4. Filling Back of a Inclined Shaft with Self-compacting Concrete Flowed of 1000m

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This report describes the practical use to filling back of the inclined tunnel of penstock (its angles are 48 degrees, and the length is 960m) with the self-compacting concrete. Though it had difficulty in discovering the design of mix proportion which replaced fly ash to 30% and method for stabilizing in respect of the condition of the concrete which flows in the conveying pipe, the placing of the concrete of 14,240 m^3 ended in March, 2004.

By using the self-compacting concrete, the placing speed quickened, and the quality was improved by the no separation of the coarse aggregate. And the construction cycle was shortened, since the installation of the stage was omitted, as the result, the construction cost was reduced.

Key words : pumped storage power station, inclined tunnel of penstock, self-compacting concrete, fly-ash, *cost down*