2. Observational Studies of the Grouting into Rock Masses by the Fluorescent Method

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It is important to grasp an improvement effect precisely in order to rationalize the grouting into rock masses. For the reason, it is necessary to grasp an infiltrating condition of the grout material, then, relate this information to indexes such as the Lugeon value. The purpose of the investigation is to acquire the basic information, which improves the quality of an improvement effect. Grouting procedures of the fluorescent method are as follows; 1) by mixing the cement with the fluorescent substance, the grout material is produced, 2) the fluorescent grout material is injected to the cracks in rock masses, 3) the core and borehole wall are illuminated by the black light, 4) the crack where the fluorescent grout material was injected is luminescent by irradiating ultraviolet rays, 5) on the basis of information from this crack, infiltrating condition of the grout material is analyzed. In this paper, we report the estimation of penetration ranges and courses of the infiltrated grout and the linkage with indexes such as the Lugeon value from analysis of the grout infiltrating condition.

Key words : dam, grouting, fluorescent method, borehole television, crack