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### Certification Notes

(CN IG1009)

#### **Certification of Internal Components (IC)**

##### **References:**

G.8 Internal Components (IC) - Per minutes of the May 7-8, 2019 Certification Committee Meeting, after January 1, 2020 the guidelines below will be mandatory:

Baseline testing to ASTM E2189 shall be performed during each regular certification test on units identical to those fabricated for ASTM E2188 testing. Initially and at least each 4 years, sets of three (3) double pane, five (5) multiple cavity test specimens shall be constructed under auditor witness for E2189 internal component performance testing utilizing all the components of an internal components (IC) system, which are used in the ultimate product. Only ASTM E2189 testing shall be required in each of the following categories of internal components. The specific internal component to test in each category shall be 1) worst case product or 2) highest sales volume product, at the fabricator's discretion:

- 1) Bars, grills or muntins (BA)
- 2) Blinds (BL)
- 3) Glass, or other glazing materials (GI)
- 4) Other internal components not in the above categories (i.e. insulating materials, electronics) (OI)

When testing muntins or grills, test samples shall be fabricated dividing the sample into four areas in an off-set pattern in accordance with ASTM E2189. A licensee may use the same IGCC®/IGMA® number for units manufactured with and without internal components (IC) providing regular testing has been accomplished in accordance with the above procedure. (Modified 5/8/2019)

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It is recognized that a given company may utilize numerous Internal Components (IC) in production units and it is not practical to regularly test all IC variations. The following shall serve to supplement guideline G.8 and guide the licensee and auditor in selection of the IC to be tested:

1. Favor shall be given to testing worst case IC
2. Favor shall be given to testing highest volume production IC
3. Consideration shall be given to testing IC on a rotational basis
4. Licensees are encouraged, but not required to utilize guideline G.5 to establish compliance and equivalency of various IC materials. Fog test only is required.

The following direction is also provided:

- **Muntins or Grills (BA)**- When testing muntins or grills, test samples shall include all components of the muntin or grill system (i.e. holes, clips, brackets) and shall be fabricated dividing the sample into four equal areas (1 by 1 offset). Muntins or grills need only be included in one air space of a multiple air space unit.
- **Air Space Inserts (decorative or other) (GI or OI)** - Units for IC testing of inserts (glass, film, leaded glass, electrical panels or other) shall include all components of the insert system except that non-transparent glazing or material should be replaced with transparent material with care taken not to obstruct the center viewing area of the unit. Inserts for fog test units shall approximate inserts used in actual production.
- **Grooved Spacer for IC** - Some frame/spacer systems are grooved to accommodate the air space insert but do not generally create 2 separate sealed airspaces and as such will be considered and tested as a single airspace unit. For proper durability testing of these units, the groove may need to be filled and at the fabricator's discretion may use the same insert as the fog test units, a center insert of clear glass, or a simplified center insert. In these cases, the center groove should be filled with an insert of appropriate thickness to support the spacer during testing and compression to help facilitate "wetout".
- **Blinds (BL)**- Units for IC testing of blinds between glass (BBG) shall include all components of the blind system in the approximate correct proportions, although the blinds do not need to be operational. Components may be placed in the unit with care taken to not obstruct the center viewing area of the unit. Any frame modifications (i.e. holes, clips or brackets for operators) shall be included. Other than cleaning BBG ICs of oils and residue created by cutting or slicing components in correct proportions, BBG ICs used for testing are not to be treated or to undergo processing that differs from normal production processes, e.g., pre-conditioning with high heat or chemical treatments not used in the production process.
- **GCIA Testing of IC** - At present IGCC/IGMA does not require GCIA testing of IC. It has been recognized that practical limitations may exist in GCIA testing some IC. As of the date of this document, a task group within IGCC/IGMA is working on guidance for GCIA testing of IC and it is expected to include this work in future certification procedures. With this said, there is nothing

precluding a fabricator from GCIA testing IC, and if done so, certification documentation will reflect such testing. This may be necessary for certain code or jurisdictional requirements.