

Research on Materials Design of Durable Concrete against Salt Scaling Deterioration

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Summary

Abstract: Focusing on reduction of air content during ready mixed concrete casting, the influence of pressurization during pumping pressure on bubble structure of concrete and scaling resistance of concrete was studied using mortar. The higher the pressure, the larger the average bubble diameter and the bubble spacing coefficient tend to be, and the number of bubbles decreases to solve in mixing water. In particular, reduction of bubbles of 150 μm or less is conspicuous, and as the number of bubbles decreases more, the scaling resistance decreases. In the case of mortar with air introduced by hollow microspheres with thin films, the change in bubble structure is small and the effect of pressurization is small. Excluding mortar pressurized at 0.45 MPa (gauge pressure), no significant reduction in scaling resistance is observed.