

ABSTRACT

TUNNEL EXCAVATING MACHINE AND EXCAVATING METHOD

It is an object of the present invention to provide a tunnel excavating machine of high-speed construction type and an excavation method which is capable of stopping invasion of water completely and allows covering members to be assembled easily. This tunnel excavating machine comprises: a cylindrical excavating machine main portion 1 which is provided with a cutter head 4 mounted rotatably at a front portion thereof and fit to an external periphery of an existing segment S through a tale seal 23; a cylindrical excavating machine auxiliary portion 2 which is fit to the inside of the excavating machine main portion 1 movably in the back and forth direction and provided with an erector 25 for assembling the aforementioned segments; a plurality of main propulsion jacks 22 disposed between the excavating machine main portion 1 and the excavating machine auxiliary portion 2; and a plurality of auxiliary propulsion jacks 22 mounted on the excavating machine auxiliary portion 2 and capable of being retracted with respect to the segment S, so that assembly of the covering members is enabled by means of the erector 25 under propulsion and excavation with the excavating machine main portion 1.

Figure : None