



THALIA

Reinventing How TBM Operators Learn

Thalia is a state-of-the-art tunnelling simulator designed by Bouygues Travaux Publics to accelerate and elevate the training of future TBM operators. This high-performance platform replicates EPB, Slurry and Variable Density machines through a full-scale control console and professional monitoring screens. With more than 30 realistic scenarios, trainees can safely experience all the conditions and challenges of real tunnelling.



Key benefits

- ± Enhanced safety through risk-free practice
- ± Accelerated training for TBM operators
- ± Error reduction and improved decision-making
- ± Standardized best practices across teams
- ± Simulation of rare and critical events



Turning traditional training into a powerful experience

For decades, new operators have learned directly inside operating TBMs—a method that limits exposure to complex situations and slows progression. Thalia revolutionizes this approach by offering an immersive, risk-free learning environment where operators can build confidence and skills long before entering the jobsite.

Mastering the interaction between ground, machine and decisions

Thalia gives trainees a unique understanding of how geology, machine behaviour and operator choices interact. By practicing repeatedly across varied simulated situations, future operators learn to anticipate risks, interpret machine feedback and respond effectively to operational changes.



A Hyper-Realistic Simulation Engine

Powered by an advanced behavioural model, Thalia reproduces in real time the consequences of every parameter change—ground conditions, machine settings or pilot actions. It recalculates forces, pressures and material flows several times per second, delivering a true ring-by-ring excavation experience.

A Real TBM Control Room at Your Fingertips

The simulator integrates all key interfaces used on real machines:

- › Live operating curves
- › Key performance indicators
- › Guidance and data acquisition systems
- › Cutting-tool monitoring
- › Grout management dashboards

Trainees learn in an environment that perfectly mirrors real operations.



Adresse
Contact

www.tunnelbytp.com

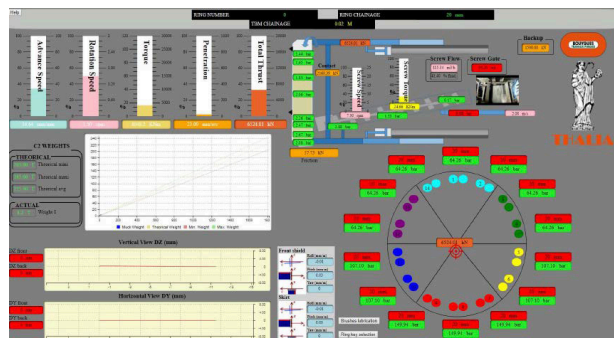


The key steps of the TBM Pilot Training Path

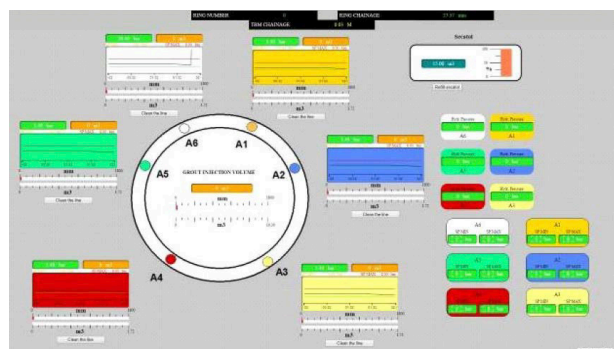
Thalia forms the foundation of a complete training programme combining:

- › E-learning to understand mechanical and physical principles
- › Simulator sessions to gain operational mastery safely

Three training formats—1, 3 or 6 weeks—adapt to every experience level. All successful trainees obtain the Tunnelling Machine Pilot Certification, followed by on-site mentoring with an experienced pilot on a real TBM.



Main parameters



Grout information



Special Human Resources Recognition in partnership
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