Evaluation Listing CCMC 10929-L
FT-20

Evaluation Issued:	1985-04-25
Re-evaluated:	2013-08-26
Re-evaluation due:	2015-07-31

Preface: Masterformat 06 05 23.07, Metal Truss Connector Plates

Preface Issued:	2013-03-05

Scope

These Evaluation Listings apply to light metal plate connectors used in structural lumber assemblies. The proponent has demonstrated that the product meets the requirements of the following standard:

- CAN/CSA-O86-09 Consolidation, “Engineering Design in Wood.”

The design values for the metal truss connector plates are based on test results obtained in accordance with CAN/CSA-S347-99 (R2009), “Method of Test for Evaluation of Truss Plates Used in Lumber Joints.”

Standards

CAN/CSA-S347 requires the following tests:

1. lateral resistance of teeth;
2. tensile strength of plate;
3. shear strength of plate; and
4. ultimate tensile strength of plate material.

Clause 10.8 of CAN/CSA-O86-09 does not apply to truss plates in corrosive conditions, or the use of galvanized truss plates in lumber that has been treated with a fire retardant and that is used in wet service conditions or in locations prone to condensation.

Truss plates must be manufactured from galvanized sheet steel, which should conform to G90 coating class, meeting Clause 14.4.1.2. of CAN/CSA-O86-09.

National Building Code of Canada 2010 (NBC)

NBC References

The CAN/CSA-O86-09 standard is referenced in the NBC 2010, Division B, Table 4.1.8.9. and Sentence 4.3.1.1.(1).

The CAN/CSA-S347-99 (R2009) standard is not directly referenced in the NBC 2010, however it is referenced in Clauses 10.8.1.9, 10.8.3.2.1, and 10.8.4.2. of CAN/CSA-O86-09.

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1. Evaluation

The product conforms to CSA S347-99 (R2009), "Method of Test for Evaluation of Truss Plates Used in Lumber Joints" and CAN/CSA-O86-09 Consolidation, "Engineering Design in Wood." Results from testing in conformance to CSA S347-99 are as follows:

Ultimate Tensile Strength of Plate

Grade of Steel	Plate Thickness (mm)	Ultimate Tensile Strength (MPa)	Correction Factor
SQ255	0.914	406	0.89

Lateral Resistance of Teeth

Direction of Load	Limit States Design	
	Ultimate Lateral Resistance, n_u	Lateral Slip Resistance, n_s
Units	MPa/Plate	MPa/Plate
Type of Press	Hydraulic	Hydraulic
Species of Wood	S-P-F	S-P-F
Load parallel to grain, plate length parallel to load	2.06	2.09
Load parallel to grain, plate length perpendicular to load	1.70	1.96
Load perpendicular to grain, plate length parallel to load	1.21	1.36
Load perpendicular to grain, plate length perpendicular to load	1.22	1.50

Tensile Strength of Plate

Direction of Load	Limit States Design
	Tensile Resistance, t_p
Plate length parallel to load	198 N/mm/Plate
Plate length perpendicular to load	153 N/mm/Plate

Shear strength of plate

Angle (Degree)	Limit States Design	Failure Mode	
	Shear Resistance, v_p (N/mm/Plate)	Shear Failure in T or C	Slots in Plate Axis
0	101	N/A	⊥
30	128	T	∥
30	82	C	⊥
60	156	T	∥
60	59	C	⊥
90	126	N/A	∥
120	96	T	⊥
120	75	C	∥
150	131	T	⊥
150	69	C	∥

Refer:

⊥	Slots perpendicular to plate, long dimension
∥	Slots parallel to plate, long dimension
C	Compression
T	Tension

2. Description

The product is a Grade SQ255, galvanized steel truss connector plate with a thickness of 0.914 mm that is stamped with 0.0124 teeth/mm^2.

3. Standard and Regulatory Information

See the Preface and the standard for explanation.

Listing Holder

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Plant(s)

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Disclaimer

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