INTERNATIONAL STANDARD

ISO 10406-2

First edition 2008-12-15

Fibre-reinforced polymer (FRP) reinforcement of concrete — Test methods —

Part 2: FRP sheets

Polymère renforcé par des fibres (PRF) pour l'armature du béton — Méthodes d'essai —

Partie 2: Feuilles en PRF

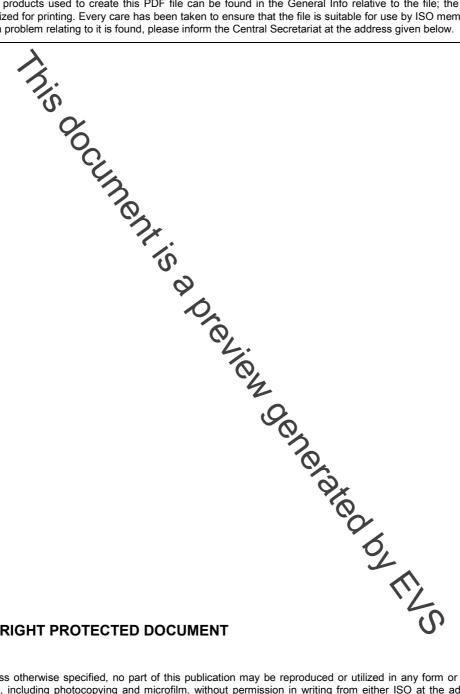


PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below





COPYRIGHT PROTECTED DOCUMENT

© ISO 2008

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office Case postale 56 • CH-1211 Geneva 20 Tel. + 41 22 749 01 11 Fax + 41 22 749 09 47 E-mail copyright@iso.org Web www.iso.org

Published in Switzerland

Contents

Page

Forew	ord	v
1	Scope	1
2	Normative references	1
3	Definitions and symbols	1
3.1	Definitions	1
3.2	Symbols	4
4	General provision concerning test pieces	5
5	Test method for desermining tensile properties	5
5.1	Test pieces Testing machine and measuring devices	5
5.2 5.3	Test method	و د
5.4	Calculation and expression of test results	10
5.5	Test report	11
6	Test method for overlap splice strength	12
6.1	Test pieces Testing machine	12
6.2 6.3	Test method	14
6.4	Calculation and expression of test results	14 14
6.5	Test report	15
7	Test method for determining bond properties of fibre-reinforced polymer (FRP) sheets to	
	concrete	16
7.1 7.2	Test pieces	16
7.2 7.3	Test method	20 20
7.4	Calculation and expression of test results	21
7.5	Test pieces Testing machine and measuring devices Test method Calculation and expression of test results Test report Test method for direct pull-off strength of FRP sheets with concrete Test pieces Testing machine and measuring devices Test method Calculation and expression of test results Test report Test method for freeze/thaw resistance	22
8	Test method for direct pull-off strength of FRP sheets with concrete	23
8.1	Test pieces	23
8.2	Testing machine and measuring devices	24
8.3 8.4	Calculation and expression of test results	24 25
8.5	Test report	25
9	Test method for freeze/thaw resistance	26
9.1	Test pieces	26
9.2	Test method for freeze/thaw resistance Test pieces Testing machine and measuring devices Test method	26
9.3 9.4	Test method	27
9.4 9.5	Test report	
10	Test method for exposure to laboratory light sources	
10.1	Test pieces	
10.2	Testing machine and measuring devices	
10.3	Test method	
10.4 10.5	Calculation and expression of test results	
	Test report	
11 11.1	Test method for durability	
11.1 11.2	Types of test methods for durability Test piece	

11.3	Test method	. 32
	Calculation and expression of test results	
	Test report	

Inis document is a preview denetated by EUS

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 10406-2 was prepared by Technical Committee ISO/TC 71, Concrete, reinforced concrete and prestressed concrete, Subcommittee SC 6, Non-traditional reinforcing materials for concrete structures.

review generated by this ISO 10406 consists of the following parts under the general title Fibre-reinforced polymer (FRP) reinforcement of concrete — Test methods:

- Part 1: FRP bars and grids
- Part 2: FRP sheets

© ISO 2008 - All rights reserved

Inis document is a preview denetated by EUS

Fibre-reinforced polymer (FRP) reinforcement of concrete — Test methods —

Part 2:

FRP sheet

1 Scope

This part of ISO 10406 specifies test methods applicable to fibre-reinforced polymer (FRP) sheets for the upgrading of concrete members

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 31-0:1992, Quantities and units — Part 0: General principles

ISO 291:2008, Plastics — Standard atmospheres for conditioning and testing

ISO 4892 (all parts), Plastics — Methods of exposure to laboratory light sources

ISO 5725 (all parts), Accuracy (trueness and precision) of measurement methods and results

ISO 7500-1, Metallic materials — Verification of static unitarial testing machines — Part 1: Tension/compression testing machines — Verification and calibration of the proce-measuring system

JIS A 9511, Preformed cellular plastics thermal insulation materials

3 Definitions and symbols

3.1 Definitions

For the purposes of this document, the following terms and definitions apply.

3.1.1

accelerated artificial-exposure testing machine

machine that creates reproducible standard test conditions to accelerate weathering artificially

3.1.2

ambient temperature

environmental conditions corresponding to the usual atmospheric conditions in laboratories with uncontrolled temperature and humidity

© ISO 2008 – All rights reserved