How does the TBM construct tunnels?

Prior to the tunnel construction, parts of the TBM are assembled underground using a retrieval shaft which is cut into the ground. At the take-off point of the tunnel, the machine is assembled in the launching pit. As it bores through soil, rock or a mixture of both, the TBM continually installs the precast segmental lining to make a permanent tunnel wall. At the same time, it transports the excavated materials to the retrieval shaft. When the TBM has completed the tunnel construction, the TBM will be disassembled in the retrieval shaft at the tunnel end and repaired for re-use.

The Tunnel Boring Machine (TBM) is a huge machine specially designed for building tunnels. It is like a small size factory. Inside the TBM, you will see electronic panels, hydraulic pumps, air compressors, grouting pumps etc. It is equipped with a string of trailers to bring good luck for the project ahead. The TBMs used for the tunnel construction of Shatin to Central Link are called “Zhao-jun”, “Fanli-hua” and “Xi-shi”. Is “Soeng-ngo”, “Iron Lady” and “Xi-shi”. They are named after a lady. The name should reflect its mission and be easy to remember. The TBMs used for the tunnel construction of Island Line are called “Zhao-jun”, “Fanli-hua” and “Xi-shi”. The TBMs used for the tunnel construction of Express Rail Link are called “Zhao-jun”, “Fanli-hua” and “Xi-shi”. They are named after a lady. The name should reflect its mission and be easy to remember.

The benefits of using a TBM

• Installing the permanent tunnel lining as the TBM bores makes the permanent tunnel lining much safer than using other construction methods, including the possibility of settling and maintaining the structural safety of buildings in the vicinity.
• The tunnel boring machine can be disassembled in the retrieval shaft at the tunnel end for repair. This allows for 24-hour real-time operation.
• Launching and retrieval systems are installed at the buildings and shield tunnels and are used during the construction process. These systems are used to reduce the risk of settling.
• It is a highly efficient construction method involving several stages to form the permanent tunnel lining simultaneously. This allows for 24-hour real-time operation.
• The Tunnel Boring Machine is a huge machine specially designed for building tunnels. It is like a small size factory. Inside the TBM, you will see electronic panels, hydraulic pumps, air compressors, grouting pumps etc. It is equipped with a string of trailers to bring good luck for the project ahead. The TBMs used for the tunnel construction of Shatin to Central Link are called “Zhao-jun”, “Fanli-hua” and “Xi-shi”. Is “Soeng-ngo”, “Iron Lady” and “Xi-shi”. They are named after a lady. The name should reflect its mission and be easy to remember. The TBMs used for the tunnel construction of Island Line are called “Zhao-jun”, “Fanli-hua” and “Xi-shi”. The TBMs used for the tunnel construction of Express Rail Link are called “Zhao-jun”, “Fanli-hua” and “Xi-shi”. They are named after a lady. The name should reflect its mission and be easy to remember.

Shatin to Central Link Information Centre

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Saturdays, 10:00am – 1:00pm

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Calls will be connected to a voice mailbox when the line is busy after office hours. Please leave your name, message and we will contact you as soon as possible. For more information, please visit www.mtr-shatincentrallink.hk