

콘크리트제품의 동결저항성에 관한 실험적 연구  
Experimental Study on the Frost Resistance of Concrete Product

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The quality of the surface layer in concrete structures plays an important role in the durability of the concrete. The concrete factory products are made as they improve the appearance of the surface and compressive strength in need. A common criterion to judge the quality of concrete products frequently seen in our daily life appears to be “beauty” in terms of consistent shaping. However, as for most concrete curb in such areas where a large amount of anti-freezing agents(NaCl) and ice and snow melting agents(CaCl<sub>2</sub>) are spread over roads to ensure road safety during the winter season, since deterioration advances from the surface, scaling is seen on the surface concrete due to deterioration which combined freezing damage and salt damage. Especially, In cold northern districts, the spreading amount of deicing salts increases by regulation of studded tire use, and the scaling of the concrete products, the various parts of concrete structures for roads is increasing in recent years.

In this study, L-shape concrete curb were targeted, the permeable form method with the commercial permeable sheet was applied to it and the improvements of the quality were examined. By the permeable form method, surface layers got strengthened, which prevented permeation of the deterioration factor from the outside, and the scaling resistance of the upper surface where the permeable sheet was applied improved exceedingly. It will be expected by applying the permeable form method to various concrete products that frost resistance improves and scaling damage decreases.

Key words : Permeable form method, Surface layer strength, Freeze thaw test, Scaling resistance

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