plastics pipes

4 APPARATUS

The following is required:

(a) *General* Apparatus consisting of two parallel bearing plates or beam bars between which the specimen is compressed by an external load. This specimen is submerged in a water bath and the load is applied to the specimen with only negligible friction losses (see Figure 1).

(b) *Loading plates* Loading plates, if used, shall be not less than 5 mm thick and shall not bend or deform during the test. Their length shall be equal to, or greater than, the specimen length.

(c) *Beam bars* For pipe specimens with a nominal diameter less than 300 mm, beam bars, if used, shall be 20 ±5 mm in diameter. For larger diameter pipes, the bars shall be 50 ±5mm in diameter.

(d) *Force and deflection measuring equipment* The accuracy of measurement of force shall be ±1.0% of the indicated value. For measurement of deflection, the accuracy shall be within ±1.0% of the maximum measured value of change or 0.1 mm, whichever is the greater.