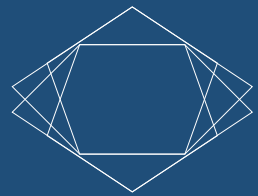




NGA GLASS CONFERENCE™ CHICAGO — JULY 18-20, 2022



Certification Program Update

Administered By:
AMS, Inc.

205 West Main St., P.O. Box 730
Sackets Harbor, New York 13685
E-mail: staff@amscert.com
Phone: (315) 646-2234

Website: www.amscert.com

July 2022





ANSI Z97.1
 Published
 September 2015
 Reaffirmed
 September 2020

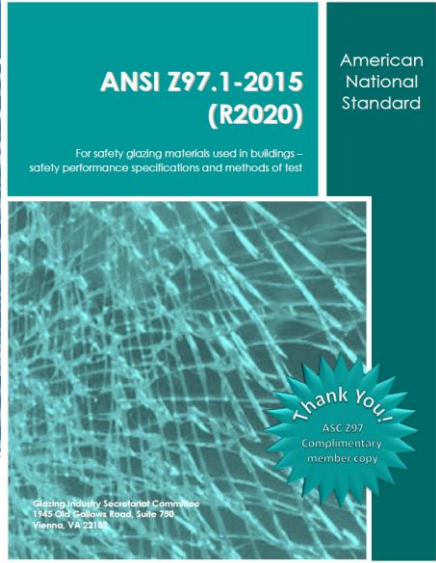
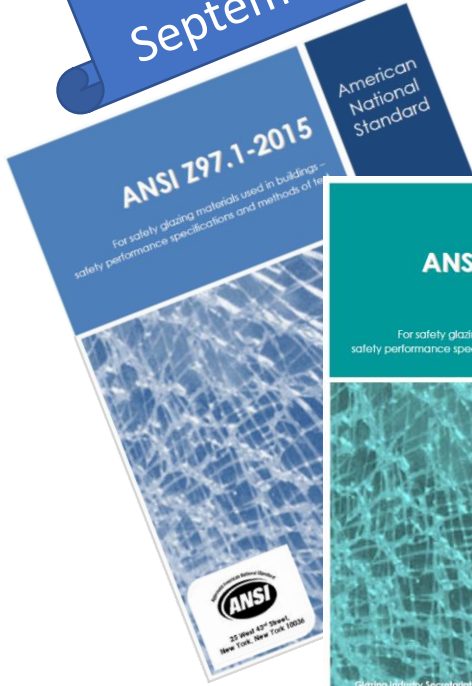
CAN/CGSB – 12.1-2017
 Published
 February 2017

CSPC 16 CFR 1201

PART 1201—SAFETY STANDARD FOR ARCHITECTURAL GLAZING MATERIALS

Subpart A—The Standard

- Sec.
- 1201.1 Scope, application and findings.
 - 1201.2 Definitions.
 - 1201.3 General requirements.
 - 1201.4 Test procedures.
 - 1201.5 Certification and labeling requirements.
 - 1201.6 Prohibited stockpiling.
 - 1201.7 Effective date.



Safety Glazing Materials used in Buildings



CAN/CGSB 12.1 -2017

- Marg Webb (FGIA retired) remains Canadian glass committee chair
- Committee currently wrestling with a code issue (ambiguity) that could be interpreted as allowing wired glass
- Some suggestion of available funding to support future glass standard development
- 12.1 (Safety Glass) and 12.8 (Insulating Glass) both re-affirmed in 2022.

CPSC 16 CFR 1201

PART 1201—SAFETY STANDARD FOR ARCHITECTURAL GLAZING MATERIALS

Subpart A—The Standard

Sec.

- 1201.1 Scope, application and findings.
- 1201.2 Definitions.
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- 1201.5 Certification and labeling requirements.
- 1201.6 Prohibited stockpiling.
- 1201.7 Effective date.

§ 1201.4 Test procedures.

Except as provided in §§ 1201.1(c) and (d), architectural glazing products shall be tested in accordance with all of the applicable test provisions of ANSI Z97.1-2015 “American National Standard for Safety Glazing Materials Used in Building—Safety Performance Specifications and Methods of Test,” approved March 2015. The Director of the Federal Register approves the incorporation by reference in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. You may obtain a copy from ANSI Customer Service Department, 25 W. 43rd Street, 4th Floor, New York, NY 10036. You may inspect a copy at the Office of the Secretary, U.S. Consumer Product Safety Commission, Room 820, 4330 East West Highway, Bethesda, MD 20814, telephone 301-504-7923, or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

[81 FR 15431, Mar. 23, 2016]

ASC Z97 Committee Leadership

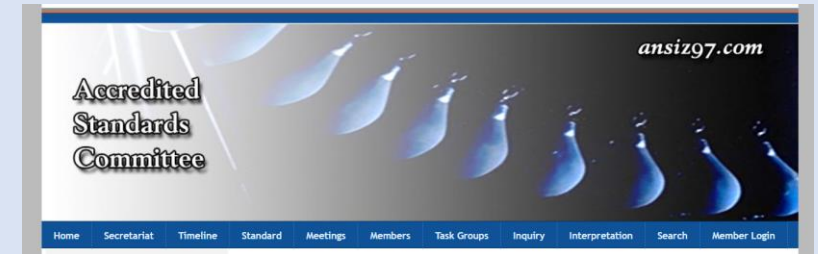


- Secretariat: GISC (Re-affirmed for another term)
 - Jeff Haberer (Chair); Ilona Schmidt; Shane Merryman
- Committee Officers:
 - John Kent (Chair); **Open** (Vice-Chair); Julia Schimmelpenningh (Secretary)
- Steering Committee:
 - John Kent (General); Urmilla Sowell (NGA); Rick Wright (OBE); Julia Schimmelpenningh (Eastman)

ASC Z97 Committee Update

ANSI Z97.1-2015 (R2020)

- June 10th full committee and SC call
 - A. Re-organize committee
 - B. Update status
 - C. Where do we go from here? (Action due 2025)
- Committee is out of balance (due to rule change, other) 28 Members
- Actively soliciting non “Fabricator/Distributor” members**
- Straw poll to be sent
 - Reaffirm - in the interest of harmonization
 - start revisions (several pending issues)
- Plan for another committee call by end of summer.



ASC Z97.1 ANSI ACCREDITED STANDARDS COMMITTEE
Safety Requirements for Architectural Glazing Materials

Chairman: K. Osh, 2300 Harmon Road, Auburn Hills, MI 48326, Phone: 248-340-2141; E-mail: KOLA@Guardian.com
Secretary: J.C. Schimelpenninck, 730 Worcester Street, Springfield, MA 01151, Phone: 413-730-3413; E-mail: JCSCH@Solutia.com

**Membership Request
ASC Z97 Committee**

1. Type of membership:

- Organizational
- Individual

2. Please provide the following basic information:

Name/Title: _____
Organization: _____
Address: _____
Telephone: _____
FAX: _____
E-mail: _____
Website: _____

SGCC® Certification Council

Current Activities



• **Contact Us** – www.sgcc.org or email SGCC@amscert.com

• **Certification Testing Standards** - ANSI Z97.1-2015(R2020), CPSC 16 CFR 1201, CAN/CGSB 12.1-2017

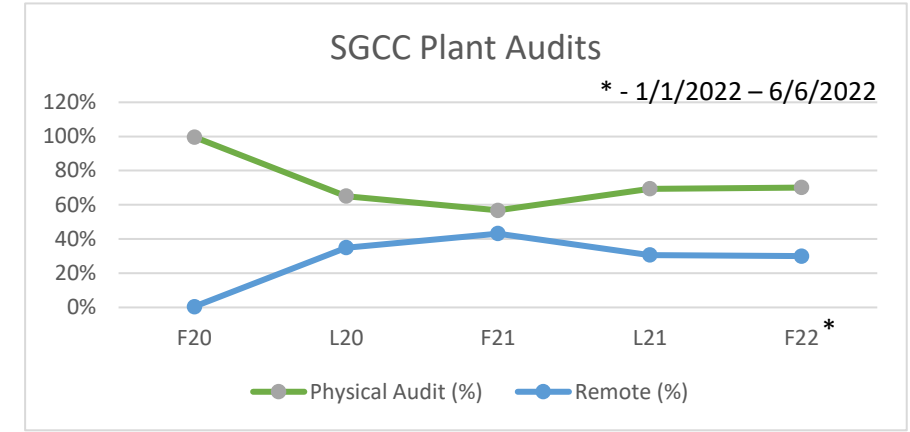
• **2022 Audits** – Audits are completed both Virtually (Remote) or In person (Physical)

• **Next Meeting** – SGCC® 2022 Fall Certification Committee Meeting October 4 - 6, 2022
Florida (Margaritaville Resort Orlando Kissimmee FL)

• **Coated Glass** – Effective July 1st, 2022, In order to be SGCC certified for tempered glass with a metalized coating (MC) that is applied to annealed glass prior to tempering (reflective, Low E, other), test results for the MC glass must have been provided to SGCC.

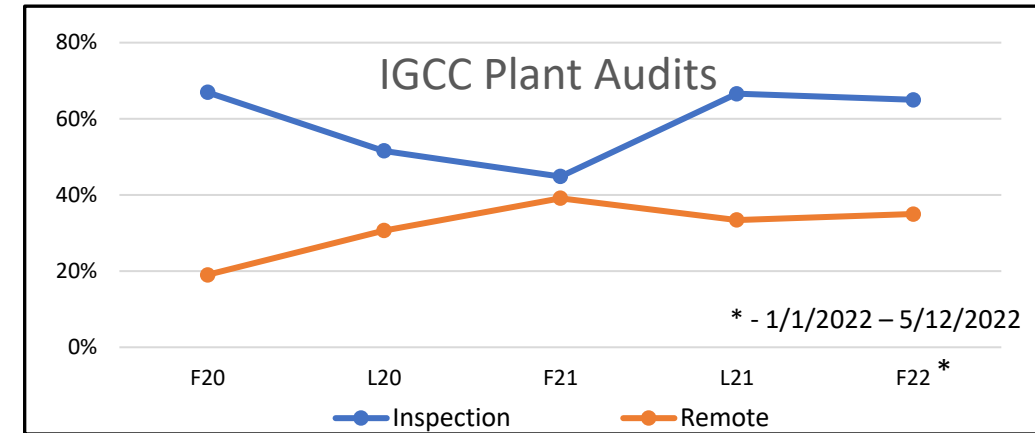
- ***New*** Certified Product Directory Designator **MC** = Metalized Coating, Tempered Glass (i.e. Reflective, Low E, other) {August 2022}
- To maintain MC - Annual testing is required (1 test coated, 1 test un-coated/clear)
- Testing shall be with a sputter coating (soft coat) or a pyrolytic (hard coat), at the discretion of the SGCC Licensee. Testing of any coated product shall cover all coated products

• **Laminated Guidance Material** – Laminated Glass inquires continue to be more technical. Laminated Sub-Committee continuing to develop further definition regarding coatings, decorative glazing, and inserts to the Laminated Guidance Document and update graphics. The Sub-Committee is working on finalizing the additional clarification for Laminated Specialty Products (LSP) tentatively scheduled for release by August 2022.



IGCC®/IGMA® Certification

Current Activities



- **Contact Us** – www.igcc.org or email IGCC@amscert.com
- **Certification Testing Standards** – ASTM E2190 - 2019
- **2022 Audits** – Audits are completed both Virtually or In person
- **Next Meeting** – May 2-3, 2023 San Antonio, TX
- **High Altitude (IG Cavity Compensation Task Group (IGMA TM-3200))**

A New Cavity Pressure Compensation (CPC) Systems Guideline was approved.

List of Cavity Pressure Compensation (CPC) Systems (1 time test of each type at approved lab, does not need to be auditor witnessed)

TI = Tubes Inserted (TI units intended to be closed at some point after fabrication may be certified (durability and GCIA) if passing results are achieved. TI units intended to be left open, with no additional gas capture, shall not be GCIA certified.)

HR = Holes Resealed (Holes into the sealed airspace, created either in the field or at the factory, that are permanently sealed in the field for the purpose of cavity pressure compensation)

PA = Pressure Adjusted (Units initially made with a positive or negative preset)

RS = Relief System (Bladder or diaphragm)

PF = Post Fabrication (Designs requiring a secondary fabrication process at or near the installed altitude. Example, closing of a valve)

OT = Other (uncategorized)

Implementation (timeline) - Any time (reports prior to 05/04/2022 are grandfathered)

IGCC®/IGMA® Con't



- **IGCC/IGMA & IGMAC Reviewed Lists:**
 - “**Restriction**” was removed due to increased requests for waivers regarding the policy
 - Test samples shall be fabricated shall be by a Licensee fabricator, **or a component supplier under auditor witness.**
 - Copies can be found <https://igcc.org/reviewed-components-memos.aspx>

- **Materials** - Sub-committee suggests developing a common industry quality control test for fabricators to perform to determine desiccant characteristics. Proposed Revising IGMA TM-2100 – *In House Testing Procedure*. Tentative Desiccant workshop **Summer 2022**.
 - Temp Rise test,
 - Methods found in the EN-1279-4
 - Creating a gas desorption test, and
 - Dust.

- **IGCC/IGMA and IGMAC** – Continue to work thru the normalization process targeting **2023** Implementation.

- **RAC (Rapid Assessment Chamber)*** –
 - Goal to test IGUs in 14 days
 - IGCC has approved moving forward with taking orders
 - Validation testing and data analysis continues
 - Contact Mitch Majewski (mmajewski@amscert.com) with any questions or comments on the RAC.



RAC Update:

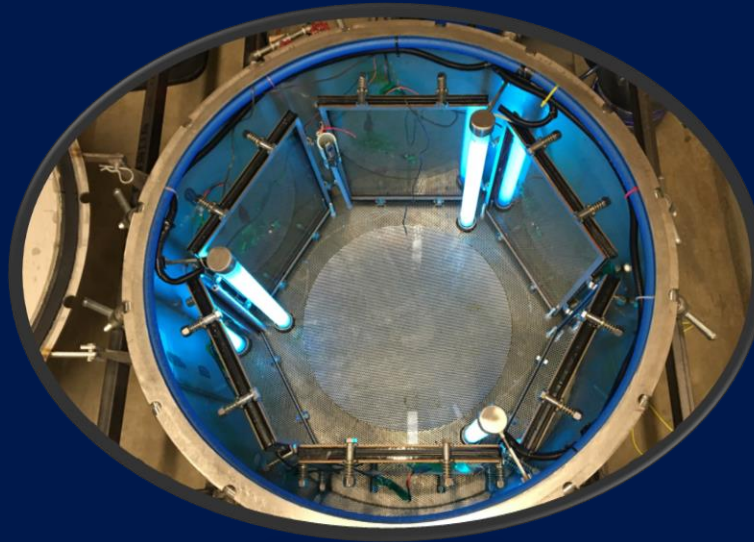
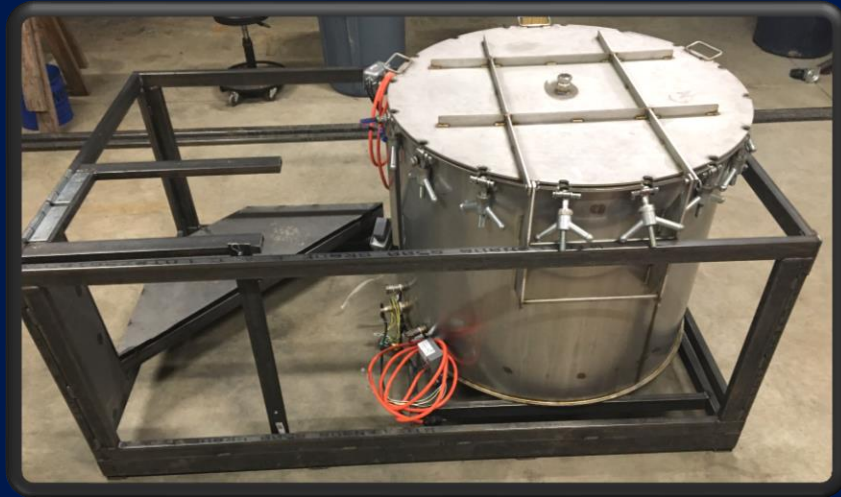
NGA Glass Conference

July 2022

THE GOAL OF RAC

Test IG units to determine if defects are present
(workmanship, materials, design, other)
Within 14 Days.

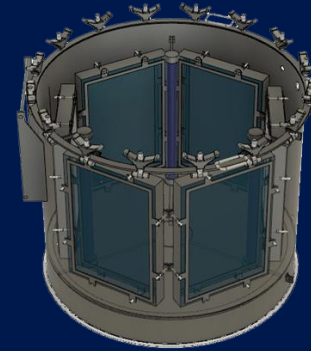
A look at the RAC



Running the RAC

What is required:

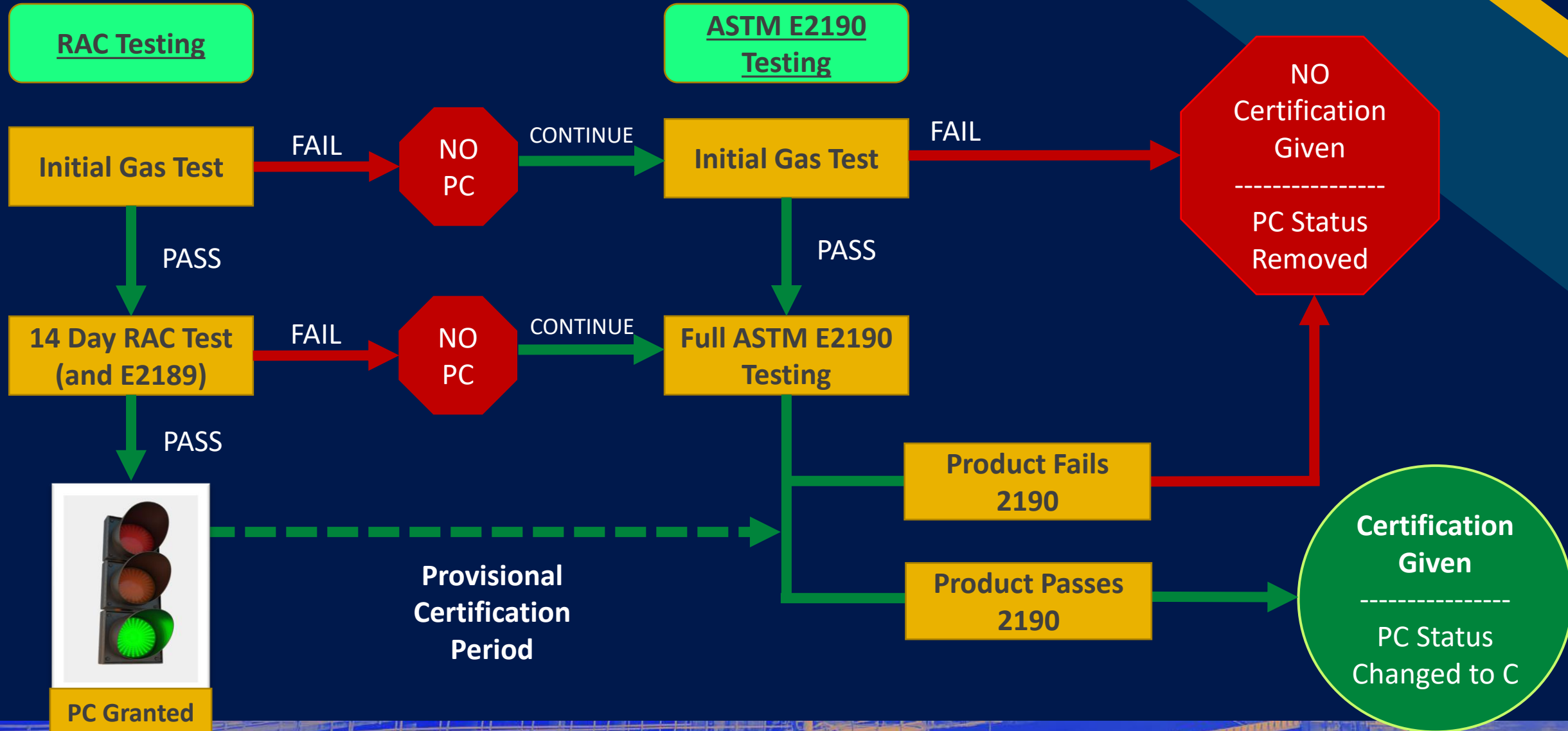
- (3x) 20 AMP | (1x) 15 AMP Power outlets
- 6' x 4' space to operate the chamber (RAC assembly can be moved with a pallet jack)
- Water Source & Drain (only uses ~10 gallons / month)
- A single test operator, the RAC was designed with ease of operation in mind



Operating Conditions:

Factor	Provisional Certification
Edge Pressure (lbf/in)	0
Chamber Temperature (Fahrenheit)	140
Chamber Pressurization Δ (PSI)	1.6 PSI (+/- .8 PSI)
Pressure Rate of Change (psi/min)	3 (.75/15s)
Pressure Dwell Time (Seconds)	5 Minutes

Provisional Certification Workflow for New Products



RAC Phase 2 / 3 Timeline	
DOE Started (Phase 2)	October 2020
RAC 2 Begins Testing	February 2021
2021 Annual Certification Meeting	May 2021
DOE Completed	October 2021
Subcommittee Approval of RAC for PC	November 2021
Board Approval of RAC for PC	January 2022
Validation Testing Begins (Phase 3)	January 2022
2022 Annual Certification Meeting	May 2022
RAC Ordering Begins	May 2022
First RAC Installed in an IGCC/IGMA Approved Testing Laboratory (PC Begins)	September 2022

Validation Testing (Final Conditions)

Total Validation Units: **190** (Type 1 - 2 - 3 - 4 - 5 - 6)

Total # of units tested in DOE: **132** (Type 1)

Total # of units tested in Phase 1: **102** (Type 1 - 2 - 3)

TOTAL-TOTAL: 424 Units (70 Sets)

3 / 9 / 2017

IGCC sets tested:

PC - 21

VEC - 13

HBF - 11

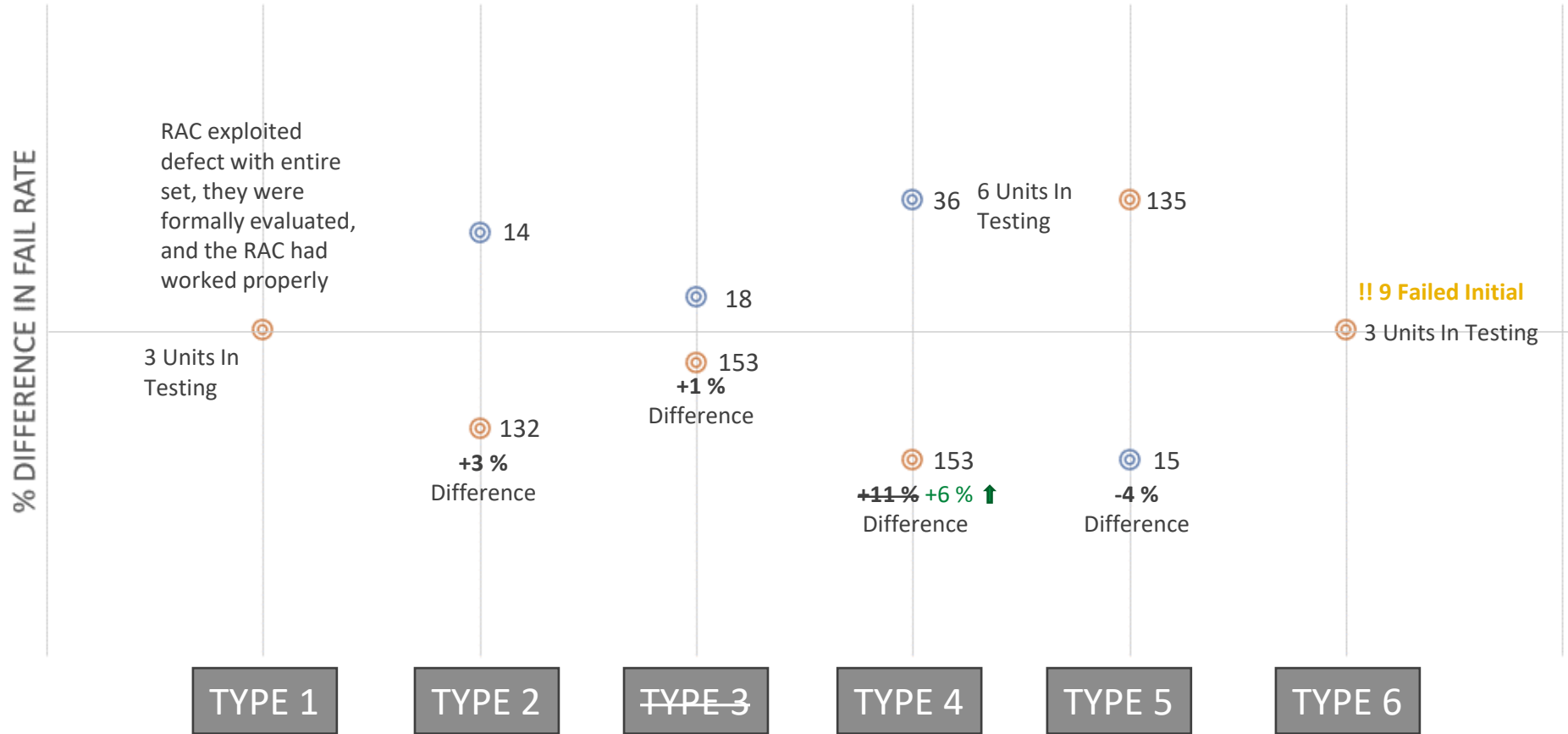
Total Units For Testing:

- Type 1: 24 (+)
- Type 2: 48
- Type 3: 42
- Type 4: 40
- Type 5: 21
- Type 6: 15

All 2190 Data is for GCIA sets

Individual Unit Failure Rate: RAC vs 2190

⊙ RAC Results ⊙ 2190 Results



Comparing individual RAC Pass/Fail Rate to individual Pass/Fail Rate of 2190

RAC is showing to be a little harder on IG Units !!!!

We want Blue (RAC) above Orange (2190)

The closer they are to the center line the better.

The background of the entire image is a photograph of the Chicago skyline, featuring several prominent skyscrapers. The image is overlaid with a blue gradient that is darker on the left and fades into a lighter blue on the right. A white diagonal line runs from the top right towards the bottom left, separating the blue gradient from a white diagonal line that runs from the top left towards the bottom right. The text "NGA GLASS CONFERENCE™" is written in a large, white, all-caps sans-serif font across the middle of the image. Below it, "CHICAGO" is written in the same font on the left, and "JULY 18-20, 2022" is written on the right, separated from "CHICAGO" by a thin white horizontal line.

NGA GLASS CONFERENCE™

CHICAGO — JULY 18-20, 2022



Two Programs - ONE MISSION

The general mission of both the NACC and AGMT Programs is to provide those who have a key stake in a glazing project the evidence that the glazing contractor and/or the individuals installing glazing systems have the credentials to deliver the best possible end- product.

NACC and AGMT programs provide a mechanism to mitigate risk for glazing project stakeholders by providing verified evidence of contractors' and glaziers' adherence to the highest industry standards and best business practices.



- Management
- Processes
- Systems
- Procedures



Architectural Glass
& Metal Technician
CERTIFICATION PROGRAM

- Knowledge
- Skills
- Abilities

PROGRAM COMPONENTS

*“NACC is a welcome resource to the design and construction community providing access to prequalified companies who have **DEMONSTRATED** sound business practices, compliance with industry standards, and a commitment to **QUALITY** and **SAFETY**. The word ‘**DEMONSTRATED**’ is the difference between lip service and meaningful action”*

-Rodney Harvey, Principal-CDC



Business Practices



Safety



**Contract
Administrative
Processes**



Quality



**Glazing
Processes**

Metrics

52

Certified Contractors

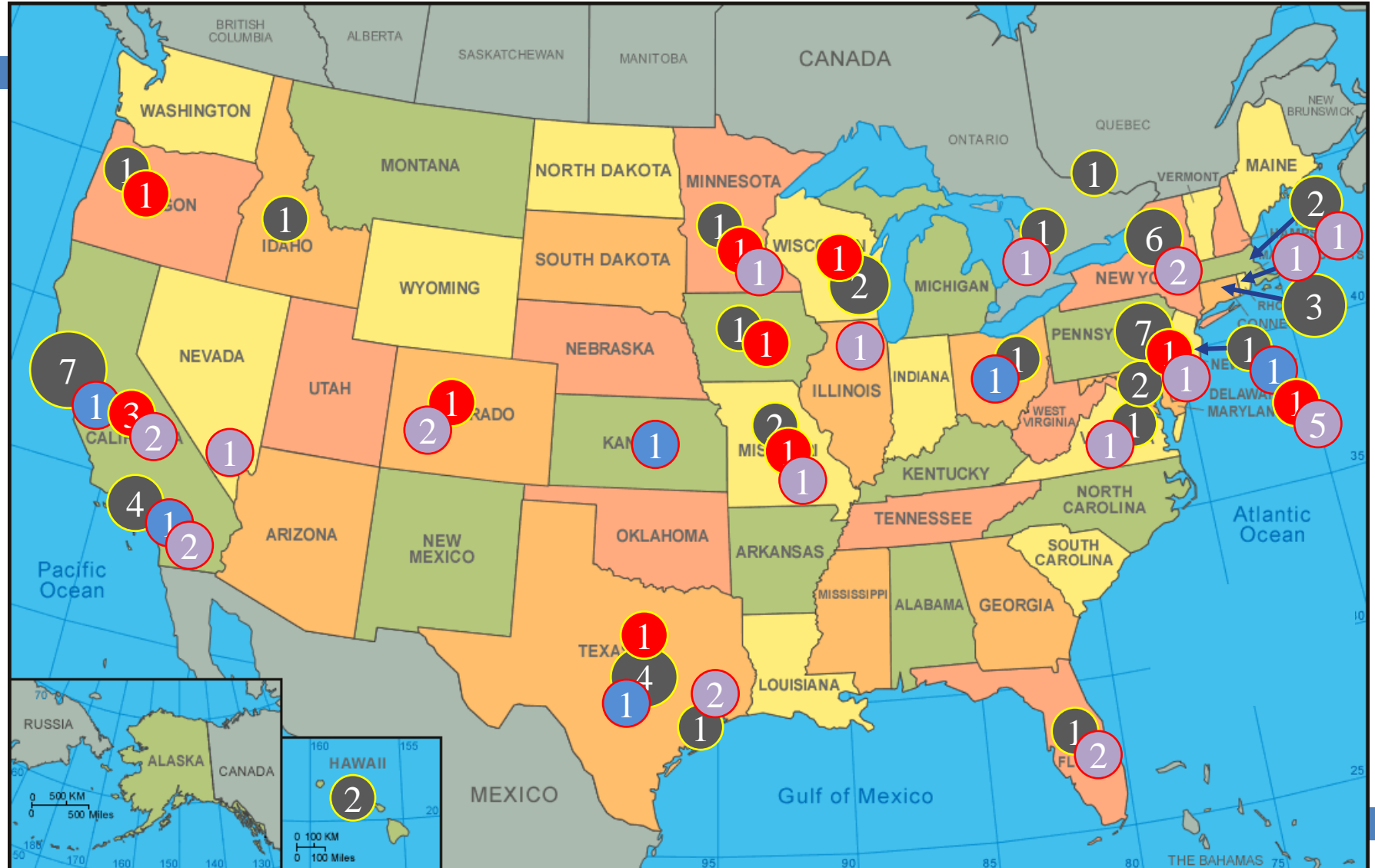
45 contractors are currently at different stages of the application & certification process

Increasing number of specification across the country is helping drive interest.



Metrics

- 
 Certified Contractors
- 
 Audited
- 
 Audit Scheduled
- 
 Preparing



Creating a Quality Management System

Demystifying the Quality Management Process



Corrective and Preventative Action Plan

Improving Your Quality and Performance



WORKSHOPS AND HANDBOOKS

Resources for Glazing Contractors Considering NACC Certification



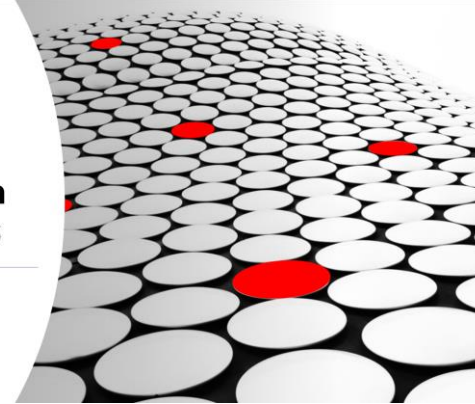
Creating Operational Procedures

Doing what makes sense for your business



Creating Verification Procedures

Knowing work is being performed correctly



Enhancing your Safety Program

A Systems Approach to Assuring a Safe Workplace



Creating a Quality Manual

Roadmap to Consistent Performance



Production Equipment Accuracy Verification

Making certain critical measurements are precise



QUALITY MANUAL

SAMPLE

2020

Best Glazing Inc.
QMS-01 Revision 1

FOR ILLUSTRATIVE PURPOSES ONLY



Understanding Quality Management SYSTEMS

A GUIDE TO NAVIGATING NACC





Architectural Glass
& Metal Technician
CERTIFICATION PROGRAM

Examination Overview

KBT – Knowledge-based Test: 125
question/2-hour multiple choice exam



PBT – Performance-
based Test (6.25 hrs.)
Curtainwall
Storefront and Entrance
Sealant application
○Weather sealing
○Structural glazing

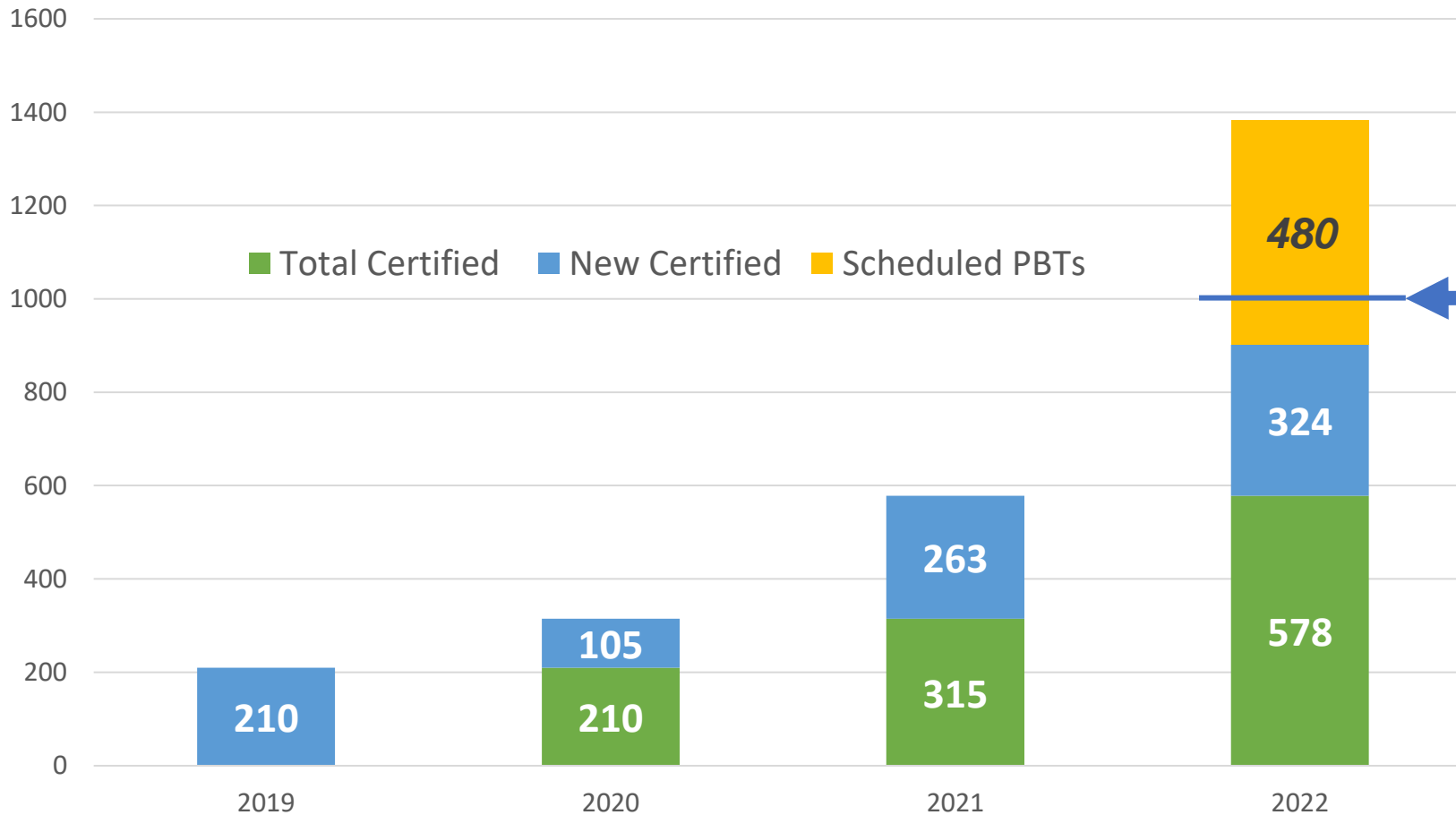


AGMT Certification Update



Architectural Glass & Metal Technician
CERTIFICATION PROGRAM

Certified or Scheduled for PBT



902 Total Certified Glaziers

Expecting to break the 1000 Certified Glaziers mark in **August**

FGIA Update

NGA GLASS CONFERENCE™
CHICAGO — **JULY 18-20, 2022**



FGIA Glass Products Council

(formerly IGMA)

Marketing and Education

Final Approval to Education Steering

IG Fabricator Workshop
Preventing IG Failures
Do's & Don'ts of Safety

Final Approval to Marketing & Engagement Steering

Marketing Activities

IGMA Certification

Final Approval to Technical Steering

Desiccant
Design Considerations for Over-Sized Units
IG Manufacturing Quality Procedure
IG Sealant
Vacuum Insulating Glass
Quality Assurance for IG Spacers
Moisture Vapor Transmission

Final Approval to Innovation Steering

IG Durability Testing re: Edge Seal System

IG Technical Services

Final Approval to Technical Steering

Dimensional Tolerances
Glazing Guidelines
IG Cavity Compensation
Impact of Solar Reflectance
PIB Migration
Multiple Cavity IGU's
Thermal Stress
Visual Quality

Final Approval to Code Action Steering

Glass Strength Design

GPC Research

Final Approval to Innovation Steering

Advanced Fenestration Testing
Gas Measurement Validation
Glass Research Fund

Reports to Sustainability Steering

Processed Glass PCR

Final Approval to Technical Steering

ASTM E2190 Field Correlation
Edge Pressure
Laser Absorption Spectroscopy

TECHNICAL SERVICES COMMITTEE

TASK GROUPS



- **Design Considerations for Multiple Cavity IGU's (IGMA TM-1300)**
 - New Task Group in 2022, to consider adding VIG
- **Dimensional Tolerances (IGMA TB-1200)**
 - New Task Group in 2022, updating applicable standards
- **Glazing Guidelines (IGMA TM-3000)**
 - In ballot resolution at IG Tech Services Committee
- **PIB Migration (joint with NGA)**
 - In Ballot resolution
- **Effects of Cavity Width Variability Post Fabrication Webpage**
 - Going to Technical Steering Committee for final ballot
- **Visual Quality Guidelines (IGMA TM-3100)**
 - New Task group in 2022, to review and revise
- **Glass Strength Design (Joint with Fen BC, Fen-Can, AVFQ)**
 - Submit a code change request
 - a) focus on aspect ratio for the 2025 code cycle and
 - b) develop full tables for the 2030 code cycle
- **Preventing Glass Breakage (SIGMA TR-3401)**
 - New Task Group in 2022, to review possible updates
- **Thermal Stress (IGMA TM-1500)**
 - New Task Group in 2022, to review and revise
- **Guidelines for Use of Capillary/Breather Tubes (TB-1601) (joint with NGA)**
 - In ballot resolution

TECHNICAL SERVICES COMMITTEE HIGHLIGHTS



New Task Groups

- **Preventing Glass Breakage (SIGMA TR-3401)**
 - New Task Group in 2022, to review possible updates
- **Thermal Stress (IGMA TM-1500)**
 - New Task Group in 2022, to review and revise
- **Visual Quality Guidelines (IGMA TM-3100)**
 - New Task group in 2022, to review and revise



TECHNICAL SERVICES COMMITTEE HIGHLIGHTS

Design Considerations for IG Cavity Compensation (IGMA TM-3200)

- Changes to pressure inside IGU cavity due to environmental factors
- Published in 2021



GPC RESEARCH COMMITTEE TASK GROUPS

- **Edge Pressure of IGU's**
 - 3 responses to RFP
- **ASTM E2190 Field Correlation Study Pilot Program**
 - Final measurements April, 2022
- **Gas Content Measurement and Validation**
 - Verification of SES (GasGlass) device
 - Develop precision and bias statement for device
- **Laser Absorption Spectroscopy**
 - To be started on the completion of the SES validation
- **Advanced Fenestrations Testing (joint with IGCC)**
 - Develop advanced screening and test methodologies to expedite testing
- **Processed Glass PCR**
 - To maintain the currently used PCR (developed jointly with NGA)

GPC RESEARCH COMMITTEE HIGHLIGHTS



- **ASTM E2190 Field Correlation Study Pilot Program**
 - Final measurements April, 2022
- **Gas Content Measurement and Validation**
 - Verification of SES (GasGlass) device
 - Develop precision and bias statement for device

IGMA CERTIFICATION COMMITTEE

TASK GROUPS



- **Desiccant (IGMA TM-2100) (Joint with IGCC)**
 - Suggestion to develop a common industry quality control test for fabricators to perform to determine desiccant characteristics
- **Fabricator Considerations for Large Glass Products (joint with NGA)**
 - Reviewing negative ballots
- **Durability Testing of Internal Components**
 - To identify and determine if an IG units' internal elements that contact the edge seal system affect the durability of the IG unit.
 - Develop and validate a durability testing methodology.
- **IG Sealant (IGMA TM-2400)**
 - Combine the TM-2403 and TR-1000 into TM-2400
 - Develop a technical publication, TB-2500, IG Fabricator Considerations for Sealants Usage
- **Quality Management System (IGMA TM-4000/4100)**
 - Currently revising, restructuring and updating the document
- **Moisture Vapor Transmission (MVTR) (IGMA TB-2701)**
 - New group 2022 – to evaluate and revise the guideline
- **Quality Assurance for IG Spacers (IGMA TM-2000)**
 - New group 2022 – review and revise as necessary
- **Vacuum Insulating Glass (VIG)**
 - Develop a technical bulletin to act as a primer to the industry on VIG. (completed)
 - Develop glazing guidelines for VIG (IG Tech Services)
 - Develop a test / standard specification for VIG. (Completed at ISO, creating working groups in ASTM)
 - Develop Certification Program guidelines to certify VIG.

IGMA CERTIFICATION COMMITTEE

HIGHLIGHTS



New Task Groups

- **Moisture Vapor Transmission (MVTR) (IGMA TB-2701)**
 - New group 2022 – to evaluate and revise the guideline
- **Quality Assurance for IG Spacers (IGMA TM-2000)**
 - New group 2022 – review and revise as necessary
- **Vacuum Insulating Glass (VIG)**
 - Develop a technical bulletin to act as a primer to the industry on VIG. (completed)
 - Develop glazing guidelines for VIG (in process)
 - Develop a test / standard specification for VIG. (Completed at ISO, creating working groups in ASTM)
 - *Develop Certification Program guidelines to certify VIG.*
- **IG Sealant (IGMA TM-2400)**
 - Combine the TM-2403 and TR-1000 into TM-2400
 - Develop a technical publication, TB-2500, IG Fabricator Considerations for Sealants Usage
- **Quality Management System (IGMA TM-4000/4100)**
 - Currently revising, restructuring and updating the document

GPC MARKETING AND EDUCATION COMMITTEE

- **Do's and Don'ts of Glass Safety (IGMA TM-5000)**
 - published in 2022
- **IG Fabricator Workshop In Person**
- **IG Fabricator Workshop Video Series**
- **Preventing IG Failures Video Series**
- **Leadership Development Program**

IGMA INSULATING GLASS MANUFACTURERS ALLIANCE
FGIA Fenestration & Glazing Industry Alliance

DO'S AND DON'TS OF GLASS SAFETY (IGMA TM-5000)

PUBLISHED JUNE 2022

IGMA TM-5000-22

Do's and Don'ts of Glass Safety

an FGIA technical manual

2022 IG FABRICATOR WORKSHOP (IN PERSON)

- Hands on, participatory event
- Addresses most important aspects of fabricating and testing IG units
- Next in-person session scheduled for November 1-3, 2022!



Typical Modules for the Workshop

- Station 1: Glass Cutting & Washing
- Station 2: Spacer and IG Fabrication
- Station 3: Sealants/Hot Melt Sealant/Sealant Adhesion & Butterfly Test
- Station 4: Volatile Fog
- Station 5: Gas Filling and Measurement
- Station 6: Desiccants and Desiccant Matrix
- Station 7: Forensic Investigation of IGU Failures
- Station 8: Frost Point



IG FABRICATOR WORKSHOP – VIDEO SERIES



FGIA now offers both in-person and a video series option for this workshop.

Video Series Workshop

- This series has been under development throughout 2021 and offers a condensed version of the workshop in ten 20–30-minute segments. It is now available for purchase in the FGIA Online Store.
- Now, individuals or entire teams can learn the basics of glass safety responsibilities, insulating glass design, forensic testing and more from their comfort of their homes or offices.

VIDEO SERIES REGISTRATION

This video series is an excellent option for those who are unable to travel to our IG Fabricators In-Person Workshop held each November in Plano, TX



PREVENTING INSULATING GLASS (IG) FAILURES (IGMA TM-4100) VIDEO MODULES



- Content developed by industry experts
- Topic-specific sessions offering best practices for manufacturing quality IG units
- Six-month unlimited access to streaming videos and PDF handouts
- 13 video modules
 - **Complimentary Sessions**
 1. Program Introduction, Evaluation and Overview *(Video length: 28:29)*
 2. Product Certification to the ASTM E2190 Standard *(Video length: 26:42)*
 3. Handling Glass Safely *(Video length: 21:00)*
- Contact education@fgiaonline.org to learn more



FGIA EDUCATION PROGRAMS



Contact education@fgiaonline.org to learn more



Fenestration Masters

FGIA offers a nationwide program for professionals in the glass, window, door, skylight, curtain wall and storefront manufacturers, suppliers and test lab industries. The FenestrationMasters® program provides training content based on consensus-based AAMA standards. To gain the FGIA FenestrationMasters professional certification, the curriculum and certification exam must be completed. The required coursework covers a wide range of subject matters including performance standards, product and material types and code requirements.

Installation Masters

The InstallationMasters® Training and Certification Program is an important and exciting tool being offered to installers of windows and doors all across the country. Complete this two-day program and become professionally certified.

Fundamentals of Fenestration

Fundamentals of Fenestration is an introductory, online educational program providing basic terminology and standards for windows, doors and skylights for both residential and light commercial products, as well as commercial and architectural applications. The course is designed for use by several audiences, as well as qualifying for continuing education credits.

Upcoming Events

2022 FGIA Fall Conference |
September 25-28, 2022 | Fairmont Chicago
(Millennium Park), Chicago, IL



U.S. Headquarters: 1900 E. Golf Rd. Suite 1250, Schaumburg, IL 60173 | Phone: (847) 303-5859

Canadian Office: 1769 St. Laurent Blvd. Suite 104, Ottawa, ON, Canada K1G 3V4 | Phone: (847)-303-5664

Thank you!

NGA GLASS CONFERENCE™
CHICAGO — JULY 18-20, 2022

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NGA GLASS CONFERENCE™
CHICAGO — JULY 18-20, 2022

NGA INDUSTRY COLLABORATION UPDATES



National Fenestration Rating Council

NGA INDUSTRY COLLABORATION UPDATES



- American Subcontractors Association contracts and other documents are available to NGA members free of charge. New resource just added on lien and bond claims.
- Adding NGA glazier voice to ASA's legislative initiatives.
- ASA has expertise on risks in delegated design and associated contract and insurance concerns.

NGA INDUSTRY COLLABORATION UPDATES



NGA has a partnership with the National Center for Construction Education and Research (NCCER)

- NGA offers Glazier Apprentice Curriculum for organizations and companies that want to establish a glazier apprenticeship program approved by the U.S. Department of Labor.
- Students who complete the curriculum will earn a **jointly endorsed NGA/NCCER credential** indicating a journeyman-level minimum competency reached through knowledge and performance.
- There are 14 programs in 13 states currently using the NGA Glazier Apprentice Curriculum with more to come.
- NGA will attend NCCER's Construction Career Pathways Conference in November.

NGA INDUSTRY COLLABORATION UPDATES



- International Window Cleaners Association has two published joint GTPs on glass cleaning topics
- New- IWCA draft *Guide to Architectural Glass for Professional Window Cleaners*- references GANA Glazing Manual and several NGA technical papers

NGA INDUSTRY COLLABORATION UPDATES



- *Whole Building Design Guide*
 - Task group is reviewing and suggesting updates to the text