

Tunnel under the Oude Maas, Zwijndrecht

Client: Ministry of Transport, Public Works and Water Management, Projectbureau HSL-Zuid
Engineering: HSL Drechtse Steden v.o.f. (Design & Construct)
Realisation: BAM Civiel (in the joint venture "HSL Drechtse Steden v.o.f.")
Sum: € 232.617.000
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BAM Civiel

In the High Speed Railway Link in the Netherlands the rivers Oude Maas and Dordtsche Kil are crossed by means of immersed tunnels. The Joint Venture Drechtse Steden, in which BAM Civiel participates, designed and constructed the tunnels. The principal is Projectbureau HSL-Zuid Zuid-Holland Zuid, part of the Ministry of Transport, Public Works and Water Management. Like most immersed tunnels in the Netherlands, the elements for the Railway tunnel under the river Oude Maas are built in the Barendrecht dry dock. Each 10 metres high element is divided into two tubes. During the same period, a trench was dredged in the riverbed in which the elements were to be placed. At very high tide it was possible to tow the sealed-off elements to the immersion site, aided by the current. The element is continuously guided and corrected

using tugs and pontoons during the flotation and submerging operations.

The immersion is controlled by gradually pumping in ballast water. The movement of the tunnel element is closely monitored, using highly advanced computer programs. Divers perform a last check as the rubber on the outside of one unit makes contact with the previous element. After all the elements are immersed into the trench, divers also make the last missing segment, the closing joint of the tunnel. Now the bulkheads can be broken down and ballast put in. After this the tunnel can be prepared for its use as a safe river crossing for the High Speed Line.