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Date:	5 December 2009
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Level 2

Design and Installation of Turntables

Endorsement and Authorisation

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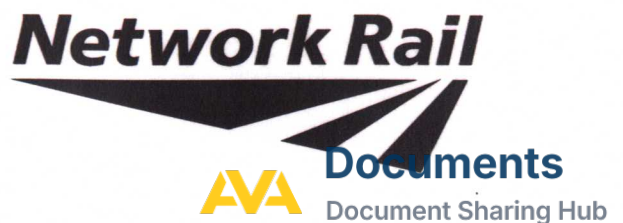


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Issue record

Issue	Date	Comments
1	Dec 2009	First Issue

Compliance

This Network Rail standard is mandatory and shall be complied with by Network Rail and its contractors if applicable from 6 March 2010.

When this standard is implemented, it is permissible for all projects that have formally completed GRIP Stage 4 to continue to comply with the Issue of any relevant Network Rail Standards current when GRIP Stage 4 was reached and not to comply with requirements contained herein, unless the designated Standard Owner has stipulated otherwise in the accompanying Briefing Note.

Reference documentation

Doc Ref Number	Title
BS 466	Specification for power driven overhead travelling cranes, semi-goliath and goliath cranes for general use
BS EN 13001-1	Crane Safety. General Design. General Principles and Requirements (Can be used for structural elements of turntable.)
BS EN 13001-2	Crane Safety. General Designs. Load Actions
BS 3858	Specification for binding and identification sleeves for use on electric cables and wires
BS 5467	Electric Cables Thermosetting insulated Armoured Cables for Voltages of 600/1000V and 1900/3300V
BS 5499	Graphical Symbols and signs. Safety Signs including Fire Safety Signs. Specifications for Geometric shapes Colours and layout
BS 6004	Electric Cables PVC Insulated Non Armoured Cables for Voltages up to and including 450/750V for Electric Power Lighting and Internal Wiring
BS 6221-2	Printed wiring boards. Methods of test
BS 6221-6	Printed wiring boards. Specification for multilayer printed wiring boards
BS 6346	Electric Cables PVC Insulated Armoured Cables for Voltages of 600/1000V and 1900/3300V
BS 7211	Electric Cables PVC Insulated Non Armoured Cables for Voltages up to and including 450/750V for Electric Power Lighting and Internal Wiring having low emissions of smoke and corrosive gases when affected by fire

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BS 7671-2008	Requirements For Electrical Installations (IEE Wiring Regulations)
BS 7846	Electric Cables 600/1000V Armoured fire resistant cables having Thermosetting Insulation and low emissions of smoke and corrosive gases when affected by fire
BS 7889	Electric Cables Thermosetting Insulated Unarmoured Cables for a voltage of 600/1000V
BS 9000-1	General requirements for a system for electronic components of assessed quality. Specification of general procedures
BS EN 13557	Cranes. Controls and control stations
BS EN ISO 12100-1	Safety of Machinery. Basic concepts, General Principles for Design, Basic Terminology, Methodology.
BS EN ISO 12100-2	Safety of Machinery. Basic concepts, General Principles for Design, Technical Principles
BS EN 60073	Basic and Safety Principles For Man-Machine Interface Marking and identification coding principles for indicators and actuators
BS EN 60439	Low Voltage Switchgear And Control Gear Assemblies Type Tested and Partially Type Tested
BS EN 60204-1	Safety of machinery. Electrical equipment of machines. General requirements
BS EN 60529	Specification for degrees of protection provided by enclosures (IP code)
BS EN 60947-5-1	Specification for low-voltage switchgear and control gear. Control circuit devices and switching elements. Electromechanical control circuit devices
BS EN 61000-6-3	Electromagnetic compatibility (EMC). Generic standards. Emission standard for residential, commercial and light-industrial environments
BS EN 61386-1	Conduit systems for cable management. General requirements
BS ISO 13202:2003	Cranes measurement of velocity and the parameters
BS EN ISO/IEC 17050	Conformity Assessment. Suppliers Declaration of Conformity. General requirements
SI 2005/0281	Electro-Magnetic Compatibility Regulations 2005
SI 1998/2306	The Provision and Use of Work Equipment Regulations 1998
SI 1998/2307	Lifting Operations and Lifting Equipment Regulations 1998
GI/RT7007	Low Voltage Electrical Installations

The Railway Group Standards and other references included in the above table are given for guidance purposes, but are not intended to be exhaustive list of all relevant documents.

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1 Purpose

This standard defines the technical requirements for a rail vehicle turntable to be used for transporting rail vehicles between roads within maintenance depots.

2 Scope

This standard details the requirements for the design, manufacture, delivery, off-loading, installation, testing and commissioning of a rail vehicle turntable and associated equipment at Network Rail owned Light Maintenance Depots

3 Definitions

Safe Working Load

The maximum load that is permitted to be safely handled by the turntable.

Depot Protection System

A system that provides protection and warnings to staff working on rolling stock within maintenance depots when any movements of rail vehicles take place.

Bridge

The structural member(s) on which the crabs is supported.

Rotational travel

Describes the way the turntable turns through, horizontally, the full 360 degrees. Maximum speed is measured at the outer most edge of the platform.

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