



## Standards (British, European and International)

The preparation of standards for a wide range of lifting equipment, components and associated materials together with codes and recommendations for safe use has resulted in a very good standard of safety when properly applied. All persons who are concerned with the design, technical selection or use of lifting equipment are advised to work to these standards.

The European standards programme is still a long way from completion but, as can be seen below, there are now many standards bearing the BS EN prefix. These European Standards are intended to help the process of removing technical barriers to trade throughout Europe and beyond. The reader should ensure that they have the current edition of the standard, complete with any amendments.

Listed below are the main standards applicable to lifting equipment.

### British and European Standards

#### CRANES, RUNWAYS, BLOCKS AND WINCHES

Power driven overhead travelling cranes, semi-goliath and goliath cranes for general use	BS 466	: 1984
Gin blocks	BS 1692	: 1998
Power driven mobile cranes	BS 1757	: 1986
Rules for the design of cranes - Structures	BS 2573-1	: 1983
Mechanisms	BS 2573-2	: 1980
The design and testing of steel overhead runway beams	BS 2853	: 1957
Safe use of cranes	BS 5744	: 1979
Code of practice for safe use of cranes - General	BS 7121-1	: 2006
Inspection, testing and examination	BS 7121-2	: 2003
Mobile cranes	BS 7121-3	: 2000
Lorry loaders	BS 7121-4	: 1997
Tower cranes	BS 7121-5	: 1997
Offshore cranes	BS 7121-11	: 1998
Recovery vehicles	BS 7121-12	: 1999
Automatic safe load indicators	BS 7262	: 1990
Slewing jib cranes	BS 7333	: 1990
Recovery vehicles and vehicle recovery equipment	BS 7901	: 2002
Code of practice for safe use of cranes	CP 3010	: 1972
Cranes - Safety – Requirements for health and safety – Limiting and indicating devices	BS EN 12077-2	: 1999
Cranes – Information for use and testing Instructions	BS EN 12644-1	: 2001
Marking	BS EN 12644-2	: 2000
Cranes - Safety – Loader cranes	BS EN 12999	: 2002
Cranes – Mobile Cranes	BS EN 13000	: 2004
Cranes - Equipment – Non-electrical equipment	BS EN 13135-2	: 2004
Cranes - Safety – Non fixed load lifting attachments	BS EN 13155	: 2003
Cranes - Safety – Hand powered lifting equipment	BS EN 13157	: 2004

Cranes – Offshore Cranes – General purpose offshore cranes	BS EN 13852-1	: 2004
Cranes – Manually controlled load manipulating devices	BS EN 14238	: 2004
Cranes and lifting appliances – Selection of wire ropes	BS ISO 4308-1	: 2003
Cranes – Wire ropes – Care, maintenance, installation, examination and discard	BS ISO 4309	: 2004
Cranes – Training of drivers – Tower cranes	BS ISO 9926-3	: 2005
Cranes – Limiting and indicating devices	BS ISO 10245-4	: 2004
Cranes – Availability – Vocabulary	BS ISO 11994	: 1997

#### SLINGS

Lifting slings - Methods of rating	BS 6166-1	: 1986
Specification for marking	BS 6166-2	: 1986
Guide to the selection and safe use of lifting slings for multi-purposes	BS 6166-3	: 1988
Short link chain for lifting purposes - Safety Chain slings - Grade 8	BS EN 818-4	: 1997
Chain slings - Grade 4	BS EN 818-5	: 1999
Chain slings – Specification for information for use and maintenance to be provided by the manufacturer	BS EN 818-6	: 2000
Textile slings – Safety Flat woven webbing slings, Roundslings, Lifting slings made from natural and man-made fibre ropes	BS EN 1492-1	: 2000
	BS EN 1492-2	: 2000
	BS EN 1492-4	: 2004
Steel wire rope slings – Safety Slings for general service	BS EN 13414-1	: 2003
Specification for information to be provided by the manufacturer	BS EN 13414-2	: 2003
Grommets and cable laid slings	BS EN 13414-3	: 2003

#### ACCESS EQUIPMENT

Mobile elevating platforms – design calculations, stability criteria, construction, safety, examinations and tests	BS EN 280	: 2001
Protection against falls from a height Anchor devices. Requirements and testing	BS EN 795	: 1997
Lifting platforms. Mast climbing work platforms	BS EN 1495	: 1998
Rescue equipment. Rescue lifting devices	BS EN 1496	: 1996
Suspended access equipment for use in building, engineering construction, steeplejack and cleaning industries	BS 2830	: 1994
Temporarily installed suspended scaffolds and access equipment	BS 5974	: 1990
Permanently installed suspended access equipment	BS 6037	: 2003
Application and use of anchor devices to	BS EN 795	: 1997
Code of practice for the installation, maintenance, thorough examination and safe use of mast climbing work platforms (MCWPs)	BS 7981	: 2002

#### MISCELLANEOUS

Steel links and strap assemblies for lifting attachments for packing cases	BS 2837	: 1988
Alloy steel shackles	BS 3551	: 1962



Eyebolts for lifting purposes	BS 4278	: 1984	Spiral ropes for general structural applications	BS EN 12385-10: 2003
Rigging screws and turnbuckles	BS 4429	: 1987	Steel wire ropes for petroleum and gas industries – Terms of acceptance	BS ISO 10425 : 2003
Lifting equipment for performance, broadcast and similar applications: Specification of the design and manufacture of above stage equipment (excluding trusses and towers)	BS 7905-1	: 2001	Steel Wire ropes – Determination of rotational properties	BS ISO 21669 : 2005
Design and manufacture of aluminium and steel trusses and towers	BS 7905-2	: 2000		
Use of lifting equipment for performance, broadcast and similar applications: Code of practice for installation, use and removal of above stage equipment	BS 7906-1	:2005	<b>FIBRE ROPES</b>	
Code of practice for the use of aluminium and steel trusses and towers	BS 7906-2	: 2000	Fibre ropes for general service -	
Vehicle lifts	BS EN 1493	: 1999	Polyamide	BS EN 696 : 1995
Mobile or moveable jacks and associated lifting equipment	BS EN 1494	: 2001	Polyester	BS EN 697 : 1995
Safety requirements - Lift tables	BS EN 1570	: 1999	Manila and sisal	BS EN 698 : 1995
Offshore containers – Design, construction, testing, inspection and marking	BS EN 12079:	1999	Polypropylene	BS EN 699 : 1995
Forged steel shackles for general lifting purposes, Dee and Bow grade 6	BS EN 13889	:2003	General specification	BS EN 701 : 1995
Fork lift trucks - Fork arms - Technical characteristics and testing	BS ISO 2330	: 2002		
Industrial trucks - Inspection and repair of fork arms in service on fork lift trucks	BS ISO 5057	: 1993	<b>TERMINAL ATTACHMENTS FOR CHAIN, FIBRE ROPES &amp; WIRE ROPES</b>	
			Sockets for wire ropes-	
<b>CHAINS</b>			Inch Units	BS 463-1 : 1958
Proper use and maintenance of calibrated round steel link lifting chains	BS 6521	: 1984	Metric units	BS 463-2 : 1970
Short link chain for lifting purposes - Safety General conditions of acceptance	BS EN 818-1	: 1996	Thimbles for natural fibre ropes	BS 3226 : 1960
Short link chain for lifting purposes - Safety Medium tolerance chain for chain slings - Grade 8	BS EN 818-2	: 1997	Bordeaux connections	BS 7167 : 1990
Short link chain for lifting purposes - Safety Medium tolerance chain for chain slings - Grade 4	BS EN 818-3	: 1999	Components for slings - Safety Forged steel components grade 8	BS EN 1677-1 : 2000
Short link chain for lifting purposes – Safety Fine tolerance chain grade T (types T, DAT and DT)	BS EN 818-7	: 2001	Forged steel lifting hooks with latch grade 8	BS EN 1677-2 : 2000
Short link chain for lifting – General conditions of acceptance	BS ISO 1834:	1999	Self locking hooks grade 8	BS EN 1667-3 : 2001
			Links grade 8	BS EN 1677-4 : 2000
			Hooks with latch grade 4	BS EN 1677-5 : 2001
			Links grade 4	BS EN 1677-6 : 2001
			Terminations for steel wire ropes – Safety	
			Thimbles for steel wire rope slings	BS EN 13411-1 : 2002
			Splicing of eyes	BS EN 13411-2 : 2001
			Ferrules and ferrule securing	BS EN 13411-3 : 2004
			Metal and resin socketing	BS EN 13411-4 : 2002
			U-bolt wire rope grips	BS EN 13411-5 : 2003
			Asymmetric wedge sockets	BS EN 13411-6 : 2004
			Hooks for lifting – Nomenclature	BS ISO 1832 : 2003
			<b>SHIPPING</b>	
			Code of practice for ships' cargo blocks	MA 47 : 1977
			Code of practice for the design and operation of ships' derrick rigs	MA 48 : 1976
			<b>MATERIALS</b>	
			Colliery haulage and winding equipment	
			Wrought steels -	BS 2772-2 : 1989
			Steel castings for general engineering purposes	BS 3100 : 1991
			Quenched and tempered steels -	
			Technical delivery conditions for special steel	BS EN 10083-1 : 1991
			Technical delivery conditions for unalloyed quality steels	BS EN 10083-2 : 1991
			Steels for general engineering purposes	BS EN 10277-2 : 1999
			Steels for quenching and tempering	BS EN 10277-5 : 1999
Stranded steel wire ropes -				
Zinc coated ropes for ships	BS 302-3	: 1987		
Ropes for haulage purposes	BS 302-5	: 1987		
Larger diameter ropes for general purposes	BS 302-7	: 1989		
Higher breaking load ropes	BS 302-8	: 1989		
Steel wire ropes – Safety				
General requirements	BS EN 12385-1	: 2002		
Definitions	BS EN 12385-2	: 2003		
Information for use and maintenance	BS EN 12385-3	: 2004		
Stranded ropes for general lifting	BS EN 12385-4	: 2002		
Stranded ropes for lifts	BS EN 12385-5	: 2002		
Stranded ropes for mine shafts	BS EN 12385-6	: 2004		
Locked coil ropes for mine shafts	BS EN 12385-7	: 2002		
Stranded hauling ropes for lifting persons	BS EN 12385-8	: 2002		
Locked coil ropes to carry persons	BS EN 12385-9	: 2002		

## International Standards

In addition to the British and European Standards listed, lifting equipment is also covered by the following ISO Standards. Where an identical (dual numbered) British Standard exists the ISO Standard has been omitted from the list.

General purpose thimbles for wire rope	2262	: 1984
Shackles for general lifting purposes	2415	: 2004
Wire rope sockets		
Characteristics and conditions of acceptance	3189-1	: 1985
Produced by forging or machining	3189-2	: 1985
Produced by casting	3189-3	: 1985
Eyebolts for general lifting purposes	3266	: 1984
Classification		
Lifting appliances	4301-1	: 1986
Mobile cranes	4301-2	: 1985
Tower cranes	4301-3	: 1993
Jib cranes	4301-4	: 1989
Overhead travelling and portal bridge cranes	4301-5	: 1991
Stability of cranes	4304	: 1987
Cranes – Wire ropes – Care, maintenance, installation, examination and discard	4309	: 2004
Point and eye hooks grade M	4779	: 1986
Non-welded grade T chain slings	7593	: 1986
Molten metal socketing wire ropes	7595	: 1984
Resin socketing wire ropes	7596	: 1982
Point and eye hooks grade T	7597	: 1987
Grade T components for chain	8539	: 1986
Wire rope slings - inspection	8792	: 1986
Ferrule secured eye terminations	8793	: 1986
Spliced eye termination	8794	: 1986