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prEN 12616, Double Ring Infiltrometer

- The time for the water to fall from 30 to 10 mm is measured.
- The infiltration rate (IA) is determined: IA = (FWA x C) /tA , where
  FWA is the fall of water level in mm (20 mm)
  tA is the time taken for the water level to fall (h)
  Temperature correction factor

From top side

Outer and Inner cylinder

WATER LEVEL

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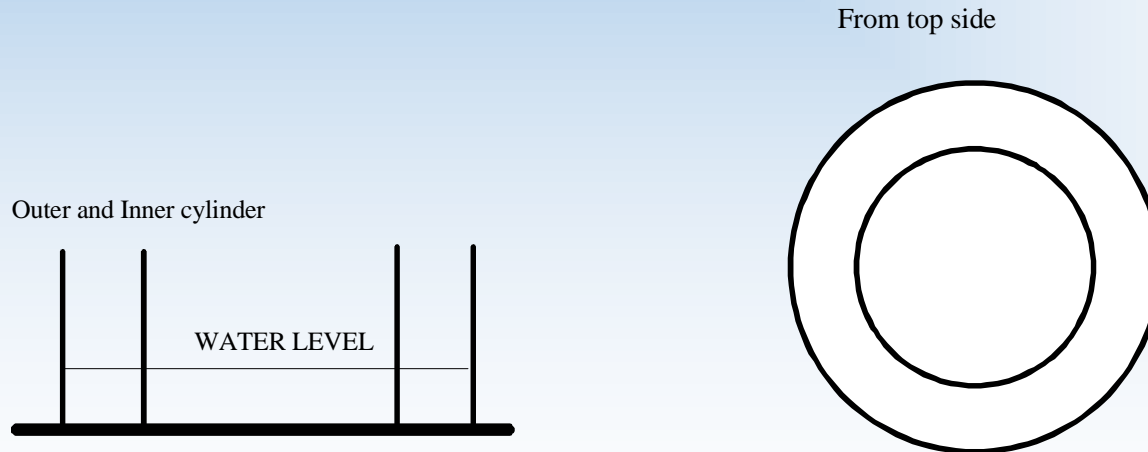
Nordic method

Figure 2.2.1. How to seal the cylinder onto the surface

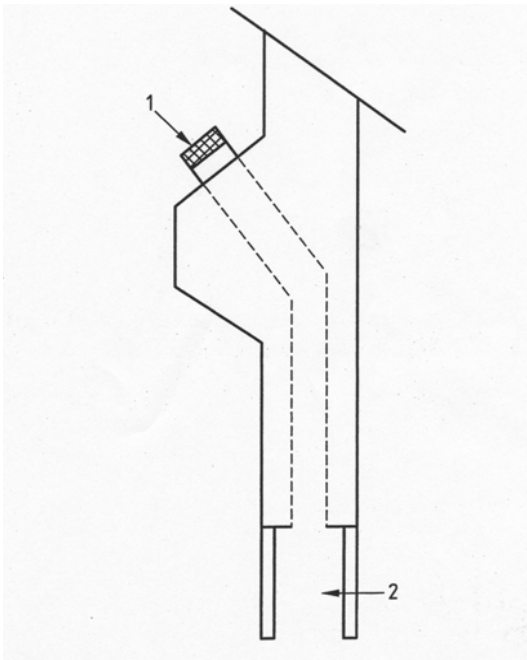*Photo: The cylinder is pressed onto the surface by using the weight of the car*

DIN 18035 - 6 / IST method field test

Photo 2.3.1 Single cylinder hammered into the surface

- Diameter of cylinder = 30 cm
- 2 litres of water are carefully added so that a water column of about 2 mm in maintained: total water column to trickle away: 2.83 cm
- time t in sec is taken until the water has disappeared in the surface

Infiltration rate = 2,83 / t in cm/sec

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IST laboratory test

- Sample is placed in aluminum ring and sealed at periphery.

- Plastic cylinder is put over the aluminum ring

- Water is filled in until H=15cm above sample surface.

- Time t in sec is taken until water level reaches sample surface

Infiltration Rate

$$k \, [cm/s] = \frac{F}{f} * \frac{1}{t} * \ln\left(\frac{H}{1}\right)$$

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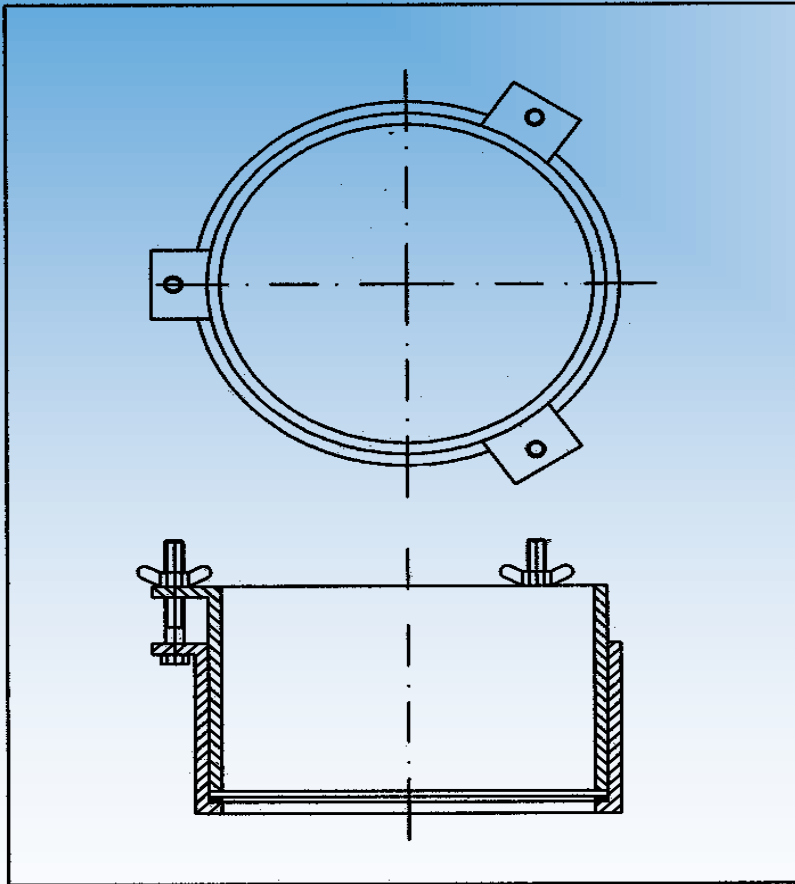Norwegian Building Research Institute

Austrian method, lab test

Figure 2.5.1. Test equipment

Time from 40 to 10 mm is measured

Abb. 1a

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BS 7044/ FIH Method
lab and field test

Double Ring Infiltrometer