Post-Construction Imprint of Precast Assembly Side Walls in the Open Section of Yindu Road Cross-River Tunnel Project

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Date: 2025-07-29T19:11:12+00:00

Abstract

This paper presents the prefabricated assembled side wall construction technology based on the Pudong open-cut section of the Yindu Road River-Crossing Tunnel project. Compared with conventional cast-in-place dominant construction methods for open-cut sections, the application of prefabricated side wall systems in underground U-shaped structures can effectively address issues such as limited construction site area. Based on actual site conditions, key procedures including prefabricated side wall base slab construction, prefabricated side wall installation, post-cast strip construction, diagonal bracing removal, and deformation joint treatment are introduced. The application of this prefabricated side wall construction technology not only shortens the construction period but also enhances the apparent quality of the walls, providing a reference for subsequent projects.

Full Text

Preamble

Construction of Prefabricated Assembled Side Walls in the Open-Cut Section of the Newly Built Yindu Road River-Crossing Tunnel Project

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Abstract

This paper introduces the construction technology of prefabricated assembled side walls as applied in the open-cut section on the Pudong side of the newly built Yindu Road River-Crossing Tunnel Project. Compared with conventional

cast-in-place construction methods typically used in open-cut sections, the adoption of prefabricated side walls for underground U-shaped structures effectively resolves challenges such as constrained construction site area. Based on actual site conditions, the paper details key construction procedures including prefabricated side wall base construction, side wall installation, post-cast strip construction, diagonal bracing removal, and deformation joint treatment. The implementation of this prefabricated side wall construction technology not only reduces the project duration but also improves the apparent quality of the wall surfaces, offering a valuable reference for future engineering projects.

Keywords: prefabricated assembly; side wall construction; open-cut section

Note: Figure translations are in progress. See original paper for figures.