CSA Group

CSA S347:14
(reaffirmed 2018)

Method of test for evaluation of truss plates used in lumber joints

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CSA Group

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CSA S347:14
March 2014

Title: *Method of test for evaluation of truss plates used in lumber joints*

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Published in March 2014 by CSA Group
A not-for-profit private sector organization
178 Rexdale Boulevard, Toronto, Ontario, Canada M9W 1R3

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ISBN 978-1-77139-466-6

Contents

Preface

This is the fourth edition of CSA S347, *Method of test for evaluation of truss plates used in lumber joints.* It supersedes previous editions published in 1980, 1976, and 1999.

The major changes in this addition include the following:

a) change from basic relative density to oven-dry relative density;
b) introduction of test requirements for machine stress rated lumber, machine evaluated lumber and structural composite lumber;
c) introduction of additional tests for roller press embedment of truss plates; and
d) updating of calculations and reporting to suit changes in truss plate analysis requirements in CSA O86.

The plate and teeth resistance and the teeth lateral slip resistance, determined in accordance with this Standard, provide the basis for the truss plate connection design and design values set forth in CSA O86, *Engineering design in wood.*

This Standard was prepared by the Technical Committee on Engineering Design in Wood under the jurisdiction of the Strategic Steering Committee on Buildings and Civil Infrastructure and was formally approved by the Technical Committee.

Notes:

1) *Use of the singular does not exclude the plural (and vice versa) when the sense allows.*
2) *Although the intended primary application of this Standard is stated in its Scope, it is important to note that it remains the responsibility of the users of the Standard to judge its suitability for their particular purpose.*
3) *This Standard was developed by consensus, which is defined by CSA Policy governing standardization — Code of good practice for standardization as "substantial agreement. Consensus implies much more than a simple majority, but not necessarily unanimity". It is consistent with this definition that a member may be included in the Technical Committee list and yet not be in full agreement with all clauses of this Standard.*
4) *To submit a request for interpretation of this Standard, please send the following information to inquiries@csagroup.org and include "Request for interpretation" in the subject line:*
   a) *define the problem, making reference to the specific clause, and, where appropriate, include an illustrative sketch;*
   b) *provide an explanation of circumstances surrounding the actual field condition; and*
   c) *where possible, phrase the request in such a way that a specific "yes" or "no" answer will address the issue.*

   Committee interpretations are processed in accordance with the CSA Directives and guidelines governing standardization and are available on the Current Standards Activities page at standardsactivities.csa.ca.
5) *This Standard is subject to review five years from the date of publication and suggestions for its improvement will be referred to the appropriate committee. To submit a proposal for change, please send the following information to inquiries@csagroup.org and include "Proposal for change" in the subject line:*
   a) *Standard designation (number);*
   b) *relevant clause, table, and/or figure number;*
   c) *wording of the proposed change; and*
   d) *rationale for the change.*

CSA S347:14
Method of test for evaluation of truss plates used in lumber joints

1 Scope

1.1
This Standard provides basic procedures based on joint ultimate load or a limiting slip for the determination of the lateral strength resistance and lateral slip resistance of truss plate teeth embedded in sawn and structural composite lumber members.

1.2
This Standard provides for the determination of the lateral strength resistance and lateral slip resistance of nails embedded in lumber members when used in nail-on truss plates. When this Standard is so applied, the word "tooth" is understood to be replaced by the word "nail".

1.3
This Standard provides basic procedures based on truss plate ultimate strength for the determination of the tensile and shear strengths of the net section of the plate.

1.4
The capacities determined by testing methods and procedures described herein, and corrected for the variations in the ultimate tensile strength of the plate material used in the manufacture of the test truss plates, will yield values that may be adjusted for use in engineering design, such as specified in CSA O86.

1.5
In this Standard, "shall" is used to express a requirement, i.e., a provision that the user is obliged to satisfy in order to comply with the Standard; "should" is used to express a recommendation or that which is advised but not required; and "may" is used to express an option or that which is permissible within the limits of the standard.

Notes accompanying clauses do not include requirements or alternative requirements; the purpose of a note accompanying a clause is to separate from the text explanatory or informative material.

Notes to tables and figures are considered part of the table or figure and may be written as requirements.

Annexes are designated normative (mandatory) or informative (non-mandatory) to define their application.

2 Reference publications
This Standard refers to the following publications and where such reference is made it shall be to the edition listed below.