
Structures for mine shafts —
Part 3:
Sinking stages

Structures de puits de mine —
Partie 3: Plates-formes de fonçage

iTeh Standards
(<https://standards.iteh.ai>)
Document Preview

[ISO 19426-3:2018](https://standards.iteh.ai/catalog/standards/iso/f7da9072-1f69-4f9e-b581-ebb42914ef53/iso-19426-3-2018)

<https://standards.iteh.ai/catalog/standards/iso/f7da9072-1f69-4f9e-b581-ebb42914ef53/iso-19426-3-2018>



iTeh Standards
(<https://standards.iteh.ai>)
Document Preview

ISO 19426-3:2018

<https://standards.iteh.ai/catalog/standards/iso/f7da9072-1f69-4f9e-b581-ebb42914ef53/iso-19426-3-2018>



COPYRIGHT PROTECTED DOCUMENT

© ISO 2018

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Fax: +41 22 749 09 47
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Symbols	2
5 Materials	4
5.1 Steel.....	4
5.1.1 Structural steel grades.....	4
5.1.2 High strength steel grades.....	4
5.2 Aluminium alloys.....	4
6 Nominal loads	4
6.1 Permanent load.....	4
6.2 Imposed loads.....	5
6.2.1 Stage deck load.....	5
6.2.2 Shaft formwork winch load.....	5
6.2.3 Kibble cross-head support load.....	5
6.2.4 Jumbo unit load.....	6
6.2.5 Lashing unit load.....	6
6.2.6 Stage jack load.....	6
6.2.7 Stage skid load.....	6
6.2.8 Canopy load.....	7
6.2.9 Kibble guide load.....	7
6.2.10 Temporary stage support load.....	7
6.2.11 Blast load.....	7
6.2.12 Guard railing load.....	7
6.2.13 Special load.....	8
6.3 Emergency load.....	8
6.3.1 Emergency rope load.....	8
6.3.2 Emergency impact load.....	8
7 Design procedures	8
7.1 Design loads.....	8
7.2 Design codes.....	8
7.3 Load reversal.....	8
7.4 Design of replaceable members.....	9
7.5 Impact energy design of top deck.....	9
7.6 Deflection limitations.....	9
Annex A (informative) Load factors and load combinations	10
Annex B (informative) Examples of jumbo unit loads	12
Annex C (informative) Examples of lashing unit loads	15
Annex D (informative) Examples of stage jack loads with lashing	20
Bibliography	24

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 82, *Mining*.

A list of all parts in the ISO 19426 series can be found on the ISO website.

ISO 19426-3:2018

<https://standards.iteh.ai/catalog/standards/iso/f7da9072-1f69-4f9e-b581-ebb42914ef53/iso-19426-3-2018>

Introduction

Many mining companies, and many of the engineering companies which provide designs for mines, operate globally so ISO 19426 was developed in response to a desire for a unified global approach to the safe and robust design of structures for mine shafts. The characteristics of ore bodies, such as their depth and shape, vary in different areas so different design approaches have been developed and proven with use over time in different countries. Bringing these approaches together in ISO 19426 will facilitate improved safety and operational reliability.

The majority of the material in ISO 19426 deals with the loads to be applied in the design of structures for mine shafts. Some principles for structural design are given, but for the most part it is assumed that local standards will be used for the structural design. It is also recognized that typical equipment varies from country to country, so the clauses in ISO 19426 do not specify application of the principles to specific equipment. However, in some cases examples demonstrating the application of the principles to specific equipment are provided in informative Annexes.

iTeh Standards (<https://standards.iteh.ai>) Document Preview

[ISO 19426-3:2018](https://standards.iteh.ai/catalog/standards/iso/f7da9072-1f69-4f9e-b581-ebb42914ef53/iso-19426-3-2018)

<https://standards.iteh.ai/catalog/standards/iso/f7da9072-1f69-4f9e-b581-ebb42914ef53/iso-19426-3-2018>