

Development of Risk Management System for Urban Railroad Underground Structures and Surrounding Ground

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Abstract : To assess the risk of the underground structures and surrounding ground, we collect basic data by the engineering method of measurement, exploration and surveys and, derive the risk through proper analysis and each assessment for urban railroad underground structures and surrounding ground including station inflow. Basic data are obtained by the fiber-optic sensors, MEMS sensors, water quantity/quality sensors, tunnel scanner, ground penetrating radar, light weight deflectometer, and are evaluated if they are more than the proper value or not. Based on these data, we analyze the risk level of urban railroad underground structures and surrounding ground. And we develop the risk management system to manage efficiently these data and to support a convenient interface environment at input/output of data.

Keywords : urban railroad, underground structures, ground subsidence, station inflow, risk

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