
JACKING SYSTEM FOR EXCAVATION CONSTRUCTION OF CROSS PASSAGE AND CONSTRUCTION METHOD USING THE SAME

ABSTRACT

The present disclosure provides a jacking system used for excavation construction of cross passage and a construction method using the same. The jacking system includes a reaction frame and force transmission member which connects the reaction frame with main tunnel segment(s) surrounding a starting end of the cross passage. The reaction frame is used to provide support for excavation apparatus along an excavation direction, wherein, support force is transmitted to the main tunnel segment(s) surrounding the starting end of the cross passage via the force transmission member. With the technical solution of the present disclosure, back support is cancelled from the jacking system and the structure and whole system are more simplified and intensive. In addition, the space behind the reaction frame is no longer occupied, which makes it possible to construct main tunnel and cross passages or multiple cross passages simultaneously. This jacking system not only has low manufacturing cost, but also reduces construction cost due to simplified operation, construction space saving and simultaneous construction procedures.

Fig. 1