

4. Development of Honey-comb Segment Against Internal Water Pressure

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Generally, in the shield tunnel with internal water pressure, the lining is becoming insatiable in proportion to the internal water pressure because the axial force is reduced. Especially, when the internal water pressure is higher than the ground water pressure, the joint of the segments should be consolidated because the lining is tensed in ring axial.

Therefore, "Honey-comb Segment against internal water pressure" developed is keeping merits of general "Honey-comb Segment" which can omit secondary lining. In developing, joint bending tests and ring loading tests in which test ring was directly acted internal water pressure were carried out, and it was certified that "Honey-comb Segment against internal water pressure" has sufficiently ring stiffness and the joint of the segments were satisfactorily watertight.

Key words: shield tunnel, segment, internal water pressure