Innovative Positioning System Integration for Immersed Tunnel Construction

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In the southeastern part of South Korea 18 prefabricated tunnel elements have been immersed on the seabed as a part of a major road construction project.

This 3.2 km long tunnel has a maximum depth of 48m. The operational conditions were extraordinary as the immersion location is in direct connection with the Pacific Ocean and swell waves of over 8 meters combined with strong currents were no exception. Just 50 mm deviation was allowed.

Both the length and depth of this immersed tunnel imposed great challenges and required ‘out of the box’ positioning solutions. Since the contract was awarded in March and the first immersion was scheduled for the next January, the development and implementation time were very short.

Both existing and tailor made survey and positioning systems were successfully combined for the immersion of these tunnel elements.