

Cranes

Steel structures

Principles of design and construction

DIN
15 018
Part 2

Krane: Stahltragwerke, Grundsätze für die bauliche Durchbildung und Ausführung

Supersedes April 1974 edition.

In keeping with current practice in standards published by the International Organization for Standardization (ISO), a comma has been used throughout as the decimal marker.

Dissemination: Not required

DIN 15-018 Part 1 and Part 2 have been published following an abridged procedure as specified in DIN 820 Part 4, in the form of corrected editions. This method of proceeding, as well as the corrections that have now been made, were notified and explained in the DIN-Mitteilungen (DIN News) No. 1992, volume No. 5, pages 496 to 498.

It would have been inadvisable to revise the content of the standard at the present time, in view of the general approval which has greeted its publication, and mainly because of the current discussions on the national basic standards relating to steel structures (DIN 18500); furthermore, the efforts of ISO/TC 96 to achieve an internationally approved ruling with regard to the loads and load combinations which are to be assumed for the verification by calculation of the performance characteristics of cranes had to be borne in mind.

The principal corrections, including those which have arisen from the processing of the comments received, are described in the Explanatory notes.

Contents

	Page		Page
1 Field of application	2	6.2.2.5 Fabricating conditions	5
2 Standards and documents referred to	2	6.2.2.6 Restraining of shrinkage and cooling rate	5
3 General	3	6.2.2.7 Sinking of arcon members	5
3.1 Static systems	3	6.2.2.8 Thickness of welds	5
3.2 Load-bearing members	3	6.2.3 Butt joints between flange plates and members	5
and principal connections	3	6.2.4 Welding in cold-worked zones	5
3.3 Cambers	3	6.3 Riveted and bolted connections	5
4 Materials	4	6.3.1 Hole diameters and bolt threads	5
4.1 Steel quality groups for welded members	4	6.3.2 Types of rivet	5
4.2 Designations to be used in the documentation	4	6.3.3 Grip lengths and shank lengths	5
4.3 Members incorporating different grades of steel	4	6.3.4 Fit bolts	5
5 Structural members	4	6.3.5 Black bolts	5
5.1 Centroidal axes and system lines	4	6.3.6 Spacing between adjoining holes	5
5.2 Ease of assembly and accessibility	4	6.3.7 Making of holes	5
5.3 Minimum dimensions	4	6.3.8 Number of rivets and bolts	5
5.4 Minimum spacings	4	6.3.9 Indirect overlap	5
5.5 Points of introduction of forces, bends, cutouts	4	6.3.10 Bolt locking devices	5
5.6 Quality of flame-cut surfaces	4	7 Rails and rail fastenings	5
6 Connections	4	7.1 Welding processes and welding conditions	5
6.1 Junctions, joints and other connections	4	7.2 Butt welds	5
6.1.1 Arrangement	4	7.3 Shear-resistant rail fastening	5
6.1.2 Centroidal axes	4	7.4 Non-shear-resistant rail fastening	5
6.1.3 Partial connecting forces	4	8 Protection against corrosion	5
6.1.4 Lining plates	4	8.1 General	5
6.1.5 Coordinated action of fasteners	4	8.2 Special protective measures	5
6.1.6 Angle cleats and welded-on lug plates	4	8.2.1 External surfaces	5
6.2 Welded joints	4	8.2.2 Internal surfaces of hollow members	5
6.2.1 Conditions required for welding shops	4	8.2.3 Riveted connections	7
and welding specialists	4	8.2.4 Connections made with fit bolts or non-fit bolts	7
6.2.1.1 Welding shops	4	8.2.5 Connections made with high strength	7
6.2.1.2 Supervision of welding operations	4	friction grip bolts	7
6.2.1.3 Welders	5	8.2.6 Sealing of grooves	7
6.2.1.4 Non-destructive testing	5	8.3 Embedding in concrete	7
6.2.2 Fabrication	5	8.4 Other types of protection against corrosion	7
6.2.2.1 Welding filler metals	5	9 Hoisting ropes and guy ropes	7
6.2.2.2 Type and quality of welds	5	9.1 Rope construction and	7
6.2.2.3 Execution of welds	5	protection against corrosion	7
6.2.2.4 Cleanliness of surface	5	9.2 Rope anchorages and connections	7
		9.3 Rope terminations	7
		9.4 Rope saddles and bolsters	7

Continued on page 21

Din 15018 Design

**United States. Congress. House.
Committee on Energy and Commerce.
Subcommittee on Commerce, Trade,
and Consumer Protection**

Din 15018 Design:

Design and Analysis of Fatigue Resistant Welded Structures Dieter Radaj, 1990-01-03 An English version of a successful German book Both traditional and modern concepts are described

Constructional Steel Design P.J. Dowling, Professor J E Harding, R. Bjorhovde, E. Martinez-Romero, 2005-12-20 This book consists of the papers presented at the First World Conference on Constructional Steel Design held in Acapulco Mexico December 1992 The Conference provided a forum for presentation and discussion by designers and research workers involved with steel construction

Load Assumption for Fatigue Design of Structures and Components Michael Köhler, Sven Jenne, Kurt Pötter, Harald Zenner, 2017-06-07 Understanding the fatigue behaviour of structural components under variable load amplitude is an essential prerequisite for safe and reliable light weight design For designing and dimensioning the expected stress load is compared with the capacity to withstand loads fatigue strength In this process the safety necessary for each particular application must be ensured A prerequisite for ensuring the required fatigue strength is a reliable load assumption The authors describe the transformation of the stress and load time functions which have been measured under operational conditions to spectra or matrices with the application of counting methods The aspects which must be considered for ensuring a reliable load assumption for designing and dimensioning are discussed in detail Furthermore the theoretical background for estimating the fatigue life of structural components is explained and the procedures are discussed for numerous applications in practice One of the prime intentions of the authors is to provide recommendations which can be implemented in practical applications

CIGOS 2021, Emerging Technologies and Applications for Green Infrastructure Cuong Ha-Minh, Anh Minh Tang, Tinh Quoc Bui, Xuan Hong Vu, Dat Vu Khoa Huynh, 2021-10-28 This book highlights the key role of green infrastructure GI in providing natural and ecosystem solutions helping alleviate many of the environmental social and economic problems caused by rapid urbanization The book gathers the emerging technologies and applications in various disciplines involving geotechnics civil engineering and structures which are presented in numerous high quality papers by worldwide researchers practitioners policymakers and entrepreneurs at the 6th CIGOS event 2021 Moreover by sharing knowledge and experiences around emerging GI technologies and policy issues the book aims at encouraging adoption of GI technologies as well as building capacity for implementing GI practices at all scales This book is useful for researchers and professionals in designing building and managing sustainable buildings and infrastructure

Fatigue Design of Steel and Composite Structures Alain Nussbaumer, Luis Borges, Laurence Davaine, 2012-01-09 This volume addresses the specific subject of fatigue a subject not familiar to many engineers but still relevant for proper and good design of numerous steel structures It explains all issues related to the subject Basis of fatigue design reliability and various verification formats determination of stresses and stress ranges fatigue strength application range and limitations It contains detailed examples of applications of the concepts computation methods and verifications

Travel and Tourism in America Today United States. Congress. House. Committee

on Energy and Commerce. Subcommittee on Commerce, Trade, and Consumer Protection, 2003 Service Fatigue Loads Monitoring, Simulation, and Analysis P. R. Abelkis, J. M. Potter, 1979 *Fatigue Design of Steel and Composite Structures* ECCS - European Convention for Constructional Steelwork, 2018-06-26 This volume addresses the specific subject of fatigue a subject not familiar to many engineers but still relevant for proper and good design of numerous steel structures It explains all issues related to the subject Basis of fatigue design reliability and various verification formats determination of stresses and stress ranges fatigue strength application range and limitations It contains detailed examples of applications of the concepts computation methods and verifications Recommendations of the Committee for Waterfront Structures Harbours and Waterways HTG, 2015-11-09 The EAU 2012 takes into account the new generation of standards which is shortly to be introduced into the building control system it consists of Eurocode 7 the associated national application documents and additional national regulations DIN 1054 2010 In certain cases partial safety factors are determined differently based on experience in practice This means that the safety standard of sea and port buildings remains in place the recommendations nevertheless satisfy the requirements for international recognition and application regarding the planning design specification tender procedure construction and monitoring as well as the handover of and cost accounting for port and waterway systems under uniform criteria **Background to SANS 10160** Johannes Verster Retief, Peter Dunaiski, 2009-10-01 This book provides practising SA structural design engineers with the background to and justification for the changes proposed in the new SANS 10160 standard **Applied Mechanics Reviews**, 2000 **Structural Engineering, Mechanics and Computation** A. Zingoni, 2001-03-16 Following on from the International Conference on Structural Engineering Mechanics and Computation held in Cape Town in April 2001 this book contains the Proceedings in two volumes There are over 170 papers written by Authors from around 40 countries worldwide The contributions include 6 Keynote Papers and 12 Special Invited Papers In line with the aims of the SEMC 2001 International Conference and as may be seen from the List of Contents the papers cover a wide range of topics under a variety of themes There is a healthy balance between papers of a theoretical nature concerned with various aspects of structural mechanics and computational issues and those of a more practical nature addressing issues of design safety and construction As the contributions in these Proceedings show new and more efficient methods of structural analysis and numerical computation are being explored all the time while exciting structural materials such as glass have recently come onto the scene Research interest in the repair and rehabilitation of existing infrastructure continues to grow particularly in Europe and North America while the challenges to protect human life and property against the effects of fire earthquakes and other hazards are being addressed through the development of more appropriate design methods for buildings bridges and other engineering structures Civil Engineering, 1999 **Structural Concrete, Volume 2** fib Fédération internationale du béton, 2010-01-01 The second edition of the Structural Concrete Textbook is an extensive revision that reflects advances in knowledge and technology over

the past decade It was prepared in the intermediate period from the CEP FIP Model Code 1990 MC90 to fib Model Code 2010 MC2010 and as such incorporates a significant amount of information that has been already finalized for MC2010 while keeping some material from MC90 that was not yet modified considerably The objective of the Textbook is to give detailed information on a wide range of concrete engineering from selection of appropriate structural system and also materials through design and execution and finally behaviour in use The revised fib Structural Concrete Textbook covers the following main topics phases of design process conceptual design short and long term properties of conventional concrete including creep shrinkage fatigue and temperature influences special types of concretes such as self compacting concrete architectural concrete fibre reinforced concrete high and ultra high performance concrete properties of reinforcing and prestressing materials bond tension stiffening moment curvature confining effect dowel action aggregate interlock structural analysis with or without time dependent effects definition of limit states control of cracking and deformations design for moment shear or torsion buckling fatigue anchorages splices detailing design for durability including service life design aspects deterioration mechanisms modelling of deterioration mechanisms environmental influences influences of design and execution on durability fire design including changes in material and structural properties spalling degree of deterioration member design linear members and slabs with reinforcement layout deep beams management assessment maintenance repair including conservation strategies risk management types of interventions as well as aspects of execution quality assurance formwork and curing The updated Textbook provides the basics of material and structural behaviour and the fundamental knowledge needed for the design assessment or retrofitting of concrete structures It will be essential reading material for graduate students in the field of structural concrete and also assist designers and consultants in understanding the background to the rules they apply in their practice Furthermore it should prove particularly valuable to users of the new editions of Eurocode 2 for concrete buildings bridges and container structures which are based only partly on MC90 and partly on more recent knowledge which was not included in the 1999 edition of the Textbook

Tubular Structures XIII Ben Young, 2010-11-12

Tubular Structures XIII contains the latest scientific and engineering developments in the field of tubular steel structures as presented at the 13th International Symposium on Tubular Structures ISTS13 Hong Kong 15-17 December 2010 The International Symposium on Tubular Structures ISTS has a longstanding reputation for being the principal showcase for manufactured tubing and the prime international forum for discussion of research developments and applications in this field The Symposium presentations herein include one invited ISTS Kurobane Lecture together with all the technical papers Various key and emerging subjects in the field of hollow structural sections are covered such as special applications and case studies static and fatigue behaviour of connections joints concrete filled and composite tubular members and offshore structures stainless steel and aluminium structures earthquake and dynamic resistance specification and standard developments material properties and structural reliability impact resistance and brittle fracture fire resistance casting and

fabrication innovations Research and development issues presented in this book are applicable to buildings bridges offshore structures entertainment rides cranes towers and various mechanical and agricultural equipment Tubular Structures XIII is thus a pertinent reference source for architects civil and mechanical engineers designers steel fabricators and contractors manufacturers of hollow sections or related construction products trade associations involved with tubing owners or developers of tubular structures steel specification committees academics and research students all around the world

Analytical and Experimental Methods for Residual Stress Effects in Fatigue Robert L. Champoux, John H. Underwood, J. A. Kapp, 1988 **EAU 1980** Arbeitsausschuss "Ufereinfassungen" (Germany), 1982 **Joints in Aluminium - INALCO '98** M H Ogle, P L Threadgill, S J Maddox, 1999-09-30 The proceedings of the 7th INALCO conference which was held at TWI Cambridge in April 1998 **Handbook of Mechanical Engineering** Heinrich Dubbel, 1994 Dubel s Handbook has provided generations of German speaking engineers with a comprehensive source of guidance and reference on which they can rely throughout their professional lives DLC Mechanical engineering **Fatigue Assessment of Welded Joints by Local Approaches** Dieter Radaj, C M Sonsino, W Fricke, 2006-10-30 Local approaches to fatigue assessment are used to predict the structural durability of welded joints to optimise their design and to evaluate unforeseen joint failures This standard work provides a systematic survey of the principles and practical applications of the various methods It covers the hot spot structural stress approach to fatigue in general the notch stress and notch strain approach to crack initiation and the fracture mechanics approach to crack propagation Seam welded and spot welded joints in structural steels and aluminium alloys are also considered This completely reworked second edition takes into account the tremendous progress in understanding and applying local approaches which has been achieved in the last decade It is a standard reference for designers structural analysts and testing engineers who are responsible for the fatigue resistant in service behaviour of welded structures Completely reworked second edition of a standard work providing a systematic survey of the principles and practical applications of the various methods Covers the hot spot structural stress approach to fatigue in general the notch stress and notch strain approach to crack initiation and the fracture mechanics approach to crack propagation Written by a distinguished team of authors

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Table of Contents Din 15018 Design

1. Understanding the eBook Din 15018 Design
 - The Rise of Digital Reading Din 15018 Design
 - Advantages of eBooks Over Traditional Books
2. Identifying Din 15018 Design
 - Exploring Different Genres
 - Considering Fiction vs. Non-Fiction
 - Determining Your Reading Goals
3. Choosing the Right eBook Platform
 - Popular eBook Platforms
 - Features to Look for in an Din 15018 Design
 - User-Friendly Interface
4. Exploring eBook Recommendations from Din 15018 Design
 - Personalized Recommendations
 - Din 15018 Design User Reviews and Ratings
 - Din 15018 Design and Bestseller Lists

5. Accessing Din 15018 Design Free and Paid eBooks
 - Din 15018 Design Public Domain eBooks
 - Din 15018 Design eBook Subscription Services
 - Din 15018 Design Budget-Friendly Options
6. Navigating Din 15018 Design eBook Formats
 - ePub, PDF, MOBI, and More
 - Din 15018 Design Compatibility with Devices
 - Din 15018 Design Enhanced eBook Features
7. Enhancing Your Reading Experience
 - Adjustable Fonts and Text Sizes of Din 15018 Design
 - Highlighting and Note-Taking Din 15018 Design
 - Interactive Elements Din 15018 Design
8. Staying Engaged with Din 15018 Design
 - Joining Online Reading Communities
 - Participating in Virtual Book Clubs
 - Following Authors and Publishers Din 15018 Design
9. Balancing eBooks and Physical Books Din 15018 Design
 - Benefits of a Digital Library
 - Creating a Diverse Reading Collection Din 15018 Design
10. Overcoming Reading Challenges
 - Dealing with Digital Eye Strain
 - Minimizing Distractions
 - Managing Screen Time
11. Cultivating a Reading Routine Din 15018 Design
 - Setting Reading Goals Din 15018 Design
 - Carving Out Dedicated Reading Time
12. Sourcing Reliable Information of Din 15018 Design
 - Fact-Checking eBook Content of Din 15018 Design
 - Distinguishing Credible Sources
13. Promoting Lifelong Learning

- Utilizing eBooks for Skill Development
 - Exploring Educational eBooks
14. Embracing eBook Trends
- Integration of Multimedia Elements
 - Interactive and Gamified eBooks

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