Tunnel boring is performed using a hydro shield, with the tunnel wall built from concrete tubing segments.

Execution

The tunnel boring machine (TBM) bores a path from the departure pit to the arrival pit. The soil is excavated by a cutting wheel, with the bore front supported by pressurised boring fluid (bentonite). This method is used for tunnels with internal diameters of approximately 3 m and larger.

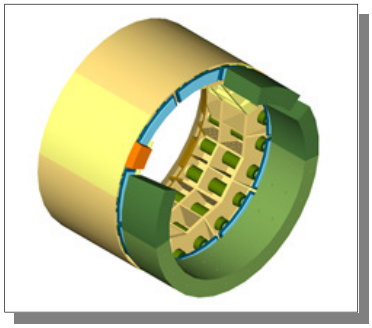
The tunnel wall is built immediately behind the TBM by assembling tubing segments to form rings. After each ring is completed, the TBM pushes against the most recently built ring in order to continue boring. The cutting wheel can be fitted with rock bits for tunneling through rock formations if required. An intervention/ maintenance at the bore front is possible under pressure using compressed air. This boring method is a safe and reliable method and can be used in a wide variety of sub soils.

Applications

It can be used both above and below groundwater level under a wide variety of geological conditions: sand, clay, silt, peat, as well as sandstone, marl or rock with a suitable cutting wheel. This method is used to construct tunnels for cables and/or piping, ecotunnels, pedestrian and bicycle tunnels, drainage tunnels, metro tunnels, tunnels for underground logistics transport, etc.

Adventages

Suitable for boring long tunnels. Precisely steerable in a straight line or in curves, watertight, safe, and usable at great depth under a wide variety of geological conditions.



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