

8. Expansion of a Method for Seismically Retrofitting Existing Shear Walls by Spraying Mortar

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A method was developed for placing additional concrete in existing shear walls by spraying polymer cement mortar and attaching them to the existing frame using epoxy resin in seismic retrofit work by placing additional concrete in existing shear walls, in order to shorten the construction period and reduce noise and vibrations [1]. The seismic retrofit method enables work while the building is in service and therefore is expected to be applied in an increasing number of cases. Tests have, however, been conducted to verify the effect of retrofit only in a limited range, and the range of application of the method was also limited. Then, additional tests were conducted to expand the range of application and to make the seismic retrofit method more versatile. The development of design methods and their validity were confirmed based on the effect of retrofit. Then, the range of application of the retrofit method could be expanded.

Key words: shear walls, walls with additional concrete, spraying, polymer cement mortar