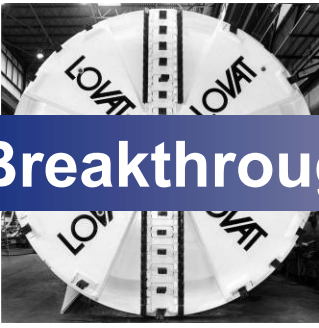
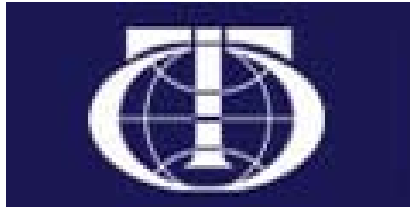


Supply of TBM for Oztas Co. – Gürpınar & Firuzkoy Tunnels, Istanbul



ÖZTAŞ İNŞAAT
İNŞAAT MALZEMELERİ TİCARET AŞ.



Turkish contractors Oztas Co. have signed a contract for the supply of a refurbished LOVAT RME136SE Series 19500 Earth Pressure Balance Tunnel Boring Machine [TBM]. The TBM will be utilized in the construction of the Gürpınar & Firuzkoy Tunnels located in Istanbul, Turkey. The TBM will undergo a complete refurbishment at LOVAT's facilities in Toronto, Canada, including conformity to European "CE" standards.

The 3.5 meter diameter mixed face TBM will first bore the 5,227 meter long Gürpınar tunnel predominately located in Gürpınar Formation, mainly anticipated to consist of hard to stiff over-consolidated plastic clay with some weak sandstone, siltstone, claystone and tuff. A small portion of the tunnel alignment will be in a formless landslide complex consisting of water saturated sand layers. A faulted zone is likely to be encountered, in which greater water inflow is expected. The entire alignment is below the groundwater level, with a maximum groundwater height above the tunnel invert of 60 meters.

The TBM will then bore the 3,770 meter long Tahtakale-Ambarh Wastewater Tunnel in Firuzkoy through three distinctive formations: the Kuşdili Formation, consisting of very soft to firm sandy-silty-clay; the Ceylan Formation, consisting of limestone with marl fragments and clay layers; and also through the Gürpınar Formation as described above. Groundwater levels will vary from 1 to 48 meters below the surface, with the entire alignment below the groundwater level.