

Shield Tunneling Machine for Tunnel Connectional Passage and Connectional Passage Tunneling Method Thereof

ABSTRACT OF THE DISCLOSURE

Provided are a shield tunneling machine for a tunnel connectional passage and a
5 connectional passage tunneling method of the shield tunneling machine. The shield
tunneling machine comprises a start end supporting walking platform (1) and a receive
end supporting walking platform (2) which are respectively arranged on material
transportation rails in two main tunnels, a main body (3) of the shield tunneling machine,
a counterforce supporting frame (4) and a main tunnel supporting assembly (5) which are
10 respectively arranged on the start end supporting walking platform (1, 2) and a
corresponding main tunnel duct piece, and a start end terminal sealing assembly (6) and a
receive end terminal sealing assembly (7) which are respectively arranged at the start end
and the receiving end of the connectional passage. A duct piece hanging assembly (8) is
arranged on the start end supporting walking platform (1); and a jacking tunneling
15 assembly is arranged between the counterforce supporting frame (4) and the main body
(3) of the shield tunneling machine. Also disclosed is a connectional passage tunneling
method. The shield tunneling machine for the tunnel connectional passage and the
connectional passage tunneling method thereof can realize auto-magical mechanical
excavation, greatly reducing labor intensity, energy consumption, and costs. Meanwhile,
20 equipment construction is stable, and the efficiency is high; settling of the ground is
effectively controlled, and the construction risk is reduced.

Fig. 1