

铁道建筑

TIEDAO JIANZHU

2025 年 9 月 第 65 卷 第 9 期 (总第 619 期)

专辑 重载铁路工务设备状态检测评估与维修管理

目次

线路与养护维修

重载铁路轨道大机捣固月度维修计划经济决策方法	龙亦语 曲建军 刘攀 等(1)
重载铁路线路设备单元维修决策方法	潘振 马战国 郅录朝 等(7)
重载铁路直线区段钢轨大修周期研究	吴占清 龙亦语 武庆(11)
重载铁路轨道几何质量劣化规律	何占元 龙亦语 刘攀(15)
基于熵权-TOPSIS法的铁路线路状态综合评价方法	柴浩 马战国(20)
重载铁路钢轨温度场非均匀分布特征	徐玉坡 倪一 李杨 等(24)
道岔区导波断轨监测系统设计与性能验证	徐玉坡(29)
基于有限元法的无缝线路待换长钢轨稳定性分析	牛作彬 马战国(35)
重载铁路扣件连续失效对轨道服役状态的影响	杨乐 崔树坤 闫子权 等(39)
基于落锤冲击试验的重载铁路混凝土弹性轨枕减振性能研究	尤瑞林 赵柯 宁娜 等(44)
混凝土轨枕承轨面磨损机理及优化措施试验研究	崔树坤 白新荣 刘炳彤 等(49)
有砟轨道道砟覆盖状态快速检测技术研究	孙淑杰 王胜春 李峰 等(54)
铁路桥梁桥面道砟厚度车载地质雷达快速检测技术及应用	张弛 郑金涛 臧锐杰 等(59)
基于动检数据的重载铁路精捣模式优选研究	刘攀 曲建军 龙亦语 等(64)
重载铁路岔区有砟道床小型捣固机械的作业参数	何宇强 韩宏洋 张岩 等(70)

隧道与地下工程

重载铁路隧道衬砌裂损分布特征及数据分析方法王少瑜 田甜 万中华 等(75)

路基与地基基础

采用毛细排水管的重载铁路基床病害整治技术杨赞玺 张栋(81)

原位改良土复合结构层整治重载铁路路基翻浆冒泥技术研究冀国华 张栋(87)

重载铁路线路基础状态周期性检测系统设计及应用马子钦 杜翠 李晓元(92)

重载铁路路基状态评估的现状与展望韩宇 徐天新 杜翠(96)

智能运维

重载铁路工务设备动静态一体化数据平台研发与应用刘建峰 马战国 谷牧 等(102)

轨道安全检测监测技术架构研究谢艳霞(108)

重载铁路工务设备综合图动态绘制方法刘建峰(114)

基于重载铁路综合检测列车复杂网络环境的数据协同传输方法王凡 李振环 王纪坤 等(119)

RAILWAY ENGINEERING

September 2025 Vol.65 No.9 (Series No.619)

Special Issue: State Inspection, Evaluation and Maintenance Management of Track
Infrastructure for Heavy Haul Railway

CONTENTS

Track and Its Maintenance

Economic Decision-making Method for Monthly Maintenance Plan of
Track Large Machinery Tamping of Heavy Haul RailwayLONG Yiyu, et al(1)

Decision Making Method for Units Maintenance of Heavy Haul Railway Line EquipmentPAN Zhen, et al(7)

Research on Rail Renewal Cycle for Straight Track Section in Heavy Haul RailwayWU Zhanqing, et al(11)

Degradation Law of Track Geometric Quality of Heavy Haul RailwayHE Zhanyuan, et al(15)

Comprehensive Evaluation Method for Railway Line Status Based on
Entropy Weight-TOPSIS MethodCHAI Hao, et al(20)

Non-uniform Distribution Characteristics of Rail Temperature Field in Heavy Haul Railway.....XU Yupu, et al(24)

Design and Performance Verification of Guided Wave-Based Broken Rail
Monitoring System for Railway Turnout ZonesXU Yupu(29)

Stability Analysis of Long Rails Ready for Service in Continuously Welded Rail Based on
Finite Element MethodNIU Zuobin, et al(35)

Influence of Continuous Failure of Fastening of Heavy Haul Railway on
Track Service StatusYANG Le, et al(39)

Vibration Reduction Performance Study of Concrete Elastic Sleepers for
Heavy Haul Railways Based on Drop Hammer Impact TestsYOU Ruilin, et al(44)

Experimental Study on Wear Mechanism and Optimization Measures of
Rail Seat Abrasion.....CUI Shukun, et al(49)

Research on Rapid Detection Technology for Ballast Coverage Status of Ballasted TrackSUN Shujie, et al(54)

Rapid Detection Technology and Application of Vehicle Mounted Ground
Penetrating Radar for Ballast Thickness Above Railway BridgesZHANG Chi, et al(59)

Research on Optimal Selection of Heavy Haul Railway Precise Tamping Mode Based on
Dynamic Detection DataLIU Pan, et al(64)

Optimal Operating Parameters of Small Tamping Machines in Ballasted

Track Turnout Areas of Heavy Haul Railways*HE Yuqiang, et al*(70)

Tunnel and Underground Works

Fracture Distribution Characteristics and Data Analysis Methods of

Heavy Haul Railway Tunnel Linings*WANG Shaoyu, et al*(75)

Subgrade·Foundation

Subgrade Defects Treatment Technologies for Heavy Haul Railway Using

Capillary Drainage Pipes*YANG Zanxi, et al*(81)

Research on Technologies of In-situ Improved Soil Composite Structure for

Remediation of Mud Pumping in Heavy Haul Railway Subgrade*JI Guohua, et al*(87)

Design and Application of Periodic Inspection System for Heavy Haul Railway Track

Foundation State*MA Ziqin, et al*(92)

Present Situation and Prospect of Condition Evaluation of Heavy Haul Railway Subgrade*HAN Yu, et al*(96)

Intelligent Operations and Maintenance

Research and Development of Dynamic and Static Integrated Data Platform and

Its Application on Heavy Haul Railway Permanent Way Equipment*LIU Jianfeng, et al*(102)

Research on Construction of Track Safety Inspection and Monitoring Technology System*XIE Yanxia*(108)

Dynamic Drawing Method of Heavy Haul Railway Permanent Way Equipment

Comprehensive Diagram*LIU Jianfeng*(114)

Data Cooperative Transmission Method Based on Comprehensive Detection of

Heavy Haul Railway in Complex Network Environment*WANG Fan, et al*(119)