Thomas & Betts
ANALYSIS OF NEC ®

2017 Code Changes: Article Section 342.14, 344.14 and 358.14 Dissimilar Metals
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342.12 Dissimilar Metals. Where practicable, dissimilar metals in contact anywhere in the system shall be avoided to eliminate the possibility of galvanic action.

Aluminum fittings and enclosures shall be permitted to be used with galvanized steel IMC where not subject to severe corrosive influences, Stainless steel IMC shall only be used with stainless steel fittings and approved accessories, outlet boxes and enclosures.

344.14 Dissimilar Metals. Where practicable, dissimilar metals in contact anywhere in the system shall be avoided to eliminate the possibility of galvanic action.

Aluminum fittings and enclosures shall be permitted to be used with galvanized steel RMC, and galvanized steel fittings and enclosures shall be permitted to be used with aluminum RMC where not subject to severe corrosive influences. Stainless steel RMC shall only be used with stainless steel fittings and approved accessories, outlet boxes and enclosures.

358.14 Dissimilar Metals. Where practicable, dissimilar metals in contact anywhere in the system shall be avoided to eliminate the possibility of galvanic action.

Aluminum fittings and enclosures shall be permitted to be used with galvanized steel EMT, and galvanized steel fittings and enclosures shall be permitted to be used with aluminum EMT where not subject to severe corrosive influences. Stainless steel EMT shall only be used with stainless steel fittings and approved accessories, outlet boxes and enclosures.

Analysis of the Change

Sections 342.14, 344.14, and 358.14 were revised to clarify the acceptable fittings that can be used with galvanized and stainless steel IMC, RMC, and EMT, based on galvanic compatibility. Stainless steel is considerably more noble (or cathodic) than aluminum and is also considerably more noble than steel and zinc (galvanized steel) and would be subject to more aggressive galvanic attack in the presence of an electrolyte. Stainless steel conduit or tubing used with aluminum or galvanized fittings, accessories, outlet boxes and enclosures may result in a galvanic action, leading to corrosion.

Products

T&B Stainless Steel Rigid and Intermediate Metal Conduit and Fittings

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Contact Us

If you have any questions or require interpretation assistance, please contact the following:

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Disclaimer: This is not intended to be an iteration of all the changes, but a reference of a change that may affect the Thomas & Betts, ABB & Baldor product lines. For a more in-depth document, please contact the International Association of Electrical Inspectors at www.iaei.org.

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