

Hydraulic steel structures

Part 1: Design analysis

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Stahlwasserbauten – Teil 1: Berechnungsgrundlagen

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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.

Contents

	Page		Page
Foreword	1	5.3 Accidental actions	9
1 Scope	2	5.3.1 Leaking of air chambers	9
2 Normative references	3	5.3.2 Transport, erection and repair	9
3 Documentation	5	5.4 Other action	9
3.1 Steel structures	5	5.4.1 Gates with double-acting drive	9
3.2 Machinery	5	5.4.2 Blockage by foreign bodies	10
4 Materials	6	5.5 Accidental action of a drive in the case of a malfunction	10
4.1 Steel structures	6	6 Friction	10
4.2 Seals	6	6.1 General	10
4.2.1 Elastomers	6	6.2 Sliding friction	10
4.2.2 Plastics	6	6.3 Static friction	10
4.2.3 Timber	6	6.4 Rolling friction	10
4.2.4 Nonferrous metals	7	6.4.1 Rolling bearings	10
4.3 Machinery	7	6.4.2 Wheels on rails	11
6 Characteristic values of actions for steel structures	7	6.4.3 Wheel flange friction	11
5.1 Permanent actions	7	7 Analysis of steel structures	11
5.2 Variable actions	7	7.1 Scope of analyses	11
5.2.1 Hydrostatic actions	7	7.2 Analysis of effects of actions	11
5.2.2 Hydrodynamic actions	7	7.3 Analysis of resistances	11
5.2.3 Water load	7	7.4 Procedure	12
5.2.4 Ice load	7	7.5 Ultimate limit state analysis	12
5.2.5 Ice pressure	7	7.5.1 General	12
5.2.6 Imposed loads	8	7.5.2 Stability analysis	12
5.2.7 Forces due to inertia	8	7.5.3 Analysis of positional stability	12
5.2.8 Changes in support conditions	9	7.5.4 Fatigue assessment	13
5.2.9 Thermal effects	9	7.6 Serviceability limit state analysis	13
5.2.10 Ship friction	9	7.6.1 General	13
5.2.11 Ship impact	9	7.6.2 Deformations	13
5.2.12 Wind load	9	7.6.3 Closing pressure	13
5.2.13 Tow-rope pulling forces on bollards	9	7.7 Further provisions	13
5.2.14 Pressure of fresh concrete	9	7.7.1 Beams with wide flanges	13
		7.7.2 Design of plates in bending	13
		7.7.3 Cut-outs in plates	13
		7.7.4 Rails	14

Continued on pages 2 to 28.

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In case of doubt, the German-language original should be consulted as the authoritative text.

Din 19704 1 Hydraulic Steel Structures Part 1

**Patrick Arnold, Gordon A.
Fenton, Michael A. Hicks, Timo
Schweckendiek, Brian Simpson**

Din 19704 1 Hydraulic Steel Structures Part 1:

Hydraulic Gates and Valves Jack Lewin, 2001 Based on the author's extensive practical experience this new edition will act as a definitive reference work on gates and valves Hydraulic gates and valves in free surface flow and submerged outlets 2nd edition will provide you with a comprehensive overview of the subject and clearly describes the principle options available to engineers and designers and outlines the main advantages and disadvantages of all hydraulic gates and valves highlighting potential problems in their use This fully revised edition includes Information about new types of water operated automatic gates rolling weir gates fuse gates and an extended part on barrier gates and their details The sections on seals the trunnions of radial gates ice formation gate operation and structural design have all been expanded New sections on hazard and reliability of gates earthquake effects on gates and operating machinery environmental impact and aesthetics as well as maintenance An appendix on the calculation of hydrostatic loads on radial gates has been set out Hydraulic gates and valves in free surface flow and submerged outlets 2nd edition will be of great benefit to engineers who work or design project

Geotechnical Engineering Handbook, Elements and Structures Ulrich Smoltczyk, 2003-05-06 Volume 3 of this Handbook deals with foundations It presents spread foundations starting with basic designs right up to the necessary proofs The section on pile foundations covers possible types of piles and their design together with their load bearing capacity suitability sample loads and testing A further chapter explains the use manufacture and calculation of caissons illustrated by real life examples There is comprehensive coverage of the possibilities for stabilising excavations together with the relevant area of application while another section is devoted to the useful application of trench walls Shore protection is treated in a special contribution covering sheet pile walls while all types of slope protection and retainments are described in detail with excellent illustrations Two further contributions are devoted to the special topics of machine foundations and foundations in subsidence regions The entire book is an indispensable aid in the planning and execution of all types of foundations found in practice whether for academics or practitioners

Earthquake Engineering for Dams and Reservoirs Jonathan Hinks, 2023-09-25 Earthquake Engineering for Dams and Reservoirs is an invaluable source for any engineer or designer tasked with building retrofitting or maintaining dams in all seismically active regions to make decisions on the type of dam structure required for new projects and understand the issues that face existing dams and how to mitigate them

Recommendations of the Committee for Waterfront Structures Harbours and Waterways HTG, Deutsche Gesellschaft für Geotechnik, 2024-01-04 The recommendations have been completely restructured in this 12th 2020 edition of the EAU 10th English edition the aim being to provide readers with a better clearer arrangement of the chapters In addition the information published in the annual technical reports of the Waterfront Structures Committee since the publication of the 11th German edition have been incorporated in this new edition The recommendations also take into account the new generation of standards consisting of Eurocode 7 the associated National Application Documents and supplementary national

publications DIN 1054 2010 In isolated instances partial safety factors differing from those in the codes are specified on the basis of practical experience Safety standards for ports harbours and marine structures are therefore upheld The recommendations satisfy the need for international acceptance in the planning design tendering award of contract construction site supervision acceptance and settlement of accounts for port harbour and waterway facilities based on uniform approaches

Lock Gates and Other Closures in Hydraulic Projects Ryszard Daniel, Tim Paulus, 2018-11-27 Lock Gates and Other Closures in Hydraulic Projects shares the authors practical experience in design engineering management and other relevant aspects with regard to hydraulic gate projects This valuable reference on the design construction operation and maintenance of navigation lock gates movable closures of weirs flood barriers and gates for harbor and shipyard docks provides systematic coverage on all structural types of hydraulic gates the selection of gate types and their advantages and disadvantages The discussion includes the latest views in new domains such as environmental impact of hydraulic gate projects sustainability assessments relation with the issues of global climate change handling accidents and calamities and the bases of asset management Heavily illustrated this reference provides a generous amount of case studies based on the author s own and their colleagues experiences from recent projects in Europe America and other continents Presents extensive coverage of the operational profiles of hydraulic closures including gates in navigation locks movable closures on river weirs closures of flood barriers spillway closures and valves and more Outlines the different structural types of hydraulic gates including miter gates vertical lift gates flap and hinged crest gates radial gates rolling and barge gates sector gates and many other Clearly outlines the selection process for gates for navigation locks river weirs flood barriers hydroelectric plants shipyard docks and other hydraulic structures Provides comprehensive discussion of design loads and other actions to which hydraulic gates may be subjected during their service life followed by an overview of analysis methods and tools Addresses the newest challenges and concerns in hydraulic gate projects such as environmental impact of hydraulic gate projects risk based design sustainability issues handling accidents and calamities and gate maintenance in view of asset management Presents the experiences from many recent projects in Europe and America including the rolling gates in large European sea locks gates in the Panama Canal new locks flood barriers in New Orleans and the Netherlands

Movable Bridge Design Charles Birnstiel, Bill Bowden, George Foerster, William Bowden, 2015-06-16 Against the background of worldwide development this book provides a fascinating and comprehensive guide of both past and current approaches to the design of a wide range of movable bridges

Modern Geotechnical Design Codes of Practice Patrick Arnold, Gordon A. Fenton, Michael A. Hicks, Timo Schweckendiek, Brian Simpson, 2013 The ground is one of the most highly variable of engineering materials It is therefore not surprising that geotechnical designs depend on local site conditions and local engineering experience Engineering practices relating to investigation and design methods site understanding and to safety levels acceptable to society will therefore vary between different regions The

challenge in geotechnical engineering is to make use of worldwide geotechnical experience established over many years to aid in the development and harmonization of geotechnical design codes. Given the significant uncertainties involved, empiricism and engineering judgment will undoubtedly always be an essential element of geotechnical design. However, rigorous and scientific approaches based on probability theory are finding increased attention in the calibration of modern geotechnical codes of practice and these codes can and should be used to aid fundamental engineering judgment. Containing contributions on Code Implementation, Code Application and Code Development, this book provides a single resource that code developers, practitioners and researchers can use to understand the different choices made by national code developers around the world. Furthermore, the book highlights some of the key challenges faced worldwide concerning the ongoing process of harmonizing geotechnical design code specifications.

Channels and Channel Control Structures K. V. H. Smith, 2013-11-21. The development of water resources has proceeded at an amazing speed around the world in the last few decades. The hydraulic engineer has played his part in constructing much larger artificial channels than ever before, larger and more sophisticated control structures and systems of irrigation, drainage and water supply channels in which the flow by its nature is complex and unsteady, requiring computer-based techniques at both the design and operation stage. It seemed appropriate to look briefly at some of the developments in hydraulic design resulting from this situation. Hence the idea of the Conference was formed. The Proceedings of the Conference show that hydraulic engineers have been able to acquire a very substantial base of design capability from the experience of the period referred to. The most outstanding development to have occurred is in the combination of physical and mathematical modelling, which in hydraulic engineering has followed a parallel path to that in other branches of engineering science. The Proceedings of this Conference will give to the reader an awareness of the current state of hydraulic design in open channel flow and open channel control structures.

K. V. H. Smith, Editor. 1. CONTROL AND DIVERSION STRUCTURES. 1.3 FACTORS AFFECTING BRINK DEPTH IN RECTANGULAR OVERFALLS. G. C. Christodoulou, G. C. Noutsopoulos and S. A. Andreou, Dept of Civil Engineering, National Technical Univ of Athens, Greece.

Sustainable and Safe Dams Around the World / Un monde de barrages durables et sécuritaires Jean-Pierre Tournier, Tony Bennett, Johanne Bibeau, 2019-08-08. These proceedings include digital media with the full conference papers. 3600 pages. Sustainable and Safe Dams Around the World contains the contributions presented at the 2019 Symposium of the International Commission on Large Dams (ICOLD) 2019, Ottawa, Canada, 9-14 June 2019. The main topics of the book include: 1. Innovation: recent advancements and techniques for investigations, design, construction, operation and maintenance of water or tailings dams and spillways. 2. Sustainable Development: planning, design, construction, operation, decommissioning and closure management strategies for water resources or tailings dams, e.g. climate change, sedimentation, environmental protection, risk management. 3. Hazards: design, mitigation and management of hazards to water or tailings dams, appurtenant structures, spillways and reservoirs, e.g. floods, seismic, landslides. 4. Extreme Conditions: management for water or tailings

dams e g permafrost and ice loading arid wet climates geo hazards 5 Tailings design construction operation and closure for tailings dams recent advancements and best practice Sustainable and Safe Dams Around the World will be invaluable to academics and professionals interested or involved in dams Un monde de barrages durables et s curitaires contiennent les contributions pr sent es lors du symposium de 2019 de la Commission internationale des grands barrages CIGB 2019 Ottawa Canada 9 14 juin 2019 Les principaux sujets du livre incluent 1 Innovation Avanc es et techniques r centes pour l investigation la conception la construction l exploitation et l entretien de barrages hydrauliques de barrages de st riles et d vacuateurs de crues 2 D veloppement durable strat gies de gestion pour la planification la conception la construction l exploitation la mise hors service et la fermeture de barrages hydrauliques ou des barrages de st riles par exemple changement climatique s dimentation protection de l environnement gestion des risques 3 Risques mesures d att nuation et gestion des risques li s aux barrages hydrauliques et barrages de st riles aux ouvrages annexes aux vacuateurs de crues et aux r servoirs par exemple inondations tremblements de terre glissements de terrain 4 Environnement extr me gestion des barrages hydrauliques et barrages de st riles par exemple perg lisol et charge de glace climats secs humides g orisques 5 Barrages de st riles conception construction exploitation et fermeture des barrages de st riles avanc es r centes et meilleures pratiques Un monde de barrages durables et s curitaires seront d une valeur inestimable pour les universitaires et les professionnels int ress s ou impliqu s dans les barrages

Sustainable Development of Water and Energy Resources: Water resources (2 pts.), 2000 *The International Journal on Hydropower & Dams*, 2004 Design of Hydraulic Gates Paulo C.F. Erbisti, 2014-05-29 Revised and updated this second edition of Design of Hydraulic Gates maintains the same goal as the original to be used as a textbook and a manual of design of gates presenting the main aspects of design manufacture installation and operation of hydraulic gates while introducing new products technologies and calculation procedures This edit **Hydraulic steel structures**, 1998 **Deutsche Normen ...** Deutscher Normenausschuss, 1959 **Learning from Construction Failures** Peter Campbell, 2001-12-28 Much of the knowledge used to design build and operate engineered facilities and products is gained by learning from failures As catastrophic building failures become ever more costly this book helps readers understand key issues from determining the causes of failure and isolating failed parts to lessening personal liability through proper contracting planning and management Life Cycle Analysis and Assessment in Civil Engineering: Towards an Integrated Vision Robby Caspeelee, Luc Taerwe, Dan Frangopol, 2018-10-31 This volume contains the papers presented at IALCCE2018 the Sixth International Symposium on Life Cycle Civil Engineering IALCCE2018 held in Ghent Belgium October 28 31 2018 It consists of a book of extended abstracts and a USB device with full papers including the Fazlur R Khan lecture 8 keynote lectures and 390 technical papers from all over the world Contributions relate to design inspection assessment maintenance or optimization in the framework of life cycle analysis of civil engineering structures and infrastructure systems Life cycle aspects that are developed and discussed range from

structural safety and durability to sustainability serviceability robustness and resilience Applications relate to buildings bridges and viaducts highways and runways tunnels and underground structures off shore and marine structures dams and hydraulic structures prefabricated design infrastructure systems etc During the IALCCE2018 conference a particular focus is put on the cross fertilization between different sub areas of expertise and the development of an overall vision for life cycle analysis in civil engineering The aim of the editors is to provide a valuable source of cutting edge information for anyone interested in life cycle analysis and assessment in civil engineering including researchers practising engineers consultants contractors decision makers and representatives from local authorities *Conference Papers [of The] Conference on Electronic Computation ,1979* *Seventh Conference on Electronic Computation ,1979* **Final Report of the International Commission for the Study of Locks** International Commission for the Study of Locks,198? **DIN-Katalog ,1980**

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Table of Contents Din 19704 1 Hydraulic Steel Structures Part 1

1. Understanding the eBook Din 19704 1 Hydraulic Steel Structures Part 1
 - The Rise of Digital Reading Din 19704 1 Hydraulic Steel Structures Part 1
 - Advantages of eBooks Over Traditional Books
2. Identifying Din 19704 1 Hydraulic Steel Structures Part 1
 - 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 19704 1 Hydraulic Steel Structures Part 1
 - User-Friendly Interface
4. Exploring eBook Recommendations from Din 19704 1 Hydraulic Steel Structures Part 1
 - Personalized Recommendations
 - Din 19704 1 Hydraulic Steel Structures Part 1 User Reviews and Ratings
 - Din 19704 1 Hydraulic Steel Structures Part 1 and Bestseller Lists
5. Accessing Din 19704 1 Hydraulic Steel Structures Part 1 Free and Paid eBooks
 - Din 19704 1 Hydraulic Steel Structures Part 1 Public Domain eBooks
 - Din 19704 1 Hydraulic Steel Structures Part 1 eBook Subscription Services
 - Din 19704 1 Hydraulic Steel Structures Part 1 Budget-Friendly Options

6. Navigating Din 19704 1 Hydraulic Steel Structures Part 1 eBook Formats
 - ePub, PDF, MOBI, and More
 - Din 19704 1 Hydraulic Steel Structures Part 1 Compatibility with Devices
 - Din 19704 1 Hydraulic Steel Structures Part 1 Enhanced eBook Features
7. Enhancing Your Reading Experience
 - Adjustable Fonts and Text Sizes of Din 19704 1 Hydraulic Steel Structures Part 1
 - Highlighting and Note-Taking Din 19704 1 Hydraulic Steel Structures Part 1
 - Interactive Elements Din 19704 1 Hydraulic Steel Structures Part 1
8. Staying Engaged with Din 19704 1 Hydraulic Steel Structures Part 1
 - Joining Online Reading Communities
 - Participating in Virtual Book Clubs
 - Following Authors and Publishers Din 19704 1 Hydraulic Steel Structures Part 1
9. Balancing eBooks and Physical Books Din 19704 1 Hydraulic Steel Structures Part 1
 - Benefits of a Digital Library
 - Creating a Diverse Reading Collection Din 19704 1 Hydraulic Steel Structures Part 1
10. Overcoming Reading Challenges
 - Dealing with Digital Eye Strain
 - Minimizing Distractions
 - Managing Screen Time
11. Cultivating a Reading Routine Din 19704 1 Hydraulic Steel Structures Part 1
 - Setting Reading Goals Din 19704 1 Hydraulic Steel Structures Part 1
 - Carving Out Dedicated Reading Time
12. Sourcing Reliable Information of Din 19704 1 Hydraulic Steel Structures Part 1
 - Fact-Checking eBook Content of Din 19704 1 Hydraulic Steel Structures Part 1
 - 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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