

## Connecting Europe and Asia by train



### Bosphorus tunnel project advances with German contribution

The «Marmaray» project made an important step forward to reach its goal of connecting Europe and Asia by railway. The first of the eleven pipe parts of the two-way railway tunnel system was lowered to the seabed in March 2007.

The construction of the Marmaray Project started in October 2004. It is one of the most important construction works for Istanbul and Turkey, solving many of the huge traffic problems of the area. With the construction of the undersea-tunnel, the two shores of the Bosphorus will be connected. A railway and tunnel system of about 76 km in total, from the suburb of Halkali on the European shore to Gebze on the Asian shore will be constructed. Apart

from the tunnels and railways, the system will include three new underground stations, 37 surface stations, an operation control centre, yards, workshops, maintenance facilities and much more. All in all, approximately 75,000 passengers are to be transported every hour and in both directions, on their way from Halkali to Gebze within the maximum of 105 minutes.

The 2,5 billion EUR project, financed mainly by the Japan Bank for International Cooperation (JBIC) and the European investment Bank (EIB), is being conducted by the Railways and Ports Directorate, the Japanese Taisei Corporation, GamaNurul and Avrasya Couseling.

Already in 2006, pipe parts were burrowed into the continental shelf. From the beginning, H+E Logistik, subsidiary of Herrenknecht AG with 1,500 employees around the globe and specialising in tunnel belt and conveyor system planning, construction and supply is part of this challenging project. With a conveyor length of 2.14 km and a belt width of 800 mm, H+E Logistik manages an hourly transport capacity of 540 tons of clay, sand and gravel, a belt storage capacity of 400m horizontal and an installed power capacity of 264 kW.

The project is expected to be finished in 2009, connecting the two parts of Turkey and bringing Europe and the Near and Middle East closer together.