CONCRETE, HARDENED:
SAMPLING AND TREATMENT OF CORES
FOR STRENGTH TESTS

1. SCOPE AND FIELD OF APPLICATION

This NORDTEST method is intended for the sampling and treatment of cylindrical test specimens of concrete intended for determination of strength and containing naturally occurring rock-type aggregate, (see Note 1).

The number of test specimens, their age and the choice of place for the taking of samples are not considered in this method.

2. REFERENCES

NT BUILD 200 CONCRETE, HARDENED: DIMENSIONS OF TEST SPECIMENS

3. PROCEDURE

3.1 Apparatus

Core drill.

Cover meter for the finding of reinforcement, if needed, see 3.2.1.

Note 1 The method agrees generally with the ISO DOP 7034 Test methods for concrete - Cores of hardened concrete - Taking, examination and testing in compression.
3.2 Test specimens

3.2.1 Shape and dimensions

The test specimens shall be cylindrical acc. to NT BUILD 200, this means that the height of the specimens shall be at least equal to the diameter of the specimens.

The diameter of these specimens shall be chosen with regard to the thickness of the object, the reinforcement and the maximum particle size in the concrete. The following should be observed:

- Reinforcement steel parallel with the direction of pressure is not permitted. If possible, reinforcement should be avoided, for instance with the aid of a cover meter.
- The diameter of the test specimens should be at least three times the maximum nominal particle size in the aggregate.

If it is not possible to select test specimens that fullfil these demands one may in exceptional cases select them in other ways, e.g., saw them into cubic form with the prerequisite that all deviations should be stated in the test report.

3.2.2 Sampling

The places for the sampling of test specimens should be chosen with reasonable regard for the safety of the construction prior and after the core drilling and any possible later repair.

3.2.3 Marking

Each test specimen should be marked with such information that it shall be possible to identify, i.e., the position of the test specimen in the object. The information should be transferred to the surface of the test specimen after it has been sawn, but not to a load-bearing surface.

3.3 Inspection

Each test specimen should be inspected with regard to larger or smaller cavities which might indicate that the fresh concrete has
not been sufficiently compacted.

The occurences of cracks, joints or signs of segregation should be noted.

Presence of reinforcement, its diameter and distance from any of the load-bearing surfaces should be noted.

3.4 **Sawing and grinding**

Each test specimen should be sawn, ground and levelled if this is necessary so that the demands in NT BUILD 200 may be fulfilled. The density of the test specimens should be determined - possibly prior to any levelling - by weighing and measuring.

3.5 **Storing**

The test specimens should be stored under water at a temperature of 20 ± 2 ºC for at least three days prior to the testing, (see Note 2).

3.6 **Test Report**

If a test report is submitted, it should contain at least the following information:

a) Name and address of the testing laboratory
b) Date and identification symbols of the report
c) Test method (number and title)
d) Any deviation from the test method
e) Name and address of the person or institution who ordered the test
f) Name of the person performing the test, method of sampling, place of sampling (sketch), direction of drilling and of moulding (Note 3)

---

**Note 2** In Sweden one deviates from this point acc. to SS 13 72 53.

**Note 3** Specially for this method.
g) Name and address of the manufacturer of the concrete
h) Composition and age of the concrete, if possible
i) The identification symbols of the concrete, shape and size
j) Date and the hour when the test was performed
k) Test results
l) Any defects, see 3.3 (Note 3)
m) Reinforcement, if used (Note 3)
n) Means of capping, if used (Note 3)
o) Any other information of importance for the evaluation of the test results
p) Evaluation of the test results, if this is required in the request for the test