



SIKA AT WORK

GAYRETTEPE – NEW AIRPORT
METRO, IHSANIYE STATION,
ISTANBUL, TURKEY

PRODUCTS FOR TBM: Sika® Foam TBM 510 LS / 513 AR

BUILDING TRUST



GAYRETTEPE – NEW AIRPORT METRO, IHSANIYE STATION, ISTANBUL



PROJECT DESCRIPTION

Begin of 2019 the city of Istanbul opened a bigger and brand new airport in the north west of the city in order to cover the increasing volume of passengers traveling around the world crossing Istanbul. Additional to the airport infrastructure, it was necessary to construct a new Metro Line to connect the new airport to the city center which includes the construction of a double Metro Line of around 37.5 km total length with 5 stations.

Different groups of several experienced construction companies were selected to carry out the construction of the new line. For this specific section of the project, the following Turkish companies were selected: Cengiz, Kolin and Kalyon.

TBM DESCRIPTION

For the excavation of this section of the full project, mainly starting from the "Ihsaniye Station" (over 8 km from the total length of the project) the team in charge decided to use 4 different EPB TBM machines from a German manufacturer with an excavation diameter of over 6 m. Two machines are always excavating in parallel. The excavated material is removed using a conveyor belt to a central shaft.

PRODUCT DESCRIPTION

Considering the length of the full project, different types of ground were found during excavation but the most of the advance of the EPB machines was crossing very cohesive soils.

For the sections mainly containing clay, Sika recommended the use of Sika® Foam TBM 510 LS which is a foaming agent for high cohesive soils. For some short sections of the tunnel containing clay and some gravel, Sika specially formulated Sika® Foam TBM 513 AR. The latter is a new foaming agent to produce very stable foam that can be injected during tunneling operations with TBMs in grounds with some rocks that may help protecting the steel structure of the cutting wheel and even extend the lifetime of the cutting tools.

PROJECT PARTICIPANTS

Owner: Ministry of transport, maritime affairs and communications.
Client: Istanbul Metropolitan Municipality.
Construction: Cengiz-Kolin-Kalyon.
Supplier: Sika Turkey.

Our most current General Sales Conditions shall apply. Please consult the most current local Product Data Sheet prior to any use.



SIKA SERVICES AG
Tueffenwies 16
CH-8048 Zurich
Switzerland

Contact
Phone +41 58 436 40 40
www.sika.com

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