

<b>GNB-CPD</b>  <b>SG18</b>	<b>Guidance from the Group of Notified Bodies for the Construction Products Directive</b>  <b>89/106/EEC</b>	<b>NB-CPD/SG18/07/053</b> Issued: 2 November 2007  <b>APPROVED – GUIDANCE</b>
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## **GNB-CPD position paper from SG18 - prEN 14545:2002 and 2007**

### ***Certification of FPC of Punched metal plate fasteners for timber***

#### **General scope, limitations and aim of this guidance for Notified Bodies (NBs)**

This position paper contains guidance for Notified Bodies (NBs) involved in the attestation of conformity of the FPC of punched metal plate fasteners for timber according to prEN 14545:2002 and 2007. The purpose is to help NBs work equivalently and come to common judgments. This guidance contains informative material (which NBs should or may follow) and normative guidance (which NBs shall follow or at least work equivalently to as circumstances demand).

This guidance is thought necessary to provide clarity and completeness for NBs so that they can work equivalently. It **supplements and makes practical for NBs** the draft harmonized standard prEN 14545:2002 and 2007, approved AG guidance, and Standing Committee guidance in the form of GPs, which also apply - unless otherwise explicitly stated in this guidance. This position paper should **not** contradict nor extend the scope of the work and role of a NB, nor impose additional burdens on the manufacturer, beyond those laid down in the CPD and prEN 14545:2002 and 2007.

This guidance should be considered valid until the relevant standards are amended to include the guidance (as thought fit by the CEN/TC); or until guidance from Commission, SCC, and AG has changed on relevant matters. Whereupon, the paper should be considered for withdrawal/revision and be replaced by new guidance as necessary.

This position paper was considered approved by SG18 on 7 May 2007 and by Advisory Group (AG) on 26 July 2007.

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# 1 Introduction

This position paper by SG18 is aimed at providing guidance regarding factory production control (FPC) for punched metal plate fasteners (system 2+).

The following text gives specific guidance to notified bodies in clarification of the requirements contained in the above standard, and should be read in conjunction with the FPC Checklist NB-CPD/AG/03/004 already issued by the GNB.

At the time of writing this position paper, the standard is only available as a draft prEN 14545:2002 and draft for formal vote, prEN 14545:2007 "Timber structures – Connectors - Requirements". CE marking against the standard will not be possible for manufacturers until the full standard is published, and subsequently cited in the Commission's Official Journal.

GNB-CPD SG18 has evaluated prEN 14545:2002 and 2007 together with the comments from the CEN enquiry and finds it fully workable for punched metal plate fasteners. All prEN 14545:2002 or 2007 references regarding testing, evaluation and design are already available as ENs.

**This position paper only applies to punched metal plate fasteners, not to other types of connector within the scope of prEN 14545:2002 or 2007.**

## 2 Guidance on the assessment of FPC

1. The specifications and parameters of FPC documented in the manual shall be suitable to maintain conformity of the product with the properties determined by Initial Type Testing according to prEN 14545.
2. prEN 14545 §7.3.2 requires daily control of the raw material. Manufacturers may choose how their FPC achieves this but NBs should expect a level of control equivalent to that given in Table A.1.
3. NBs shall check that the FPC covers any critical process or treatment of the components which is considered likely to affect performance.
4. NBs shall check that the FPC includes inspection schemes for the production process and production equipment. Manufacturers may choose how their FPC achieves this but NBs should expect a level of control equivalent to that is given in Table A.2.
5. NBs shall check that all measuring and testing equipment, that has an influence on the declared values, is calibrated and regularly inspected according to the documented procedures and criteria and at the stated frequencies. Manufacturers may choose how their FPC achieves this but NBs should expect a level of control equivalent to that given in Table A.3.
6. NBs shall check that the factory production control system incorporates a sampling plan and frequency of testing for the finished product. The results of sampling and testing shall be recorded. The plan may include non-mandated properties, but only those listed in prEN 14545 are subject to certification by the NB. The manufacturer does not necessarily have to declare a value against every property given in prEN 14545. Guidance on the inspection scheme for the manufacturer for product testing for punched metal plate fasteners is given in prEN 14545, Table 3. The requirements in the inspection scheme may be varied for factories where the FPC and testing routine concentrates on manufacturing the product to close tolerances, more than testing the finished product.

An FPC manual can have the following content based on Commission Guidance Papers 'B' and 'D':

<b>Section</b>	<b>Contents</b>	<b>Guidance paper 'B'</b> <i>Guidance paper 'D'</i>
1	Introduction	-
2	Quality objectives	-
3	Organisation and responsibility	<b>§3.1.1, 3.1.1a, b, c</b>
4	Production site	-
5	Personnel	<b>§3.2.1</b>
6	Quality control system	<b>§3.1.1, 3.1.2, 3.1.2a, 3.2.3</b>
7	Document management	<b>§3.1.1, 3.1.2</b>
8	Raw materials, purchase and contract work	<b>§3.1.3a, 3.3</b>
9	Process management	<b>§3.1.3b</b>
10	Control, assessment of results and status of test	<b>§3.1.2c,d , 3.1.3b,c, 3.2.2, 3.2.3, 3.2.4, 3.2.5</b>
11	Management of control results	<b>§3.1.2c, 3.2.3, 3.2.5</b>
12	Non-conformity products	<b>§3.1.2d, 3.2.3, 3.2.4, 3.2.5</b>
13	Marking, documents of conformity, delivery documents and traceability	<b>§3.2.2., 3.3</b> §2, 3, 5, 2(11), 5(7)
14	Handling, storage etc.	<b>§3.1.3c</b>
15	Corrective actions	<b>§3.1.2d, 3.2.4</b>
16	Measuring tools	<b>§3.1.3c, 3.2.1</b>
17	Internal audit	<b>§3.1.2b, 3.1.2d</b>

## Annex A Inspection schemes (informative)

**Table A.1 - Inspection of raw materials**

<b>Subject</b>	<b>Purpose of inspection</b>	<b>Method/procedure</b>	<b>Frequency of inspection by the manufacturer</b>
Steel	Identification of suitability of raw materials	Inspection of certificate of compliance  Visual inspection, dimensional or other appropriate procedures	Each steel consignment  At appropriate time intervals as given in the documentation of the FPC
Storage of raw materials	Identification and rotation of stock. Suitability of environment to avoid degradation	Visual inspection or other appropriate procedures	At appropriate time intervals as given in the documentation of the FPC

**Table A.2 - Inspection of production and controlling equipment**

<b>Subject</b>	<b>Purpose of inspection</b>	<b>Method/procedure</b>	<b>Frequency of inspection by the manufacturer</b>
Cutting equipment <sup>1)</sup>	Correct functioning	Visual inspection, or other appropriate procedures	Daily
Pressing equipment <sup>1)</sup>	Correct functioning	Visual inspection, or other appropriate procedures	Daily
Punching equipment <sup>1)</sup>	Correct functioning	Visual inspection, or other appropriate procedures	Daily

<sup>1)</sup> as appropriate

**Table A.3 - Inspection of testing and measuring equipment**

<b>Subject</b>	<b>Purpose of inspection</b>	<b>Method/procedure</b>	<b>Frequency of inspection by the manufacturer</b>
Strength testing equipment	Correct functioning and accuracy	Checked with apparatus calibrated in accordance with National Requirements	On (re) installation - after major repair and/or - once a year
Deformation measuring equipment	Correct functioning and accuracy	Checked with apparatus calibrated in accordance with National Requirements	On (re) installation - after major repair and/or - once a year
Dimension measuring equipment	Correct functioning and accuracy	Checked with apparatus calibrated in accordance with National Requirements	Once a year