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Flavia Reaches the Brenner: The Last Italian TBM of the BBT Project Crosses the Finish Line

The last of the Italian TBMs at construction site H61 Mules successfully completes the excavation of the west main tunnel. This marks the end of main tunnel excavation works on the Italian side of the BBT project.

Mules, May 3, 2025 – Flavia's journey began in April 2019, the TBM used to excavate 14.3 km along the west main tunnel on the Italian side of the BBT project.

It wasn't just about digging the west main tunnel: along Flavia's route, more than 65,000 precast concrete segments were installed inside the tunnel.

Before Flavia, two TBMs had already reached the state border. Serena, the TBM that excavated most of the exploratory tunnel on the Italian side, arrived at the Brenner in November 2021. Virginia, Flavia's "twin sister," reached the Brenner in March 2023. And finally, Flavia: in total, the three TBMs used in the direction of the Brenner excavated nearly 43 km.

Once completed, the Brenner Base Tunnel will be the longest underground railway connection in the world. The project is part of the overall upgrade of the Munich–Verona high-speed rail axis and is included in the TEN-T trans-European transport network, known as the "European subway," specifically within the Scandinavian–Mediterranean corridor.

For the two Executive Directors of BBT SE, Gilberto Cardola and Martin Gradnitzer, this marks another milestone in the history of the BBT project: "*With the arrival of TBM Flavia at the Brenner, mechanized excavation on the Italian side of the project is complete. We must first thank the TBM operators, who, with great professionalism and team spirit, enabled the cutterhead to safely reach the state border. A heartfelt thank you also goes to the designers, engineers, geologists, and all the employees of BBT SE, whose valuable contributions were essential to achieving this milestone*."

Alessandro Marottoli, Project Manager for lot Mules 2-3, confirms: "*The determination of the TBM operators and all the professionals involved allowed us to complete another great achievement. After Serena and Virginia, Flavia too has reached her destination*."

"*In April 2023, about 3.5 km from the Brenner arrival point, TBM Flavia came to a halt. Due to the high overburden of over 1,200 meters and the low resistance of fractured rock, the rock mass pressed against the*

cutterhead, preventing it from advancing for several months. After several attempts, the TBM resumed excavation and, after an adventurous journey, we are now witnessing a highly significant result," explains Stefan Skuk, geologist at BBT SE.

Key Data of TBM Flavia:

- Cutterhead diameter: 10.71 m
- Cutterhead drive power: 4200 kW
- Cutterhead torque: 27,000 kNm
- Total weight (TBM incl. main drive): approx. 2,750 tonnes