



论文摘要

中南大学学报(自然科学版)

ZHONGNAN DAXUE XUEBAO(ZIRAN KEXUE BAN)

Vol.暂无 No.暂无 暂无

[PDF全文下载] [全文在线阅读]

文章编号: 1005-9792(2003)05-0567-04

混凝土倒“T”形叠合板承载力的计算方法

蒋青青^{1,2}, 王新民³刘汉朝², 黄赛超²

- (1. 中南大学资源与安全工程学院, 湖南长沙, 410083;
2. 中南大学土木建筑学院, 湖南长沙, 410083;
3. 长沙经济技术开发区建设发展局, 湖南长沙, 410100)

摘要: 提出一种只发生“部分叠合”的新型混凝土倒“T”形叠合板结构形式. 采用肋部厚度已达最终设计厚度的倒“T”形截面预制板, 使之能直接承受后浇叠合层混凝土的自重和施工活荷载, 节省模板和临时支撑; 再根据倒“T”形叠合板的构造特点和试验研究及实际工程应用, 提出了这种新型叠合板以倒“T”形板为跨中弯矩的承载主体, 后浇叠合层混凝土仅参与正常使用阶段工作的基本假定, 建立了计算内容与整浇梁板相同的、简单可靠的承载力计算方法. 由于计算过程中将仅发生部分叠合的后浇叠合层混凝土的实际结构功能予以降低, 故设计者可根据实际工程情况赋予倒“T”形预制板凹槽内的后浇叠合层混凝土某些附加的有益功能, 如保温、防渗、轻质等, 从而进一步提高该结构的安全性和适用性, 更有利于这种新型叠合板结构的推广应用.

关键字: 叠合板; 倒“T”形预制板; 承载力

Calculating method for bearing load capacity of RC invertible“T”slab-composite slab

JIANG Qing-qing^{1,2}, WANG Xin-min³, LIU Han-chao², HUANG Sai-Chao²

- (1. College of Resources and Safety Engineering, Central South University, Changsha 410083, China;
2. College of Civil and Architectural Engineering, Central South University, Changsha 410083, China;
3. Bureau of Building and Development, Economic and Technological Development Zone, Changsha 410100, China)

Abstract: A new kind of the invertible“T”precast slab construction style with part composition is put forward. It adopts the design thought that its rib thickness has reached the final design thickness. It can sustain directly the weight of the later cast concrete and the moving loads of construction, saving the supports and formworks. Based on the construction characters and engineering application of the invertible T slab, the new kind of composite slab is put forward, the invertible T slab being the major part to bear the middle bend. The later cast concrete of composite part just satisfies the basic hypothesis in the normal use period. Compared with the whole casting slab's calculation contents, the load calculation way is simple and reliable. Because the construction functions of the later casting concrete is weakened, designer can attach additional functions to the later casting concrete of the invertible T slab according to the engineering's conditions, such as heat-preservation, permeation prevention and light weigh. This can further improve the safety and application of this structure, which makes it popularized and applied easily.

Key words: composite slab; invertible 'T' precast slab; bearing loading capacity

有色金属在线 中国有色金属权威知识平台

版权所有：《中南大学学报(自然科学版、英文版)》编辑部

地 址：湖南省长沙市中南大学 邮编： 410083

电 话： 0731-88879765 传真： 0731-88877727

电子邮箱： zngdx@mail.csu.edu.cn 湘ICP备09001153号