**CEPI-43-21**

# IECC®: C402.1.4.2, TABLE C402.1.4.2, AISI (New) (With 2022-2-2 Revisions)

**Proponents:**

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**2021 International Energy Conservation Code**

# Revise as follows:

C402.1.4.2 Thermal resistance of cold-formed steel ~~walls~~ assemblies.

*U*-factors of walls with cold-formed steel framed ceilings and walls ~~studs~~ shall be permitted to be determined in accordance ~~with Equation 4-1~~ with AISI S250 as modified herein.

1. Where the steel-framed wallcontains no cavity insulation, and uses continuous insulation to satisfy the U-factor maximum, the *steel-framed wall* member spacing is permitted to be installed at any on-center spacing.
2. Where the steel-framed wall contains framing at 24 inch (600 mm) on center with a 23% framing factor or framing at 16 inch (400 mm) on-center with a 25% framing factor, the next lower framing member spacing input values shall be used when calculating using AISI S250.
3. Where the steel-framed wall contains less than 23% framing factors the AISI S250 shall be used without any modifications.
4. Where the steel-framed wall contains other than standard C-shape framing members the AISI S250 calculation option for other than standard C-shape framing is permitted to be used.

*~~U~~* ~~= 1/[~~*~~Rs~~* ~~+ (~~*~~ER~~*~~)] (Equation 4-1)~~

~~where:~~

*~~R~~s* = The cumulative *R-*value of the wall components along the path of heat transfer, excluding the *cavity insulation* and steel studs.

*~~ER~~* ~~= The effective~~ *~~R~~*~~-value of the~~ *~~cavity insulation~~* ~~with steel studs as specified in Table C402.1.4.2.~~

~~TABLE C402.1.4.2 EFFECTIVE R-VALUES FOR STEEL STUD WALL ASSEMBLIES~~

~~NOMINAL STUD DEPTH SPACING OF FRAMING CAVITY~~ *~~R~~*~~-VALUE CORRECTION FACTOR EFFECTIVE~~ *~~R~~*~~-VALUE (ER)~~

~~(inches)~~

~~(inches)~~

~~(insulation)~~

*(Fc)*

~~(Cavity~~ *~~R-~~*~~Value x~~ *~~F~~c*)

~~31~~/2

~~31~~/2

~~13~~ ~~0.46~~ ~~5.98~~

~~16~~

~~15~~ ~~0.43~~ ~~6.45~~

~~13~~ ~~0.55~~ ~~7.15~~

~~24~~

~~15~~ ~~0.52~~ ~~7.80~~

~~19~~ ~~0.37~~ ~~7.03~~

~~6~~ ~~16~~

~~6~~ ~~24~~

~~21~~ ~~0.35~~ ~~7.35~~

~~19~~ ~~0.45~~ ~~8.55~~

~~21~~ ~~0.43~~ ~~9.03~~

~~16~~ ~~25~~ ~~0.31~~ ~~7.75~~

~~8~~

~~24~~ ~~25~~ ~~0.38~~ ~~9.50~~

~~For SI: 1 inch = 25.4 mm.~~

# Add new standard(s) as follows:

AISI

AISI American Iron and Steel Institute

25 Massachusetts Avenue, NW, Suite 800

Washington DC 20001.

AISI - S250 - 21North American Standard for Thermal Transmittance of Building Envelopes with Cold-Formed Steel Framing