

Job Report

Kelly drilling with an LB 45



LIEBHERR



Situation

It crosses through southern Germany stretching between the French and the Czech borders. As part of the European Route 50 it is an important link between Paris and Prague: the A6 motorway. The upgrading of the motorway includes the rebuilding of the Neckartal Bridge at Heilbronn between the junctions Untereisesheim and Neckarsulm. Hochtief

Challenge

Foundation piles were also required on the “Neckar Island” which lies about 100 m from the riverbank. The drilling rig was transported there by pontoon. Following transportation Hochtief built a pontoon bridge from the pontoon elements so that site traffic could cross. However, the drilling rig was too heavy for the pontoon bridge. After completion of this

Implementation

During the 6-month piling work, Hochtief installed 106 foundation piles using the Kelly drilling method with auger and rock drilling bucket. The company handled 170 t of steel reinforcements and 2,000 m³ of concrete in the process. On average, the piles are 11.5 m deep and have a diameter of 1.5 m. Depending on the density of the rock and the

Infrastructure GmbH installed the foundation piles using the new drilling rig type LB 45 from Liebherr. The name of the new machine comes from its nominal torque of 450 kNm. That is an increase of approximately 10 % in comparison to the already high performance of the LB 36 with 410 kNm.

construction phase, the bridge had to be rebuilt back to a pontoon so that the LB 45 could return across the Neckar. The simple handling of the machine proved to be a huge advantage both when operating it and when facing such logistic challenges.

drilling depth, Hochtief required about 2 hours for each pile. Including concreting, 2.5 piles could be installed per day. Hochtief is particularly impressed with the handling and the power of the LB 45. The bridge is expected to be open for traffic mid 2022.

Technical data Kelly drilling – LB 45:

Max. drilling depth:	95.0 m
Max. drilling diameter:	4,500 mm
Max. winch line pull:	420 kN

Ground Pressure Visualization:

