

PREFACE

The global construction market requires a world-wide coordination of product-, testing-, design- and execution-standards, so that contracts for delivery of products and for engineering- and construction services can be agreed on a common basis without barriers.

The mission of CIDECT is to combine the research resources of major hollow section manufacturers in order to create a major force in the research and application of hollow steel sections world wide. This forms the basis of establishing coordinated and consistent international standards.

For the ease of use of such standards, it is however necessary to reduce their content to generic rules and to leave more object-oriented detailed rules to accompanying non-conflicting complementary information, that have the advantage to be more flexible for the adaptation to recent research results and to be useable together with any international code.

The book by J. Wardenier, J.A. Packer, X.-L. Zhao and G.J. van der Vegte "Hollow sections in structural applications" is such a source, developed in an international consensus of knowledge on the topic. It incorporates the recently revised design recommendations for hollow sections joints of the International Institute of Welding, IIW (2009) and CIDECT (2008 and 2009). Both are consistent with each other and are the basis for the Draft ISO standard for Hollow Section Joints (ISO 14346) and may form the basis for future maintenance, further harmonisation and further development of Eurocode 3 (EN 1993-1-8), AISC (ANSI/AISC 360) and the CISC recommendations.

For the use together with EN 1993-1-8 and ANSI/AISC 360, both being based on the previous IIW (1989) recommendations, the main differences to these rules are highlighted.

The authors are all internationally recognized experts in the field of tubular steel structures, three of them having been chairmen of the IIW-Subcommission XV-E on "Tubular Structures" since 1981. This committee is the pre-eminent international authority producing design recommendations and standards for onshore tubular structures.

This book should therefore be an invaluable resource for lecturers, graduate students in structural, architectural and civil engineering, explaining the important principles in the behaviour of tubular steel structures. It is also addressed to designers of steel structures who can find in it the special items related to the use of hollow sections, in particular joints, their failure modes and analytical models as supplements to more general design codes.

Aachen, Germany, August 2010

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CONTENTS

| | |
|---|-----------|
| 1. Introduction | 1 |
| 1.1 History and developments | 1 |
| 1.2 Designation | 2 |
| 1.3 Manufacturing of hollow sections | 2 |
| 2. Properties of hollow sections | 9 |
| 2.1 Mechanical properties | 9 |
| 2.2 Structural hollow section dimensions and dimensional tolerances | 10 |
| 2.3 Geometric properties | 11 |
| 2.4 Drag coefficients | 14 |
| 2.5 Corrosion protection | 14 |
| 2.6 Use of internal void | 15 |
| 2.7 Aesthetics | 15 |
| 3. Applications | 29 |
| 3.1 Buildings and halls | 29 |
| 3.2 Bridges | 29 |
| 3.3 Barriers | 29 |
| 3.4 Offshore structures | 30 |
| 3.5 Towers and masts | 30 |
| 3.6 Special applications | 30 |
| 4. Composite structures | 37 |
| 4.1 Introduction | 37 |
| 4.2 Design methods | 37 |
| 4.3 Axially loaded columns | 37 |
| 4.4 Resistance of a section to bending | 39 |
| 4.5 Resistance of a section to bending and compression | 39 |
| 4.6 Influence of shear forces | 39 |
| 4.7 Resistance of a member to bending and compression | 39 |
| 4.8 Load introduction | 41 |
| 4.9 Special composite members with hollow sections | 41 |
| 5. Fire resistance of hollow section columns | 49 |
| 5.1 Introduction | 49 |
| 5.2 Fire resistance | 50 |
| 5.3 Unfilled hollow section columns | 52 |
| 5.4 Concrete filled hollow section columns | 53 |
| 5.5 Water filled hollow section columns | 55 |
| 5.6 Joints | 56 |
| 6. Design of hollow section trusses | 65 |
| 6.1 Truss configurations | 65 |
| 6.2 Joint configurations | 65 |
| 6.3 Limit states and limitations on materials | 66 |
| 6.4 General design considerations | 67 |
| 6.5 Truss analysis | 68 |

| | | |
|------------|--|------------|
| 7. | Behaviour of joints | 75 |
| 7.1 | General introduction | 75 |
| 7.2 | General failure criteria | 77 |
| 7.3 | General failure modes | 77 |
| 7.4 | Joint parameters | 77 |
| 8. | Welded joints between circular hollow sections | 81 |
| 8.1 | Introduction | 81 |
| 8.2 | Modes of failure | 81 |
| 8.3 | Analytical models | 81 |
| 8.4 | Experimental and numerical verification | 83 |
| 8.5 | Basic joint strength formulae | 83 |
| 8.6 | Evaluation to design rules | 84 |
| 8.7 | Other types of joints | 85 |
| 8.8 | Design charts | 86 |
| 8.9 | Relation to the previous recommendations of IIW (1989) and CIDECT (1991) | 87 |
| 8.10 | Concluding remarks | 87 |
| 9. | Welded joints between rectangular hollow sections | 103 |
| 9.1 | Introduction | 103 |
| 9.2 | Modes of failure | 103 |
| 9.3 | Analytical models | 104 |
| 9.4 | Experimental and numerical verification | 106 |
| 9.5 | Basic joint strength formulae | 106 |
| 9.6 | Evaluation to design rules | 107 |
| 9.7 | Other types of joints or other load conditions | 107 |
| 9.8 | Design charts | 109 |
| 9.9 | Concluding remarks | 109 |
| 10. | Welded joints between hollow sections and open sections | 129 |
| 10.1 | Introduction | 129 |
| 10.2 | Modes of failure | 129 |
| 10.3 | Analytical models | 129 |
| 10.4 | Experimental verification | 131 |
| 10.5 | Evaluation to design rules | 131 |
| 10.6 | Joints predominantly loaded by bending moments | 131 |
| 11. | Welded overlap joints | 141 |
| 11.1 | Introduction | 141 |
| 11.2 | Modes of failure | 141 |
| 11.3 | Analytical models for RHS overlap joints | 141 |
| 11.4 | Analytical models for CHS overlap joints | 143 |
| 11.5 | Analytical models for overlap joints with an open section chord | 143 |
| 11.6 | Experimental and numerical verification | 143 |
| 11.7 | Joint strength formulae | 144 |
| 12. | Welded I beam-to-CHS or RHS column moment joints | 151 |
| 12.1 | Introduction | 151 |
| 12.2 | Modes of failure | 151 |
| 12.3 | Analytical models | 151 |
| 12.4 | Experimental and numerical verification | 153 |
| 12.5 | Basic joint strength formulae | 153 |
| 12.6 | Concluding remarks | 154 |

| | |
|---|-----|
| 13. Bolted joints | 161 |
| 13.1 Flange plate joints | 161 |
| 13.2 End joints | 161 |
| 13.3 Gusset plate joints | 162 |
| 13.4 Splice joints | 162 |
| 13.5 Beam-to-column joints | 162 |
| 13.6 Bracket joints | 163 |
| 13.7 Bolted subassemblies | 163 |
| 13.8 Purlin joints | 163 |
| 13.9 Blind bolting systems | 163 |
| 13.10 Nailed joints | 163 |
| 14. Fatigue behaviour of hollow section joints | 175 |
| 14.1 Definitions | 175 |
| 14.2 Influencing factors | 175 |
| 14.3 Loading effects | 176 |
| 14.4 Fatigue strength | 177 |
| 14.5 Partial factors | 177 |
| 14.6 Fatigue capacity of welded joints | 177 |
| 14.7 Fatigue capacity of bolted joints | 179 |
| 14.8 Fatigue design | 180 |
| 15. Design examples | 193 |
| 15.1 Uniplanar truss of circular hollow sections | 193 |
| 15.2 Uniplanar truss of square hollow sections | 197 |
| 15.3 Multiplanar truss (triangular girder) | 197 |
| 15.4 Multiplanar truss of square hollow sections | 199 |
| 15.5 Joint check using the joint resistance formulae | 199 |
| 15.6 Concrete filled column with reinforcement | 200 |
| 16. References | 209 |
| Symbols | 221 |
| CIDECT | 229 |