

## Response to Public Comments on Draft Regulatory Guide DG-1312, “Nonmetallic Thermal Insulation for Austenitic Stainless Steel.” Proposed Revision 1 of Regulatory Guide (RG) 1.36

On October 6, 2014 the NRC published a notice in the *Federal Register* (79 FR 60188) that Draft Regulatory Guide, DG-1312 (Proposed Revision 1 of RG 1.36 was available for public comment. The Public Comment period ended on November 5, 2014. The NRC received a comment submittal from the organization listed below. The NRC has combined the comments received and NRC staff responses in the following table.

Comments were received from the following:

Kenneth Whorlow  
 President - Tutco Scientific Inc.  
 Chairperson, ASTM C795, ASTM C692, & ASTM C871.  
 And Darla Stimbart - Analytical Chemist  
 714 East Aspen Ave  
 Fruita, Colorado, 81521  
 ADAMS Accession No. ML14316A541

Commenter	Section of DG-1312	Specific Comments	NRC Resolution
K. Whorlow et al.	General	Please consider the use of shall instead of should throughout the document as is the current guidance for ASTM C16 documents regarding the use of permissive language.	This staff agrees that the use of ‘shall’ is more clear in intent than ‘should’. However because RGs are voluntary, the NRC writers guide insists upon the use of ‘should’ for staff regulatory guidance in section c, and uses the word ‘shall’ only for citing requirements in NRC rules. NRC licensees who adopt this reg guide into their licensing basis are expected to follow the ASTM document as written. In this case ‘shall’ statements in the ASTM documents must be followed if the licensee has committed to use of this RG.
K. Whorlow et al.	General	Choice of acceptance criteria is changed from that in the previous revision and has introduced terminology that is confusing to users.	The staff anticipated that questions would arise regarding the vague words ‘statistically significant.’ Staff agreed with the commenter and provided additional clarity to the acceptance criteria.
K. Whorlow et al.	Section C	The subsections are incorrectly numbered.	The numbering was corrected.
K. Whorlow et al.	Section C	2a) Preproduction corrosion testing * Please consider moving the last sentence requiring the C692 stress corrosion test to the first sentence to emphasize that the preproduction corrosion testing requires the	The staff partially agreed that the proposed language for testing was more clear. This was used in the final guidance. <i>Each material should be tested for stress corrosion effects using the 28-day stress</i>

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		<p>C692 test. We'd like to see the change to: Each material shall be tested for stress corrosion effects using the 28-day stress corrosion test as specified in ASTM C692 to determine acceptability using the criteria of ASTM C795. Duplicate specimens of each type of thermal insulating material used shall be chemically analyzed using the test method ASTM C871 to determine leachable chloride, fluoride, sodium, silicate and pH, sufficient to meet the acceptance criteria of ASTM C795, figure 1 and to establish baseline values for confirming production quality control.</p>	<p><i>corrosion test as specified in ASTM C692 to determine acceptability using the criteria of ASTM C795. Duplicate specimens of each type of thermal insulating material used should be chemically analyzed using the test method ASTM C871 to determine leachable chloride, fluoride, sodium, silicate and pH, sufficient to meet the acceptance criteria of ASTM C795, Figure 1 and to establish baseline values for confirming production quality control</i></p>
<p>K. Whorlow et al.</p>	<p>Section C</p>	<p>2b) Production testing  The Draft document defines the term lot (batch) in footnote 2 on page 3, when the term is first used. In section 2b "Production testing" the term is repeated. Please consider a reference back to footnote 2, [Each lot (see footnote 2) of insulation material...] to provide additional clarity as to the determination of a lot.  There's a change from the + / - 50% criteria in the original document to: "The results should be statistically compared to the qualification results for any statistically significant variation to assure acceptability of the product".  * Please consider Section C2b be changed to:  b) Production testing  Duplicate specimens from each lot (see footnote 2) of insulation shall be chemically analyzed as required by ASTM C795 to determine leachable chloride, fluoride, sodium, silicate and pH. The material shall meet the acceptance criteria of ASTM C795, figure 1. Using the averaged results from the duplicate specimens for each lot, the chloride plus fluoride ion concentrations shall not exceed + 50%, and the sodium plus silicate ion concentrations shall not be less than - 50%, from the averaged values used to qualify the insulation on the preproduction corrosion testing (2a).OR An alternative wording for complete clarity: b) Production testing  Duplicate specimens from each lot (see footnote 2) of insulation shall be chemically analyzed as required by ASTM C795 to</p>	<p>The staff considered the proposed verbiage and adopted a similar version. The following language was adopted.  <i>Duplicate specimens from each lot (batch) of insulation should be chemically analyzed as specified in ASTM C795 to determine leachable chloride, fluoride, sodium, silicate and pH. The material should meet the acceptance criteria of ASTM C795, Figure 1 using the averaged results from the duplicate specimens for each lot.</i></p> <p><i>For each lot chemical analysis, the chloride plus fluoride ion concentrations should not exceed 150 percent of the average values determined on the sample used for preproduction qualification testing.</i></p> <p><i>For each lot chemical analysis, the sodium plus silicate ion concentrations should not fall below 50 percent of the average values determined on the sample used for preproduction qualification testing.</i></p>

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		<p>determine leachable chloride, fluoride, sodium, silicate and pH. The material shall meet the acceptance criteria of ASTM C795, figure 1 using the averaged results from the duplicate specimens for each lot.</p> <p>For each lot chemical analysis, the chloride plus fluoride ion concentrations shall not deviate by more than +50% of the average values determined on the sample used to qualify the insulation. It is permitted for the chloride plus fluoride ion concentrations to be less than -50% of the average values determined on the sample used to qualify the insulation. For each lot chemical analysis, the sodium plus silicate ion concentrations shall not deviate by less than -50% of the average values determined on the sample used to qualify the insulation. It is permitted for the sodium plus silicate ion concentrations to be more than +50% of the average values determined on the sample used to qualify the insulation.</p>	
K. Whorlow et al.	Section C	<p>Under section Requalification - Please consider changing: ... re-qualified by repeating the qualification testing; to ... re-qualified by repeating the preproduction corrosion testing (2a). This will emphasize that the C692 corrosion test is necessary on the "new" material. Please consider changing it to read:</p> <p>3. Requalification. When a change is made in the type, nature, or quality of the ingredients, the formulation, or the manufacturing process, the insulation material shall be re-qualified by repeating the preproduction corrosion testing (2a).</p> <p>" Please also consider adding - Manufacturers shall perform periodic requalification in accordance with the manufacturer's production quality program. (Most currently do this every 2-3 years.)</p>	Staff agrees that the proposed verbiage added clarity, and accepted this comment with editorial changes.
K. Whorlow et al.	References	Item 4 ASTM C 795-08 (change the word Reaffirmed 2013 to Reapproved)	This was corrected.