

<b>IGMA</b> INSULATING GLASS MANUFACTURING QUALITY PROCEDURE MANUAL  <b>GAS FILLING</b>	REVISION: 1.5	<b>Appendix A</b>
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## D. GAS FILLING

D.1 Each day representative samples shall be inspected for gas fill concentration (See form QC-5, Gas Filling Inspection. Included in the information to be recorded are the following:

- a) Date
- b) The number of units to be inspected per period (i.e. Shift, day, week etc.)
- c) The number of units rejected per period
- d) Initials of the individual responsible for this section of the quality assurance system
- e) IGMA Certification Identification
- f) Product configuration [connector, spacer, desiccant, sealant(s)]
- g) Procedure for determination of gas fill concentration (gas chromatograph, oxygen analyzer, GasGlass, other)
- h) Current and previous instrument calibration dates

D.2 Quality Assurance Requirements

- a) The insulating glass (IG) manufacturer will construct representative samples of each product line to be verified. These representative samples will be nominal 355 mm x 505 mm (14" X 20") and be fully representative of the manufacturer's production.
- b) The IG manufacturer will construct two separate representative samples and fill these samples to 90% (for certification samples) and the manufacturer's specified field production requirements (e.g. 70%, 80%). These samples will be used to verify that the measurement device is reading accurately. Measurements will be taken on the control samples at the beginning and end of each shift.
- c) Each day the IG manufacturer will select representative samples from each of the gas-filled production units and verify that the gas fill is to the manufacturer's specifications. This procedure will be added to the "Final Inspection" criteria and the number of samples to be selected is as specified in Section E.2 under Section E, Finished Product Inspection.
- d) The IG manufacturer shall follow the instrument's manufacturer's recommendations for routine maintenance and at a minimum the instrument shall be verified for accurate measurement as specified by the instrument's manufacturer's recommendations or their authorized representative or when the IG manufacturer's control samples do not measure accurately.

D.3 Quality Control Form: The following information is required for each insulating glass unit tested:

- a) Length
- b) Width
- c) Position of spacer
- d) Glass thickness

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- e) Airspace
- f) Glass Edges
- g) Primary and secondary sealant
- h) Glass coatings
- i) Percentage gas fill required and achieved

D.4 Form Q.C. -5 is a sample quality control form that may be used.

**Gas Filling Inspection**

**Sample  
QC Inspection Form QC - 5**

Date \_\_\_\_\_  
 Inspection Quantity \_\_\_\_\_  
 # Rejected \_\_\_\_\_  
 Initials \_\_\_\_\_

IGMA(C) Certification I.D.:

Product Configuration: Connector Code \_\_\_\_\_ Spacer Code: \_\_\_\_\_ Desiccant Code: \_\_\_\_\_ Primary / Secondary Sealant: \_\_\_\_\_ x

Procedure for the Determination of Gas Fill Concentration (i.e. Gas Chromatograph, Ozygen Analyzer, GasGlass, Other) \_\_\_\_\_

Instrument Calibration Date: \_\_\_\_\_ Previous Instrument Calibration Date: \_\_\_\_\_

Ordered Size	Length	Width	Spacer Position	Thickness	Airspace	Glass Edges	Primary Sealant	Secondary Sealant	Glass Coating	Desired % Fill	Actual % Fill	Disposition

**Inspection Frequency:** As specified in Section E, Final Inspection, Subsection E.2