



SIKA AT WORK

ÜMRANIYE-ATASEHIR-GÖZTEPE METRO LINE, ISTANBUL, TURKEY

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

BUILDING TRUST



ÜMRANIYE-ATASEHIR-GÖZTEPE METRO LINE, ISTANBUL, TURKEY



PROJECT DESCRIPTION

During the last years, the city of Istanbul has been improving the local transport infrastructure and has opened some new Metro Lines all around the city. In 2017 the Government confirmed the excavation of the new Ümraniye – Ataşehir – Göztepe line which will add 13Km to the actual Metro system of Istanbul.

The Umraniye-Ataşehir-Göztepe Metro Line is planned to be opened in 2022 and will be 13 kilometers long. The journey between the 11 stations will take around 20 minutes.

This Metro Line which will be connected to the Marmaray Line at the Göztepe Station is an important part of the new Istanbul rail system, connecting additionally to the Kadıköy-Kartal line in the Yenisahra Station.

A group of different construction companies formed by Gulermak, Nurol and Makyol will be in charge of the excavation and construction of the full tunnel.

TBM DESCRIPTION

For the excavation of this big project near the Financial Area of the city (Istanbul International Finance Center), 4 new EPB TBMs with an excavation diameter of 6,60 m have been ordered by an Asian supplier.

The excavated material is removed using a conveyor belt to a starting shaft.

PRODUCT DESCRIPTION

Considering the conditions of the project, the specific type of ground to be excavated and in order to achieve a high average advance speed of the TBMs, specific foaming agents will be used during the excavation.

For the sections containing mainly sticky ground, Sika recommended the use of Sika® Foam TBM-510 LS (Cf 2%, FER 1:6-1:8 and FIR 60-80%) which is a foaming agent for high cohesive soils.

For some specific sections of the tunnel containing limestone and some gravel, Sika recommended the Sika® Foam TBM-513 AR (Cf 2%, FER 1:8-1:10 and FIR 40-60%) which has been developed locally to reduce possible wear of the cutting wheel / tools and lowering the dust during excavation.

Both products produce a stable foam and are injected during tunneling operations to condition the ground to be excavated and protecting the steel structure of the cutting wheel and trying to extend the lifetime of the cutting tools.

PROJECT PARTICIPANTS

Owner: Istanbul Metropolitan Municipality.

Client: Metro Istanbul.

Construction: Gulermak, Nurol and Makyol.

Supplier: Sika Turkey.

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



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