

## 厦门海底隧道综合超前地质预报实践

王锦山<sup>1, 2</sup>, 王力<sup>2</sup>, 曹志刚<sup>2</sup>, 刘志刚<sup>3</sup>, 王亮<sup>4</sup>, 朱辉<sup>5</sup>

(1. 北京科技大学 金属矿山高效开采与安全教育部重点实验室, 北京 100083; 2. 河北科技师范学院, 河北 秦皇岛 066004; 3. 石家庄铁道学院, 河北 石家庄 050043; 4. 燕山大学, 河北 秦皇岛 066004; 5. 中铁22局集团有限公司 厦门海底隧道工程项目部, 福建 厦门 361009)

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**摘要** 鉴于当前仍未建立起系统的隧道超前地质预报理论的实际, 基于地质力学理论, 在总结以往研究成果的基础上, 较深入地构建了隧道超前地质预报的概念和广义、狭义超前地质预报实施的技术方案, 提出了宏观预报、长期预报、短期预报和灾害临近警报的整套超前预报技术手段, 并通过厦门海底隧道的预报实践验证, 证明了提出的相关理论和技术方法的正确性与可行性, 其技术方法对隧道施工生产具有一定的指导意义。

**关键词** [海底隧道](#); [超前地质预报](#); [不良地质体](#); [TSP探测](#); [综合预报技术](#)

分类号

## PRACTICE ON SYNTHETIC GEOLOGICAL PREDICTION AHEAD OF CONSTRUCTION OF XIAMEN SUBSEA TUNNEL

WANG Jinshan<sup>1, 2</sup>, WANG Li<sup>2</sup>, CAO Zhigang<sup>2</sup>, LIU Zhigang<sup>3</sup>, WANG Liang<sup>4</sup>, ZHU Hui<sup>5</sup>

(1. State Key Laboratory of High-efficient Mining and Safety of Metal Mines(University of Science and Technology Beijing), Ministry of Education, Beijing 100083, China; 2. Hebei Normal University of Science and Technology, Qinhuangdao, Hebei 066004, China; 3. Shijiazhuang Railway Institute, Shijiazhuang, Hebei 050043, China; 4. Yanshan University, Qinhuangdao, Hebei 066004, China; 5. Site Headquarters of Xiamen Subsea Tunnel, China Railway 22nd Bureau Group Co., Ltd., Xiamen, Fujian 361009, China)

### Abstract

In view of the actual situation that there is still not any systematic theory of geological prediction for the tunnel construction, the concept of geological prediction ahead of construction for the tunnel and technical scheme of geological prediction have been constructed on the basis of the previous research results; and a complete set of geological forecasting techniques including the macro forecast, the long-term prediction, the short-term prediction and the alarm of the disaster approach, have been proposed based on the theory of geomechanics. According to the practical test of the prediction in Xiamen subsea tunnel, the accuracy of the prediction can meet the requirements of the construction standards. It shows the rationality and feasibility of the related theory and the technical method; and the proposed technical method can provide some references to the tunnel constructions.

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**Key words** [subsea tunnel](#); [geological prediction ahead](#); [unfavourable geology](#); [tunnel seismic prediction \(TSP\) detecting](#); [synthetic prediction technique](#)

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