

For Immediate Release

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TERRATEC TBMs continue to impress over long drives in Argentina

The Río Subterráneo a Lomas tunnel project in Argentina is witnessing impressive progress with the advancement of two TERRATEC Ø4.66m EPB machines.



TERRATEC is pleased to share the successful progress of the two dia. 4.66m Earth Pressure Balance Tunnel Boring Machines (EPBMs) currently operational in Buenos Aires, Argentina for the Río Subterráneo a Lomas tunnel.

The first EPB TBM (S74) named "EVA" commenced its journey at the end of September 2020. Impressively, "EVA" completed the first drive, covering approximately 8km (7945m), by the end of 2022.

During the Covid-19 pandemic, the launch of its first machine was initiated. To accomplish this, Italian contractor CMC di Ravenna and TERRATEC secured specific permission from different Argentina embassies in different countries, enabling them to send a team of international technicians to Argentina.

CMC di Ravenna played a pivotal role in this endeavor by establishing a vast organization and committing substantial resources to comply with governmental restrictions and successfully launched the first TBM.

This remarkable 13.5km tunnel is a pivotal component of the multi-billion-dollar Agua Sur system that is currently being built by Argentina's national water and sanitation company AySA. Representing the country's most extensive water infrastructure project in four decades, the Agua Sur system is poised to provide fresh water access to 2.5 million inhabitants residing in the southern metropolitan area of Buenos Aires.

The sister machine, the dia. 4.66m TERRATEC EPBM (S73) named "JUANA" has been deployed by CMC di Ravenna for the final 5km of the tunnel project. The "JUANA" has achieved an impressive advancement of 88 rings, covering a distance of 123.2m in just one week.



The TERRATEC EPBMs have been designed to handle the diverse soft ground geology along the project alignment, encompassing silts, sandy silts, and some cobbles. Equipped with high-torque soft ground cutterheads featuring a spoke-style design boasting a 49% opening ratio, these TBMs incorporate cutting tools comprising of multiple fixed and back-loading knife bits. This cutting-edge configuration ensures not only rapid advancement but also minimizes the need for interventions.

Both TERRATEC EPBMs were launched and received from shafts. The tunnel excavation takes place at an average depth of 25m, commencing with an approximately 400m radius curve before continuing along a predominantly straight alignment, with a maximum slope of +/- 2.0%. As the machines progress, a precast concrete lining ring will be installed which are comprising six segments (four parallelograms and two keys) measuring 250mm thick and 1400mm wide each.

The first launch shaft is composed of 4 interconnected circular sectors at the bottom area. Spanning around 45m in length, 12m in width, and 25m in height, this shaft serves as an integral starting point for the tunneling operations.

The Agua Sur System, a comprehensive infrastructure endeavor, encompasses various significant works. These include establishing a raw water intake, expanding the General Belgrano Water Treatment Plant to augment its water production capacity from the existing maximum of 1,950,000m³ per day to an impressive 2,950,000m³ per day. Additionally, it involves the construction of a 23km water conveyance tunnel, built in two stages, along with the creation of two pump stations and a vast network of pipe connections spanning 46km. The ambitious project is anticipated to be completed over an estimated timeframe of 10 years.

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