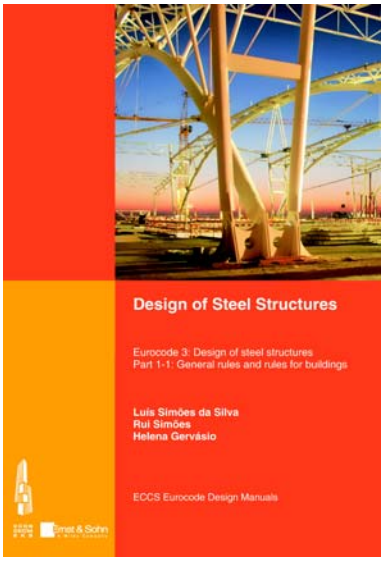
18. Mai 2010

ECCS - European Convention for Constructional Steelwork/
Associacao Portuguesa de Construcao Metalica e Mista (Editor)

Design of Steel Structures
Eurocode 3: Design of steel structures.
Part 1-1: General rules and rules for buildings.



ECCS - European Convention for Constructional Steelwork
Design of Steel Structures
Eurocode 3: Design of steel structures. Part 1-1: General rules and rules for buildings.

2010. 462 p. 295 fig. 105 tab.
€ 70,-*. Hardcover
ISBN 978-3-433-02973-2

**Prices incl. taxes and shipping.*

This book introduces the fundamental design concept of Eurocode 3 for current steel structures in building construction, and their practical application.
Following a discussion of the basis of design, including the principles of reliability management and the limit state approach, the material standards and their use are detailed. The fundamentals of structural analysis and modeling are presented, followed by the design criteria and approaches for various types of structural members. The theoretical basis and checking procedures are closely tied to the Eurocode requirements. The following chapters expand on the principles and applications of elastic and plastic design, each exemplified by the step-by-step design calculation of a braced steel-framed building and an industrial building, respectively.
Besides providing the necessary theoretical concepts for a good understanding, this manual intends to be a supporting tool for the use of practicing engineers. In order of this purpose, throughout the book, numerous worked examples are provided, concerning the analysis of steel structures and the design of elements under several types of actions. These examples will facilitate the acceptance of the code and provide for a smooth transition from earlier national codes to the Eurocode.

About ECCS:
The ECCS is one of the oldest European associations and its history runs parallel with the creation and development of the European Union. Throughout the 54 years of its history, the ECCS was the engine of excellence in the establishment of guidelines and codification for the design and construction of steel structures.

The Publishing House:
Since its foundation 1851 in Berlin, Ernst & Sohn belongs to the prominent publishing houses in the German-speaking countries particularly for civil and structural engineering. The book program with the emphasis reinforced concrete and steel structures, structural design and calculation, building physics, geotechnics and standardization supplies indispensable specialized knowledge for the learning and training of civil engineers in planning and execution. The most important book in the publishing house history - the "Beton-Kalender" (Concrete Calendar) - was published in 2006 in the hundredth edition. Ernst & Sohn is a Wiley-Blackwell company.

Further Information:
You can find the information about this book, a cover image or our company logo as a data file on our homepage: http://www.ernst-und-sohn.de/en/press-releases or please contact Michael Busch, Marketing, Wilhelm Ernst & Sohn Verlag für Architektur und technische Wissenschaften GmbH & Co. KG, Rotherstr. 21, 10245 Berlin, Germany
Tel. +49(0)30/47031-200, Fax +49(0)30/47031-270, Michael.Thomas.Busch@wiley.com.

18. Mai 2010

ECCS - European Convention for Constructional Steelwork/
Associacao Portuguesa de Construcao Metalica e Mista
(Editor)

Fire Design of Steel Structures
EC1: Actions on structures. Part 1-2: Actions exposed to fire.
EC3: Design of steel structures. Part 1-2: Structural fire design.

ECCS - European Convention for Constructional Steelwork
Fire Design of Steel Structures
EC1: Actions on structures. Part 1-2: Actions exposed to fire. EC3: Design of steel structures. Part 1-2: Structural fire design.

2010. 452 p. 134 fig. 21 tab.
€ 70,-*. Hardcover
ISBN 978-3-433-02974-9

**Prices incl. taxes and shipping.*

This book explains and illustrates the rules that are given in the Eurocode for designing steel structures subjected to fire. After the first introductory chapter, Chapter 2 explains how to calculate the mechanical actions (loads) in the fire situation based on the information given in EN 1990 and EN 1991.
Chapter 3 presents the models to be used to represent the thermal action created by the fire.
Chapter 4 describes the procedures to be used to calculate the temperature of the steelwork from the temperature of the compartment and Chapter 5 shows how the information given in EN 1993-1-2 is used to determine the loan bearing capacity of the steel structure.
The methods use to evaluate the fire resistance of bolted and welded connections are described in Chapter 7.
Chapter 8 describes a computer program called "Elefir-EN" which is based on the simple calculation model given in the Eurocode and allows designers to quickly and accurately calculate the performance of steel components in the fire situation.
Chapter 9 looks at the issues that a designer may be faced with when assessing the fire resistance of a complete building. This is done via a case study and addresses most of the concepts presented in the earlier Chapters. The concepts and fire engineering procedures given in the Eurocodes may see complex those more familiar with the prescriptive approach. This publication sets out the design process in a logical manner giving practical and helpful advice and easy to follow worked examples that will allow designer to exploit the benefits of this new approach to fire design.

About ECCS:

The ECCS is one of the oldest European associations and its history runs parallel with the creation and development of the European Union. Throughout the 54 years of its history, the ECCS was the engine of excellence in the establishment of guidelines and codification for the design and construction of steel structures.

The Publishing House:
Since its foundation 1851 in Berlin, Ernst & Sohn belongs to the prominent publishing houses in the German-speaking countries particularly for civil and structural engineering. The book program with the emphasis reinforced concrete and steel structures, structural design and calculation, building physics, geotechnics and standardization supplies indispensable specialized knowledge for the learning and training of civil engineers in planning and execution. The most important book in the publishing house history - the "Beton-Kalender" (Concrete Calendar) - was published in 2006 in the hundredth edition. Ernst & Sohn is a Wiley-Blackwell company.

Further Information:
You can find the information about this book, a cover image or our company logo as a data file on our homepage: http://www.ernst-und-sohn.de/en/press-releases or please contact Michael Busch, Marketing, Wilhelm Ernst & Sohn Verlag für Architektur und technische Wissenschaften GmbH & Co. KG, Rotherstr. 21, 10245 Berlin, Germany
Tel. +49(0)30/47031-200, Fax +49(0)30/47031-270, Michael.Thomas.Busch@wiley.com.