

Consideration in Influence of Pressure Line on Quality Variation in Placing Concrete by Pumping Methods

Atsunori MIYATA

This paper investigates effects of concrete pumping distance on the concrete quality were studied through literature survey and pumping experiments. And the following findings were obtained.

- 1) Slump and flow values of concretes with an AE water reducing agent and a high-range AE water reducing agent tended to decrease due to pumping and the decrease became notable with an increase in pumping distance. It was suggested that the decrease may exceed the minimum requirements for slump and flow value specified in the Concrete Pumping Guidelines when the pumping distance is longer than 150m.
- 2) Air content of concretes with an AE water reducing agent and a high-range AE water reducing agent tended to increase within the range specified in the Guideline.
- 3) Compressive strength of concretes with an AE water reducing agent and a high-range AE water reducing agent showed equivalent values regardless of the pumping distance, which suggested that the increase in air content due to pumping may pose negligible effects on the quality of concrete.