

Code of practice for safe use of cranes —

Part 2: Inspection, testing and examination

ICS 53.020.20

Committees responsible for this British Standard

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Association of Lorry Loaders Manufacturers and Importers
 CEA — The Construction Equipment Association
 Construction Confederation
 Construction Health and Safety Group
 Construction Plant-Hire Association
 Electricity Association
 Health and Safety Executive
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 Institution of Structural Engineers
 Low Power Radio Association
 Safety Assessment Federation Ltd.

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Contents

	Page
Committees responsible	Inside front cover
Foreword	iii
<hr/>	
Introduction	1
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 General	4
5 Personnel carrying out pre-use checks, in-service inspections and thorough examinations	4
6 Periodic pre-use checks and in-service inspections	5
7 Thorough examinations	6
8 Pre-use checks and in-service inspections for crane and tower equipment not in use for an extended period of time	9
9 Testing as part of thorough examination	10
10 Data logging	14
11 Additional recommendations for cranes for lifting persons and suspended baskets	14
12 Assessment of wire rope condition and discard criteria	16
13 Additional recommendations for mobile cranes	31
14 Additional recommendations for overhead travelling cranes	40
15 Additional recommendations for tower cranes	43
16 Additional recommendations for loader cranes	48
<hr/>	
Annex A (informative) Information to be contained in a report of a thorough examination	53
Annex B (informative) Beaufort scale	54
Annex C (informative) Sea state code	54
Annex D (informative) Example of load test certificate	55
Annex E (normative) Example of personnel carrier pre-use check form	56
Annex F (informative) Example of a wire rope test certificate	57
Annex G (informative) Example of typical procedure for climbing frame thorough examinations and checks	58
Annex H (informative) Tower crane foundation pre-erection inspection certificate	60
<hr/>	
Bibliography	61
<hr/>	
Figure 1 — Some points to be considered during the assessment of the worn rope	17
Figure 2 — Broken wires on the “crowns” of the strands of the rope	20
Figure 3 — Broken wires in the “valleys” (sometimes called gussets or interstices) between the outer strands of the rope	20
Figure 4 — External wear	21
Figure 5 — Enlargement of Figure 4	21
Figure 6 — External corrosion	22
Figure 7 — Enlargement of Figure 6	22
Figure 8 — Internal corrosion	23
Figure 9 — Waviness	23
Figure 10 — Basket deformation	24
Figure 11 — Strand protrusion	24
Figure 12 — Strand protrusion	25
Figure 13 — Core protrusion	25

	Page
Figure 14 — Wire protrusion	26
Figure 15 — Local increase in rope diameter due to core protrusion	26
Figure 16 — Local reduction of rope diameter	27
Figure 17 — Kink	27
Figure 18 — Kink	28
Figure 19 — Kink	28
Figure 20 — Flattened portion	29
Figure 21 — Flattened portion	29
<hr/>	
Table 1 — Discard criteria for single layer and parallel-closed ropes working in steel sheaves	30
Table 2 — Discard criteria for rotation-resistant ropes working in steel sheaves	31
Table 3 — Test configurations for telescopic jib arrangements	35
Table 4 — Test configurations for strut jib arrangements	38
Table 5 — Test configurations for mast/tower and jib arrangements	39
Table 6 — Recommendations for periodic testing and examination of loader cranes	52
Table B.1 — Beaufort scale wind conditions	54
Table C.1 — Sea state code and sea conditions	54

Foreword

This part of BS 7121 has been prepared by Subcommittee MHE/3/11. It supersedes BS 7121-2:1991, which is withdrawn. It is intended to be used in conjunction with other parts of BS 7121 to ensure, so far as is reasonably practicable, that lifting operations are carried out safely.

The Lifting Operations and Lifting Equipment Regulations (LOLER) [1] and the Provision and Use of Work Equipment Regulations (PUWER) [2] came into force on the 5th December 1998. Details of the Regulations, an Approved Code of Practice plus HSE guidance can be found in the HSE books *Safe use of lifting equipment* [3] and *Safe use of work equipment* [4].

BS 7121-1 provides general recommendations for crane types not covered in an additional part of BS 7121. This part covers in-service inspection, thorough examination and, where appropriate, testing for the safe use of all types of crane. Subsequent parts deal with the specific crane types as follows:

- Part 3: Mobile cranes;
- Part 4: Lorry loaders;
- Part 5: Tower cranes;
- Part 6: Derrick cranes;
- Part 7: Overhead/under-hung travelling and gantry cranes;
- Part 8: High pedestal and portal jib tower cranes;
- Part 9: Container handling cranes;
- Part 10: Rail mounted cranes;
- Part 11: Offshore cranes;
- Part 12: Recovery vehicles and equipment;
- Part 13: Hydraulic gantry lifting systems;
- Part 14: Side boom rope ladders.

When all parts of BS 7121 have been published, CP 3010 will be withdrawn and BS 5744 will be revised to cover manually operated and light cranes only.

The Health and Safety Executive (HSE) commends the use of this British Standard to those who have duties under the Health and Safety at Work etc. Act 1974 [5]. This standard was drawn up with the participation of HSE representatives and will be referred to in relevant HSE publications.

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The BS 7121 series has been accepted as representing the consensus of practical experience for safety on cranes.

As a code of practice, this British Standard takes the form of guidance and recommendations. It should not be quoted as if it were a specification and particular care should be taken to ensure that claims of compliance are not misleading.

It has been assumed in the drafting of this British Standard that the execution of its provisions is entrusted to appropriately qualified and competent people.

Attention is drawn to the following statutory regulations:

The Lifting Operations and Lifting Equipment Regulations (LOLER) [1];

The Provision and Use of Work Equipment Regulations (PUWER) [2];

The Health and Safety at Work etc. Act 1974 [5];

The Supply of Machinery (Safety) Regulations [6];

The Merchant Shipping Act [7];

The Road Vehicles (Construction and Use) (amendment) Regulations [8].

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its 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 61 and a back cover.

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Introduction

The need to thoroughly examine equipment dates back to the introduction of steam power into factories. There were a large number of steam boiler explosions and it was found that a legal requirement to have the boilers regularly examined by a competent person dramatically reduced the number of these accidents. The premises had to be closed down whilst examination of the boiler was carried out and this normally only occurred during the Easter holidays. Because Easter was a moveable feast, the maximum time set for intervals between thorough examinations was 14 months to accommodate the holiday period.

It was then recognized that there were also a large number of accidents on cranes and other types of lifting machines and so a similar requirement was introduced with a similar time scale, and again the number of accidents was dramatically reduced. The most noteworthy of the old regulations being the Construction (Lifting Operations) Regulations 1961 which have now been revoked. It was not until the introduction of the Lifting Operations and Lifting Equipment Regulations (LOLER) [1] in December 1998 that it was acknowledged that the time constraints in factories no longer applied and a more logical period could be set as the maximum time between thorough examinations. As an alternative to time periods between thorough examinations LOLER permits the use of an examination scheme.

1 Scope

This part of BS 7121 gives recommendations for the pre-use checks, in-service inspection, thorough examination and testing of cranes, including associated equipment, and the means by which tests are to be carried out.

Although this part is not applicable to the testing of new cranes, it does give guidance on safety matters to be observed during these tests within the UK.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

BS 1757, *Specification for power-driven mobile cranes.*

BS 449-2, *Specification for the use of structural steel in buildings — Part 2: Metric units.*

BS 5950-1, *Structural use of steel in building — Part 1: Code of practice for design — Rolled and welded sections.*

BS 6968, *Guide for use and maintenance of non-calibrated round steel lifting chain and chain slings.*

BS EN 473:2000, *Non-destructive testing — Qualification and certification of NDT personnel — General principles.*

BS EN 45004:1995, *General criteria for the operation of various types of bodies performing inspection.*

ISO 3056, *Non-calibrated round steel link lifting chain and chain slings — Use and maintenance.*

ISO 4301 (all parts), *Cranes — Classification.*

3 Terms and definitions

For the purposes of this part of BS 7121, the following terms and definitions apply.

1

thorough examination

examination by a competent person in such depth and detail as the competent person considers necessary to enable them to determine whether the equipment being examined is safe to continue in use

NOTE The thorough examination is not part of the maintenance regime for the equipment but provides owners with information which could be used to determine the effectiveness of the regime.