

PUBLISHED DOCUMENT

Background paper to BS EN 1994-2 and the UK National Annex to BS EN 1994-2

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Contents

Foreword *ii*

Introduction *1*

- 1** Scope *1*
- 2** Design values of material or product properties
[BS EN 1994-2:2005, 2.4.1.2 (2)P] *1*
- 3** Structural analysis *2*
- 4** Ultimate limit states (ULS) member design *3*
- 5** Shear connection *5*
- 6** Rules for transverse filler beams
[BS EN 1994-2:2005, 6.3.1 (1)] *8*

Bibliography *9*

List of figures

Figure 1 – Geometry for block connectors with hoops *7*

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 9 and a back cover.

Foreword

Publishing information

This Published Document is published by BSI Standards Limited, under licence from The British Standards Institution, and came into effect on 31 December 2007. It was prepared by Subcommittee B/525/4, *Composite structures*, in collaboration with Subcommittee B/525/10, *Bridges*, under the authority of Technical Committee B/525, *Building and civil engineering*. A list of organizations represented on this committee can be obtained on request to its secretary.

Supersession

PD 6696-2:2007+A1:2012 supersedes PD 6696-2:2007, which is withdrawn.

The start and finish of text introduced or altered by Amendment No. 1 is indicated in the text by tags **A1** and **A1**. Minor editorial changes are not tagged.

Relationship with other publications

This Published Document is a background paper that gives non-contradictory complimentary information for use in the UK with the Eurocode BS EN 1994-2 and its UK National Annex.

Presentational conventions

The provisions in this document are presented in roman (i.e. upright) type. Its recommendations are expressed in sentences in which the principal auxiliary verb is “should”.

The word “may” is used in the text to express permissibility, e.g. as an alternative to the primary recommendation of the Clause. The word “can” is used to express possibility, e.g. a consequence of an action or an event.

Contractual and legal considerations

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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Introduction

When there is a need for guidance on a subject that is not covered by the Eurocode, a country can choose to publish documents that contain non-contradictory complementary information that supports the Eurocode. This Published Document provides just such information and has been cited as a reference in the UK National Annex to BS EN 1994-2.

1 Scope

This Published Document contains non-contradictory complementary information and additional guidance for use in the UK with BS EN 1994-2 and its UK National Annex.

This Published Document gives information and guidance on the design of components of composite steel and concrete bridges; it does not cover assessment. This Published Document does not fully cover cable-supported bridges.

This Published Document does not cover the detailing of components for seismic design or the design of parapets, safety fences and other ancillary items.

2 Design values of material or product properties [BS EN 1994-2:2005, 2.4.1.2 (2)P]

The definition of design compressive stress, f_{cd} , differs in BS EN 1994-2 from that in BS EN 1992-2 since the parameter α_{cc} is omitted. Where reference is necessary to BS EN 1992-2 for design of reinforced concrete elements, such as the local design of a deck slab, the definition of design compressive stress in BS EN 1992-2:2005, **3.1.6** should be adopted for such verifications, with α_{cc} as given in the National Annex to BS EN 1992-2. This value is 0,85 for flexural and axial compression, and so is consistent with the factor 0,85 in BS EN 1994-2:2005, **6.2.1.2** (1) and **6.7.3.2** (1). Where stress in concrete is checked under the combined effects of local and global actions, the check should be in accordance with BS EN 1994-2 if the concrete is acting as part of a composite section in the direction concerned, and otherwise in accordance with BS EN 1992-2. (See PD 6687-2.)