

Research about rational assessment method and selection method of pipeline construction method

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Sewage system pipeline construction methods can be roughly classified by open cut method, jacking method, and shield method, but new technique that contributes to cost reduction as well as environmental conservation, such as long-distance jacking method and safe and rapid open cut method, has been observed as a result of the recent technical development. On the other hand, maintenance and updating technique of pipeline has been important with consideration to the issues associated with construction work, such as noise, vibration, and traffic jam. Therefore, it is necessary to comprehensively assess not only the construction cost, but also the external cost of impact on the surrounding environment associated with construction work as well as the lifecycle cost in consideration to the future maintenance and updating, in the case of selecting the future sewage system pipeline construction method. In this study, pipeline construction, maintenance and management, and updating were comprehensively analyzed, including new technique as well as new construction method, and study was conducted via case study about influential cost of the surrounding environment in pipeline construction work, and about comprehensive selection method and assessment method including maintenance cost.

Keywords: jacking method, open cut method, external cost, maintenance and management, lifecycle cost