

Glossary of terms used in

Materials handling —

**Part 4: Terms used in connection with
cranes**

Co-operating organizations

The Mechanical Engineering Industry Standards Committee, under whose supervision this British Standard was prepared, consists of representatives from the following Government departments and scientific and industrial organizations:

Associated Offices' Technical Committee	Institution of Gas Engineers
Association of Consulting Engineers	Institution of Heating and Ventilating Engineers
Association of Mining Electrical and Mechanical Engineers	Institution of Mechanical Engineers
Board of Trade	Institution of Mechanical Engineers (Automobile Division)
British Chemical Plant Manufacturers' Association	Institution of Production Engineers
British Compressed Air Society	Locomotive and Allied Manufacturers' Association of Great Britain
British Electrical and Allied Manufacturers' Association	London Transport Board
British Gear Manufacturers' Association	Machine Tool Trades Association
British Internal Combustion Engine Manufacturers' Association	Ministry of Defence
British Mechanical Engineering Federation	Ministry of Defence, Army Department*
British Pump Manufacturers' Association	Ministry of Labour (H.M. Factory Inspectorate)*
British Steel Industry	Ministry of Power
Crown Agents for Oversea Governments and Administrations	Ministry of Public Building and Works
Electricity Council, the Central Electricity Generating Board and the Area Boards in England and Wales	Ministry of Technology
Engineering Equipment Users' Association	Ministry of Technology — National Engineering Laboratory
Gas Council	Ministry of Transport
Institute of Marine Engineers	National Coal Board
Institution of Civil Engineers	National Physical Laboratory (Ministry of Technology)
	Royal Institute of British Architects

The Government departments marked with an asterisk in the above list, together with the following, were directly represented on the committee entrusted with the preparation of this British Standard:

Association of Crane Makers	National Association of Lift Makers
Chain Testers Association of Great Britain	National Joint Council on Materials Handling
Federation of Manufacturers of Construction Equipment — Excavator Section	United Kingdom National Committee of the International Cargo Handling
Institute of Materials Handling	Co-ordination Association
Lifting Equipment Manufacturers Association	The Cranfield Work Study School
Mechanical Handling Engineers Association	Individual manufacturer

This British Standard, having been approved by the Mechanical Engineering Industry Standards Committee and endorsed by the Chairman of the Engineering Divisional Council, was published under the authority of the General Council on 20 September 1968

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Foreword

In order to keep abreast of progress in the industries concerned, British Standards are subject to periodical review. Suggestions for improvements will be recorded and in due course brought to the notice of the committees charged with the revision of the standards to which they refer.

A complete list of British Standards, numbering over 4000, fully indexed and with a note of the contents of each, will be found in the British Standards Yearbook. The BS Yearbook may be consulted in many public libraries and similar institutions.

This British Standard has been prepared at the request of the National Joint Council on Materials Handling under the authority of the Mechanical Engineering Industry Standards Committee. It is intended to cover the whole field of materials handling in a number of parts of this standard. The hooks and lifting tackle normally used with the cranes defined in this part of the glossary are included in Part 5 of the glossary (in course of preparation).

The Institution desires to call attention to the fact that this British Standard does not purport to include all the necessary provisions of a contract.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i to iv, pages 1 to 20, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

Section 1. General crane terms

A. General

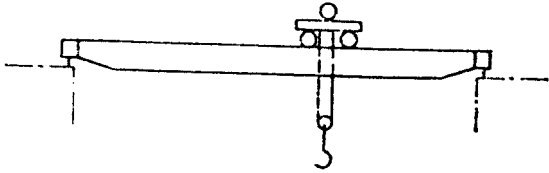
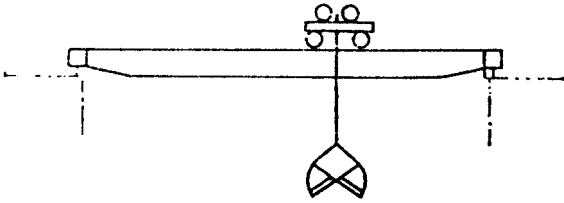
Term No.	Term and definition	Typical example
41001	Luffing or derricking. Angular movement of the crane jib in a vertical plane.	
41002	Hoisting. The motion of lifting or lowering of the load and/or lifting hook or lifting device in a vertical direction.	
41003	Level luffing. A luffing motion during which the load is automatically maintained at a constant height.	
41004	Radius. The horizontal distance measured between the centre line of the hook and a perpendicular projected through the centre of rotation.	
41005	Slewing. Rotary motion of a crane about its vertical axis.	
41006	Span. The horizontal distance between the centres of overhead or goliath crane track rails.	
41007	Travelling (long travel). Motion applied to move the whole crane.	
41008	Traversing (cross-travel). Motion applied to move a crab or load carriage along the bridge girders.	

B. Crane components

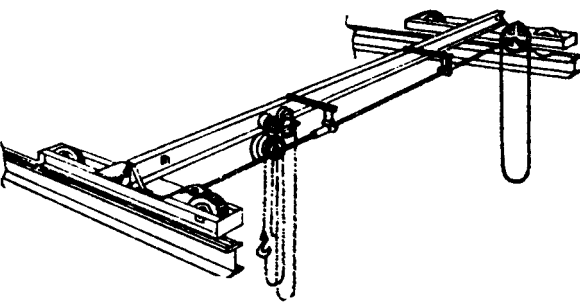
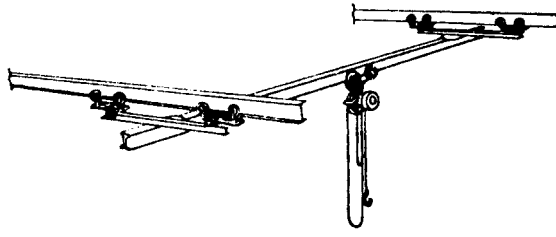
Term No.	Term and definition	Typical example
41101	Overhead travelling crane gantry. Two or more tracks comprising single or composite rolled steel sections on which the crane end carriages travel for either under- or over-slung running.	
41102	Load trolley (overhead runway type). A manually or power-propelled carriage comprising two or more wheels in rigid or articulated mountings for running on the lower flanges of overhead tracks and provided with suspension means for lifting. Special types may be provided with means for diverting the trolley in runway junctions.	
41103	Crab (manually- or power-operated). A carriage supported on four or more wheels for over- or under-slung running on a crane bridge girder(s) fitted with driving means for the traversing and hoisting motions. Power-operated crabs may be controlled from pendant push buttons or from an operator's cabin attached to the crab or crane structure.	
41104	Load trolley (tower crane type). A carriage, mounted on wheels, which, by its movement along the normally horizontal jib, provides means of varying the radius.	

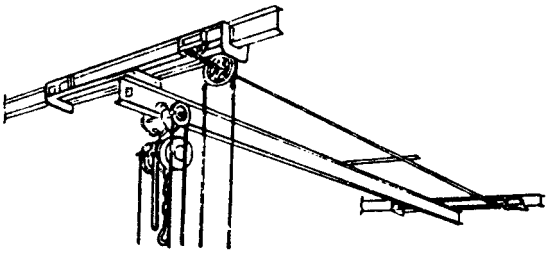
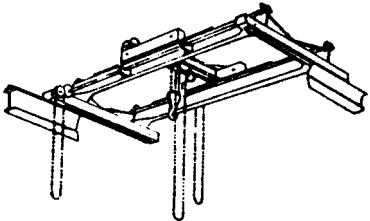
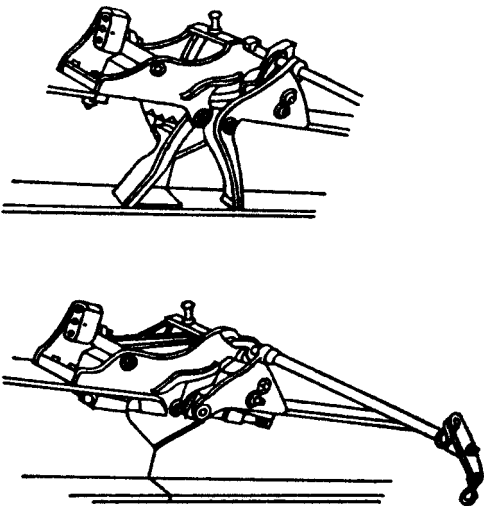
Section 2. Overhead travelling cranes

A. General

Term No.	Term and definition	Typical example
42001	Overhead travelling crane. A crane consisting of a girder or girders, mounted on end carriages which travel along a gantry. The girders support a crab fitted with traversing and hoisting motions. The crane is normally operated from a crab or girder-mounted cabin.	 Figure 1
42002	Overhead travelling grabbing crane. A specially designed overhead travelling crane incorporating a grabbing device.	 Figure 2

B. Manually operated cranes

Term No.	Term and definition	Typical example
42101	Single girder crane. A crane which has a single beam spanning the gantry. The beam, which is rigidly connected to the end carriages supports the load trolley and pulley block. The travelling end carriage wheels run directly over the gantry beams, usually on additional rails secured to the beams.	 Figure 3
42102	Under-slung crane. A crane in which the travelling end carriage wheels run on the lower flanges of the gantry beams.	 Figure 4
42103	Ungearred travelling and traversing crane. A crane in which travelling and traversing motions are obtained by either pushing the load or pulling on one of the operating chains.	

Term No.	Term and definition	Typical example
42104	Geared travelling and traversing crane. A crane in which travelling and traversing motions are obtained by means of hand chain wheels connected through reduction gearing to motion wheels.	 Figure 5
42105	Power hoisting pulley block crane. Manually operated travelling and traversing cranes with powered hoisting motion. These cranes may be of any of the types defined in 42101-4 inclusive.	
42106	Double girder crane. A crane which has two parallel girders, rigidly connected to either over- or under-slung end carriages. The hoisting unit is built into a traversing crab either over- or under-slung on the girders.	 Figure 6
42107	Latch unit. Fitted at one or both ends of the crane girder, these mechanisms provide a means of locking one crane, when correctly aligned, to another or to a fixed runway, to permit the safe transfer of the load trolley.	 Figure 7