

BS 7121-1:2016



BSI Standards Publication

# Code of practice for safe use of cranes – Part 1: General

**bsi.**

...making excellence a habit.™

**Publishing and copyright information**

The BSI copyright notice displayed in this document indicates when the document was last issued.

© The British Standards Institution 2016

Published by BSI Standards Limited 2016

ISBN 978 0 580 89630 9

ICS 53.020.20

The following BSI references relate to the work on this document:

Committee reference MHE/3/11

Draft for comment 15/30320607 DC

**Publication history**

First published as section one of CP 3010, November 1972 and as section 1 of BS 5744, November 1979

First published as BS 7121-1 May 1989

Second edition February 2006

Third (present) edition January 2016

**Amendments issued since publication**

Date	Text affected
------	---------------

---

## Contents

Foreword *iii*

1	Scope	1
2	Normative references	1
3	Terms and definitions	2
4	Management of installation and lifting operations	6
5	Planning of the lifting operation	14
6	Selection and duties of personnel other than the appointed person	20
7	Minimum attributes of personnel	23
8	Safety	27
9	Crane documentation	29
10	Erection and dismantling	30
11	Procedures and precautions	32
12	Maintenance	34
13	Operating conditions	34
14	Multiple lifting and lowering	38
15	Weather conditions	40
16	Slings and handling of loads	41
17	Signalling systems	45
18	Thorough examination, including testing	45
19	Ropes	46
20	Special applications of cranes	51

### Annexes

Annex A (normative)	Training of appointed persons and crane supervisors for lifting operations	56
Annex B (normative)	Training of crane operators and slinger-signallers	63
Annex C (normative)	Contract lift or crane hire	73
Annex D (informative)	Effect of wind and down-rating	76
Annex E (normative)	Additional recommendations for operation of cranes on or adjacent to sites of exceptional hazards	78
Annex F (normative)	Radio communication for lifting operations	92

Bibliography 94

### List of figures

Figure 1	– Adverse effect of a swinging load on load radius	4
Figure 2	– Relationship between complexity index and lift category	10
Figure 3	– Example crane signals	25
Figure 3	– Example crane signals	26
Figure 4	– Out of vertical lifting	35
Figure 4	– Out of vertical lifting	36
Figure 5	– Paying out rope	47
Figure 6	– Servicing of ropes before cutting	48
Figure 7	– Transferring rope for reel to reel	49
Figure C.1	– Contract options	74
Figure D.1	– Simplified method for determining the maximum allowed wind speed for mobile cranes	77
Figure E.1	– Compound collapse radius	79
Figure E.2	– Crawler crane collapse radius	80
Figure E.3	– Saddle jib tower crane collapse radius	81
Figure E.4	– Luffing jib tower crane collapse radius	82
Figure E.5	– Wheeled mobile crane collapse radius	83
Figure E.6	– Example calculations of load collapse radius	84
Figure E.7	– Management of cranes leading indicator audit	91