

JSCE-E 706-2010

Test method for the flexibility of plastic sheath for prestressed concrete (draft)

1 Scope

This standard specifies the requirements for carrying out the test for the flexibility of a plastic sheath to form a duct to arrange inner cables of prestressed concrete structures. The plastic sheath considered in this standard should use high-density polyethylene or a material with performance not lower than that of high-density polyethylene.

2 References

By being cited herein, the following standards constitute part of the definition of this standard. This standard is based on the latest versions of these cited documents.

JIS G 3109 Steel bars for prestressed concrete

JIS G 3536 Steel wires and strands for prestressed concrete

3 Definitions

The following terminology is used in this standard:

- a) Flexibility of sheath: flexural deformability of the sheath with no leak of water
- b) Sheath specimen: specimen made by cutting the sheath

4 Outline of test

4.1 Purpose of test

This test method is used to confirm the flexibility of a plastic sheath used for PC steel bars specified by JIS G 3109, and PC steel wires and strands specified by JIS G 3536.

4.2 Conditions of testing room

The standard temperature of the testing room is 23 ± 5 °C unless otherwise specified. The relative humidity is not specified.

4.3 Specimens

The number of sheath specimens is three unless otherwise specified. The length of the sheath specimen is at least 3 m. The sheath specimen has a structure with a joint part at the center.

5 Test method

- a) Bend the sheath specimen with a curvature radius of 30 times the inner diameter of the sheath and set it in a vertical plane so that the joint part is at the bottom (Fig.1).
- b) Pour water from the end of the sheath specimen until it is possible to confirm the water surface. The temperature of water is set at the room temperature.
- c) Five minutes after the completion of pouring, check if there is a leak of water from the sheath specimen

or not.

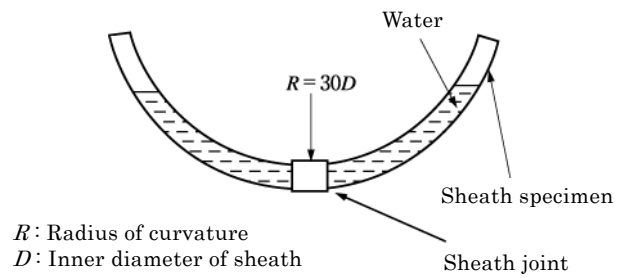


Fig.1 Outline of test

6 Report

6.1 Compulsory reporting

The report must provide the following information:

- a) Date of test
- b) Material, inner diameter, outer diameter, shape and brand of sheath
- c) Number of sheath specimens
- d) Temperature of testing room and poured water
- e) Condition of leak of water

6.2 As-needed reporting

The report should provide the following information where relevant:

- a) Name of testing organization
- b) Relative humidity of testing room