

METHOD B7

THE DETERMINATION OF THE TRETON IMPACT VALUE OF AGGREGATE

SCOPE

The Treton value is a measure of the resistance of aggregate to impact. The aggregate is subjected to the blows of a falling hammer and the resulting disintegration is measured by means of the quantity passing the 2,0 mm sieve which is then expressed as a percentage of the test sample. This is called the Treton value.

2 APPARATUS

- 2.1 A Treton apparatus consisting of a base plate, anvil, cylinder and a hammer weighing 15 kg + 50gram (Figure B7/1). The base plate should be placed on a firm concrete block.
- 2.2 The following test sieves, complying with SABS 197 (200 mm in diameter): 19,0 mm, 16,0 mm and 2,0 mm. The bigger sieves must be made of perforated plate and the 2,0 mm sieve of wire mesh.
- 2.3 A balance to weigh up to 2009, accurate to 0,1 gram.

3 METHOD

From the field sample, screen out a sufficient quantity (at least 200 g) of the 19,0 + 16,0 mm fraction (see 5.1). Select 15 to 20 of the most cubical pieces, weighing as closely as possible 50 times the relative density of the aggregate in grammes (it is not necessary to determine the relative density - an estimate will be satisfactory). Weigh the aggregate pieces accurate to 0,1g, and place them as evenly spaced as possible on the anvil in such a manner that their tops are approximately in the same horizontal plane.

Place the cylinder over the anvil and tighten the clamp screws. Place the hammer in the cylinder, so that the top of the hammer is level with the top of the cylinder and let it drop ten times from this position .

Remove the cylinder and sieve all the aggregate on the anvil and base plate thoroughly through a 2,0 mm sieve. Weigh the aggregate retained on the sieve, accurate to 0,1gram, and record the mass. The test must be carried out in triplicate (see 5.2).

CALCULATIONS

Calculate the Treton value to the first decimal place as follows:

$$\text{Treton value} = \frac{(A - B)}{A} \times 100$$

where :

A = the mass of the stone particles before tamping

B = the mass of the stone particles retained on the 2.0 mm sieve after tamping.

Report the value to the nearest whole number.

5 NOTES

- 5.1 If the aggregate is noticeably variable as regards type or hardness, each type should be tested and reported separately. In this case an estimate should be made of the percentage of each type.
- 5.2 The Treton value, as reported, must be the average of three determinations. If an individual result differs from the others by more than five, further tests should be carried out

REFERENCE

SATMAR informalog

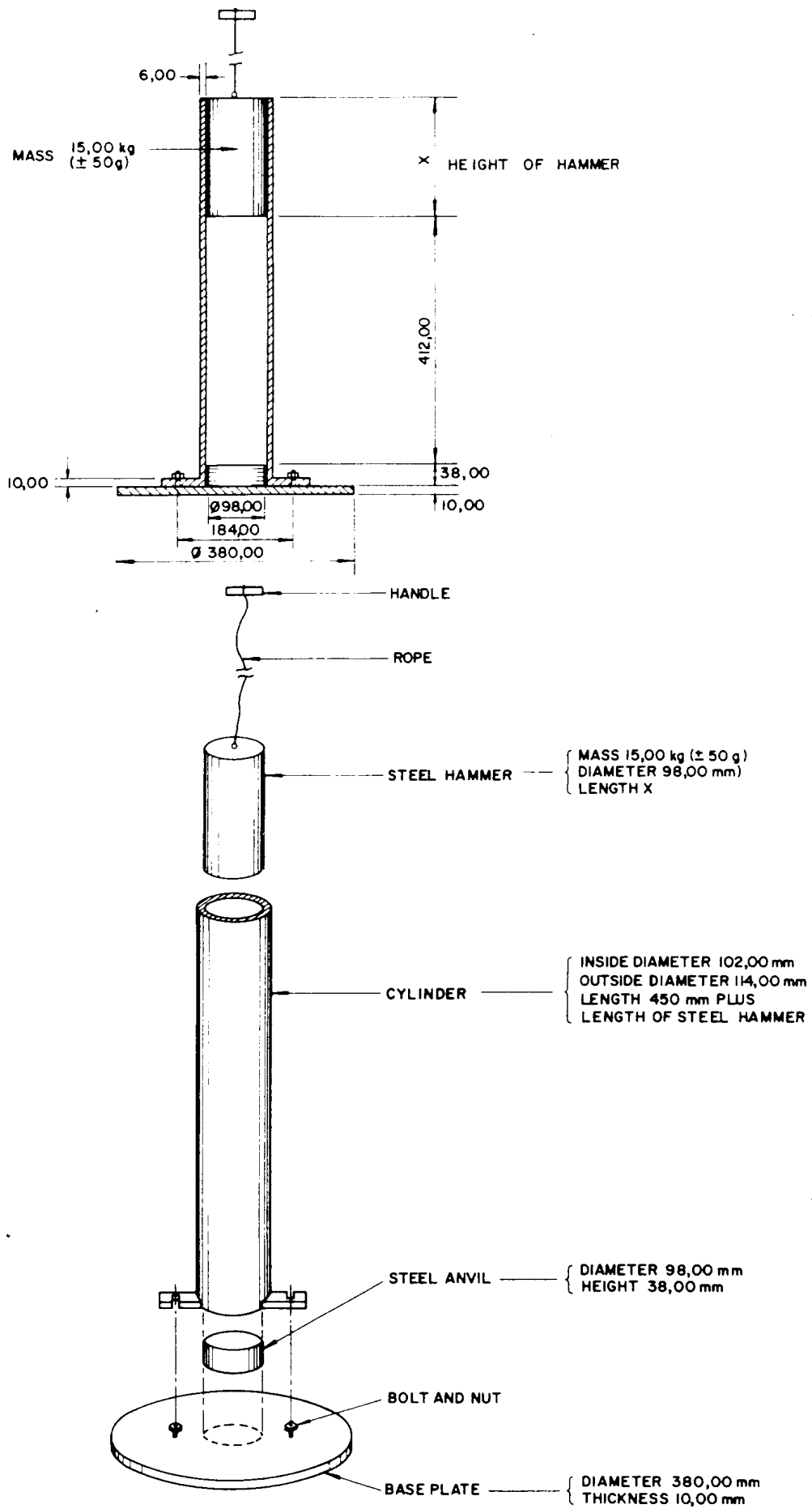


FIGURE B7/I

The Treton apparatus