

KEMROC

PERFECT TOOL FOR EXCAVATING MANHOLES

Allgemeiner Ingenieurbau Thüringen GmbH (AIT) renovated the water supply and waste water pipelines under Rennsteigstrasse in the city of Finsterbergen in Thuringia, Germany. An ERKATOR chain cutter type EK 100, mounted on a 23 ton crawler excavator, performed very well for the excavation of manholes in hard sandstone.

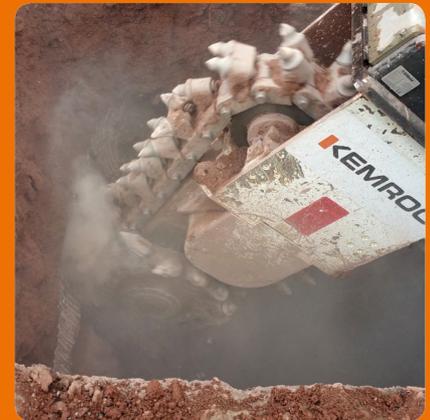
The 1.1 km long Rennsteigstrasse, the main traffic route through the city of Finsterbergen in Thuringen, Germany, is due to be completely renovated by the end of 2017. The engineers at Allgemeiner Ingenieurbau Thüringen GmbH (AIT), based in Gotha, faced a major problem in terms of trenching in hard sandstone which, in places, started at depths of 20 cm. At a section of the project which in the meantime has been completed, the plans called for several manholes to be installed. After several unsuccessful attempts to excavate the manholes with attachments from various suppliers, the contractor decided to try the ERKATOR EK 100 chain cutter from KEMROC. The chain cutter went through an intensive trial period and came through with flying colours.

EK (ERKATOR) chain cutters are part of an innovative range of products manufactured by KEMROC. The patented design consists of a double drum grinder with round attack picks mounted on a chain running between the two cutter drums. The chain cutter is designed for excavating deep, narrow trenches in medium hard rock, up to 80 MPa compressive strength. There are two models in the range, suitable for mounting on excavators with 18 to 45 ton operating weight.

At Finsterbergen, the EK 100 was used on a CAT 323D (23 ton operating weight). The chain cutter was used to excavate manholes 3.60 m long by 2.00 m wide and depths to 4.50 m along a stretch of road 150 m long. Mr Hendrik Schleicher, the engineer responsible for excavating the manholes, operated the excavator with the chain cutter most of the time. He found that the chain cutter operated perfectly in the red sandstone with a compressive strength of 70 MPa and, on occasions, in very abrasive mud. He said, "The performance of the KEMROC chain cutter is significantly better than traditional breakers. We achieved a production rate more than 7 m³/hour". He also commented on the low levels of vibration and wear, adding, "We saw no evidence of wear on the chain cutter attachment and pick consumption was at acceptable levels".



AIT had to excavate trenches and lay pipes in hard sandstone at Finsterbergen. Renovation work along Rennsteigstrasse is due for completion by the end of 2017.



A KEMROC EK 100 chain cutter was used to open trenches in sandstone with compressive strength of 70 MPa. A production rate of over 7 m³/hour was achieved.

At a later stage in the project, pipes had to be laid in open trenches and again, the excavator mounted EK 100 became the main tool to excavate in the hard, red sandstone. After his positive experience excavating manholes, Hendrik Schleicher wanted to see if the chain cutter would perform as well in the full trenching application and allow them to meet the time deadlines for completion of the project. "We are experimenting as we go along, the results are positive" he said, "and the residents along Rennsteigstrasse in Finsterbergen will also be relieved if we meet our deadline to complete the project by 30th November, 2017." ■



At times, the chain cutter had to work in very abrasive sandstone mud. According to the operator, wear rates remained at acceptable levels.

Publisher

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