

Branded Technologies

Shark Bit Method

West Okayama Shield / Okayama

Construction period: March 2004 to March 2007

Client: Chugoku Regional Development Bureau of the Ministry of Land, Infrastructure and Transport

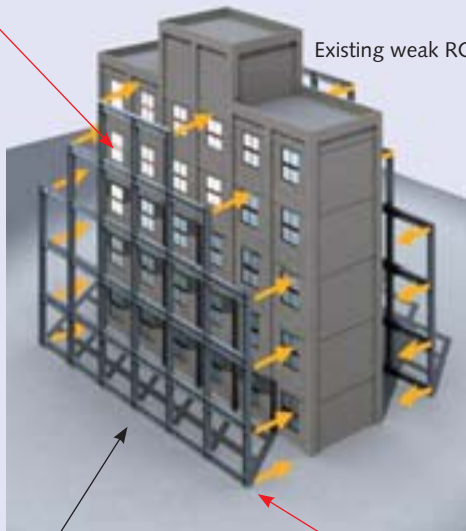
Construction summary: West Okayama Shield is a construction project to extend a multipurpose underground conduit by 830 meters, using a mud pressure shield with an external diameter of 4,530 millimeters. As a special condition, the project required construction work traversing such important structures as JR Sanyo Shinkansen Line and JR Sanyo Main Line immediately above.

For the first time, we adopted a number of new proprietary technologies such as the eco-screw system and the shark bit method in the mud pressure shield. The first attempt proved very challenging. Of special note is that we won the 3R Promotion Committee's Chairman's Award for the project. The Ministry of Land, Infrastructure and Transport also gave high marks to our new technologies. The Ministry sent a letter to the mayor of Okayama, expressing its appreciation for the contributions the project made to the technical training of its staff members.



Replaceable cutter bits

External Steel Portal Frames



Existing weak RC

Existing basement anchor

Steel beam for reinforcement to existing basement anchor



PG (Portal Grid) Method

Miyata PG Renovation / Aichi

Construction period: June 2006 to April 2007

Client: Miyata Shoten Co., Ltd.

Design and administration: AXS Satow Inc. (design and structure) and Penta-Ocean Construction Co., Ltd. (structure)

Construction summary:

- Ground area: 678.68 m²
- Building area: 582.14 m²
- Total floor space: 3990.45 m²

Earthquake-resisting reinforcement work on areas stated above, employing the PG method for front walls and carbon fiber for column reinforcement

The Fushimi Building we renovated is an office building that adjoins the Fushimi Subway Station and faces the Fushimi Boulevard. In view of the location, we were especially cautious to ensure that our construction did not block passers-by or present risks to them. We adopted the Portal Grid (PG) Method, our own patented earthquake-proof reinforcement method, in this project in consideration of the need to keep the scenery unobstructed, while also taking into account construction with occupants, the reliability of the construction method and the cost. The classy external appearance is receiving high marks from the client and tenants of the building. The project was the first in the Chubu region to use the PG method. During construction, we organized study tours of the building. With this work as construction experience, we plan vigorous sales activities to win orders for many more construction projects employing the PG method.