



safety glazing certification council

P.O. BOX 730

SACKETS HARBOR, N. Y. 13685

PHONE 315-646-2234

FAX 315-646-2297

**MINUTES OF SEVENTY-SIXTH
MEETING OF THE
CERTIFICATION COMMITTEE
APRIL 27 and 28, 2006
SHERATON DETROIT NOVI
NOVI, MI**

		Date and Votes Present	
		<u>4/27/06</u>	<u>4/28/06</u>
<u>Members and Alternates Present</u>			
AFG Glass	Mark Cody	1	1
AFG Fabrication	Mark Cody	1	1
Arch Aluminum & Glass	Cliff Monroe	1	1
JE Berkowitz	Jim Stinsman	1	1
Cardinal Glass	Bernie Herron	1	1
Guardian Fabrication Inc.	Kevin Olah	1	1
Guardian Industries Corp.	Kevin Olah	1	1
Guardian Canada Corp	Daphine Pedreschi	1	1
Oldcastle Glass	Rick Wright	1	1
Oldcastle Glass CPG	Rick Wright	1	1
Temperbent Glass	Richard Paschel	1	1
Viracon	Lyle Krohnberg	1	1
<u>Members by Virtue of Being a Director</u>			
Public Interest	Bill Nugent	1	1
Public Interest	Elaine Rodman	1	1
Public Interest	Don Vild	1	1
Public Interest	Peter Weismantle	1	1
Public Interest	June Willcott	1	1
		<hr/>	<hr/>
		Votes	Votes
		17	17
<u>Guests</u>			
Arch Aluminum & Glass	Tim Moore	Present	Present
Architectural Testing, Inc.	Dan Braun	Present	Present
JE Berkowitz	Lance Hayes	Present	Present
Oldcastle Glass	John Colapietro	Present	Absent
<u>Legal Counsel</u>			
Schiff, Hardin LLP	William M. Hannay	Present	Present
<u>Administrative Staff</u>			
AMS, Inc.	John Kent	Present	Present
		<hr/>	<hr/>
		Persons Present	Persons Present
		20	19

- 4.27.06.1 The meeting was called to order at 1:10 by Chairman Mark Cody and a quorum declared. All present introduced themselves.
- 4.27.06.2 The minutes of the October 20 and 21, 2005 meeting were reviewed. A motion was made by Monroe/Krohnberg to approve the minutes as submitted.

Vote: Unanimous Affirmative
Motion Passed

4.27.06.3 **Committee List**

(See Attachment #1)

In an effort to more clearly define the SGCC structure and process a list of working committees has been assembled. The list was updated during the meeting as shown in attachment #1.

4.27.06.4 **Board of Directors' Report - R. Paschel**

- A. The Board continued to discuss possible approval of "Non-US" Laboratories. Requests for SGCC Lab approval have been received from several off shore test facilities. At present The Board has maintained it's position that all testing for SGCC shall be by laboratories located in the United States.
- B. A review of requirements for licensees to maintain product liability insurance naming SGCC as an additionally insured party was conducted. At the Board meeting in October 05 the Board approval a policy to require this insurance to be issues by a company licensed in the US. This requirement was found to be more onerous than originally anticipated and the policy has not as of yet been enacted. The matter will be differed for now.
- C. A Number of issues dealing with laboratory performance were reviewed some of which will be further discussed at this meeting.

4.27.06.5 **Financial Report – E. Rodman**

(See Attachment #2)

4.27.06.6 **Legal Counsel's Report – W. Hannay**

- A. SGCC Anti-Trust Guidelines were distributed to the group and read out loud (See Attachment #3).
- B. SGCC, a corporation incorporated under the Illinois General Not For Profit Corporation Act, is in good legal standing in the State of Illinois with no pending or threatened litigation.
- C. Certificate of Insurance compliance continues to be pursued. (See Attachment #4)

4.27.06.7 **Administrator's Report – J. Kent**

(See Attachment #5)

4.27.06.8 **ANSI Z97.1 Update – J. Kent**

(See Attachment #6)

4.27.06.9 **Testing Laboratory Status and Laboratory Performance Issues**

(See Attachment #7 and #8)

- A. The current status of SGCC approved testing laboratories was reviewed as well as a list of recent lab testing issues. After review a motion was made by Wright/Monroe effective July 1, 2006, SGCC shall make available the results of laboratory audits and corrective actions which are performed after July 1st, 2006. Labs shall receive notification of this policy immediately. After further discussion it was stated that currently SGCC does not release information that is not otherwise publicly available (i.e. information in the CPD) without the involved licensee or lab's permission. In this situation, if a licensee wished to see a lab audit report, SGCC would release that report with the lab's permission. With this understanding, the motion and second were withdrawn.
- B. After further review, a motion was made by Monroe/Rodman to remove SGCC Laboratory Approval from Laboratory ID 300 and 975 for failure to perform services in an acceptable manner and additionally from lab 975 for failure to pay SGCC Fees. The effective date shall be July 1st, 2006.

Vote: Unanimous Affirmative
Motion Passed

- C. After further discussion, the Administrator was instructed to direct all laboratories to provide glass surface temperatures at the time of test in the vicinity of the impact area for laminated glass impact testing.

4.27.06.10 **Program Testing Results Review**

(See Attachment #9)

The data presented was reviewed. There were discrepancies noted between the summary data and the detail. The Administrator stated he would review and correct as appropriate for these minutes. The attachment of these minutes reflects the corrected information.

4.27.06.11 **Measuring Thickness**

(See Attachment #10)

- A. Question was raised as to how thickness of Tempered Patterned Glass (TPG) relates to test acceptance criteria (ten largest particles)? The answer is that acceptance criteria for TPG is based on the weight of the test sample which is then used to calculate the maximum weight of the 10 largest particles.
- B. Discussion continues regarding the dimensions of the parallel steel bars used for measuring thickness of TPG. A Motion was made by Wright/Paschel to modify the SGCC laboratory Manual guideline T.P.4 to state that thickness of TPG shall be measured in accordance with the procedures in ASTM C1036.

Vote: Unanimous Affirmative
Motion Passed

4.27.06.12 **Quick Action Sub-Committee Report and Certification of Products Not Included in ASTM C1036**

(See Attachment #11 and #12)

Concern has been expressed as to how a product that does not meet US thickness tolerance ranges should be addressed in the SGCC certification program. Products produced outside the US, such as European patterned glass do not always conform to the thickness tolerances as listed in ASTM C1036. The SGCC Quick Action committee reviewed and ruled on this issue earlier this year concluding, *“Glass certified in the SGCC program must meet ASTM C1036”*.

4.27.06.13 The meeting was recessed at 5:00 pm

4.28.06.1 The meeting was reconvened at 8:35 am

4.28.06.2 Discussion continues regarding the Quick Action Sub-Committee report and certification of products not included in ASTM C1036. SGCC guideline G.29 was considered for the following revision:

DRAFT revision to guideline G.29

For the purposes of certification, the thickness requirements of Specification ASTM C1036 or equivalent CEN, ISO or other recognized thickness specifications shall apply.

After continued discussion, the matter was tabled for later discussion

4.28.06.3 **Certification of Laminated Glass**

(See Attachment #13)

The SGCC process for certifying laminated glass has been a matter of discussion at SGCC meetings for several years. Recently with discussions concerning products for which their thickness falls outside of ASTM C1036 (see attachment #12), SGCC has been requested to review guidelines for certification of laminated glass once again. After discussion, the following subcommittee was formed to review US vs. European thickness tolerances, and possible new options for certification of laminated glass. The group was encouraged to work with interlayer suppliers and GANA:

Rick Wright
Don Vild
Cliff Monroe

4.28.06.4 **Quality Assurance Program Requirements**

(See Attachment #14)

The quality assurance subcommittee formed at the last meeting has met several times to review SGCC's requirements for a licensee's quality assurance systems. The requirements developed by the group were reviewed and further revised at the meeting as documented in attachment #14. A motion was made by Monroe/Cody to accept the recommendations of the subcommittee as annotated. The changes will be added to replace the current requirements as stated in the Procedural Guide of the Certified Products Directory

Vote: Unanimous Affirmative
Motion Passed

It was suggested to request Bill Hannay to contact CPSC to determine if there are any specific CPSC requirements for record retention.

4.28.06.5 **Comparison of ANSI Z97.1-2004 and CPSC 16 CFR 1201**

(See Attachment #15)

The differences between the two standards were reviewed. The question has been raised:

"If ANSI Z97.1-2004 (Class A) is equal to or more severe than CPSC 16 CFR 1201, might composite testing be reduced to the impacting of 4 samples, and so claiming compliance to ANSI and CPSC?"

After discussion, there was not sufficient interest to pursue this matter further.

4.28.06.6 **Old Business**

Concern over test temperature range and how it affects results was raised. It was noted that the real world includes temperature ranges well beyond the 65 – 85F that is specified in the test standards. It was felt that attempts to tighten test temperature ranges would be counter to the test standards attempt to simulate real world conditions.

4.28.06.7 **New Business**

Testing of sizes other than 34 X 76-inches was discussed. Inspector selected vs. participant selected sample sizes and the effect on failure rates was reviewed. It was stated that significantly more effort is needed to test non-standard size samples and that if the trend of increased non-standard size selection continued, there may need to be an increase in testing fees.

4.28.06.8 **Next Meeting**

It was agreed that the next meeting would be in Corning, NY on October 11th and 12, 2006. The ASTM C1036 committee meets in Corning on October 10th.

4.28.06.9 The meeting was adjourned by the chair at 10:45 am.



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Certification Sub Committee Structure

Committee: Quick Action		Chair: Mark Cody
Scope: Between meetings resolution of any issue, appeal or request for review that can not be dealt with by the administrator, or is beyond the guidance provided to the Administrator or for which the Administrator has rendered a decision that is not acceptable by the applicant.		
Members		
SGCC President		Richard Paschel
Certification Committee Chair		Mark Cody
Public Interest		June Willcott

Committee: Nominating		Chair: Don Vild
Scope: Research and presentation of slate of SGCC Board nominees and officers for the annual SGCC participants meeting.		
Members		
Kevin Olah		

Committee: Time, Place and Marketing		Chair: Elaine Rodman
Scope: Canvas for scheduled meetings of glass and associated industry meetings; develop a list of possible locations and specific dates for future meetings for submittal to participants for vote. Maintain SGCC marketing plan.		
Members		
Rick Wright		

Committee: Laboratory and QA Inspection		Chair: Kevin Olah
Scope: Address and resolve concerns related to the interrelationship between the laboratories, the administrator, and SGCC participants. Development and maintenance of the laboratory testing manual and program quality assurance requirements.		
Members		
Bernie Herron		Rick Wright
Cliff Monroe		Don Vild
Tim Moore		Mark Cody

Committee: Laminated Glass Review		Chair: Rick Wright
Scope: Review SGCC guidelines for the certification of Laminated Glass		
Members		
Don Vold		Cliff Monroe



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ATTACHMENT #2

Annual Financial Comparison Summary

Revenues	2001/2002	2002/2003	2003/2004	2004/2005	2005/2006 Un-audited (a/o 4/17/06)
Administrative	\$201,037	\$259,563	\$238,383	\$300,770	\$239,456
Testing	\$263,298	\$336,961	\$360,036	\$429,682	\$248,064
Business Account Income	N/A	\$14,168	\$30,959	\$32,585	\$32,563
Impact Bag Revenue	N/A	N/A	N/A	N/A	\$550
Test Labs Under Five	N/A	N/A	N/A	N/A	\$3000
Interest Income	\$16,595	\$10,960	\$9,276	\$9,057	\$9,814
Total Revenues	\$480,930	\$621,652	\$638,654	\$772,094	\$540,243

Expenses	2001/2002	2002/2003	2003/2004	2004/2005	2004/2005
Administrative	\$201,037	\$259,563	\$238,383	\$300,770	\$239,456
Testing	\$263,298	\$290,445	\$327,036	\$429,682	\$248,064
Accounting	\$3,000	\$3,000	\$3,000	\$3000	\$3000
Legal	\$10,664	\$14,999	\$16,832	\$20,160	\$9,858
Board Meetings	\$8,689	\$8,638	\$9,383	\$9,877	\$4302
Miscellaneous	\$773	\$8,137	\$1,576	(\$163)	\$0
Insurance	\$3,560	\$4,450	\$5,340	\$5,607	\$5,607
Web Page	\$4,215	\$309	\$548	\$3,689	\$135
Bank Charges	N/A	N/A	N/A	N/A	\$1689
Marketing	\$22,356	\$20,215	\$20,592	\$6,783	\$0
Total Expenses	\$517,592	\$606,756	\$622,690	\$779,405	\$512,111
Change in Net Assets	(\$36,662)	\$11,896	\$15,964	(\$7,311)	\$28,132
Net Assets	\$129,349	\$141,245	\$157,209	\$149,898	\$178,030

Investments	Interest Rate	Date of Maturity	Current Value as of 4/18/06
#1 First National Bank of Dryden	2.58%	5/28/06	\$74,944.98
#3 National City Bank	3.72%	4/17/07	\$97,725.25
#6 MBNA Investor Services	3.73%	12/11/06	\$53,720.43
#7 Redwood National Bank	2.27%	11/14/06	\$96,096.36
#8 Community Investment Services	2.25%	6/21/06	\$103,601.98

SGCC Banking Accounts

Account	Balance as of 4/17/06
HSBC Checking Account	\$15,305.49
HSBC Savings Account	\$15,752.76
WSB Savings Account	\$106,408.29

SGCC ANTITRUST COMPLIANCE GUIDELINES

A. It is the policy of SGCC to comply fully with the antitrust laws applicable to trade association activities.

B. In furtherance of this policy, all SGCC meetings are attended by SGCC legal counsel, and the SGCC's officers, directors, and Administrator periodically consult with SGCC legal counsel.

C. Each participant in SGCC activities has a responsibility to avoid any improper conduct from an antitrust standpoint. The following guidelines will assist in meeting this responsibility.

1. SGCC meetings are held solely to manage and operate SGCC and its certification program, in accordance with SGCC's corporate purposes, the SGCC Bylaws, and the Certified Products Directory.

2. No participant in SGCC activities, including the certification program and standards development efforts (such as ANSI Z97.1), should attempt to misuse his or her position within SGCC to gain an unfair competitive advantage on behalf of his or her company.

3. To avoid antitrust problems (either civil or criminal), the following legally-sensitive subjects should not be discussed by competitors at or during SGCC meetings:

- a. Future marketing plans of specific competitors;
- b. Any complaints or business plans relating to specific customers, suppliers, geographic markets or products;
- c. Agreements between competitors to allocate markets, customers or products;
- d. Agreements between competitors to refuse to deal with a supplier or a customer;
- e. Purchasing plans or bidding plans (except privately between two parties with a vertical commercial relationship such as supplier and customer); or
- f. Current or future price information and pricing plans, bidding plans, refund or rebate plans, discount plans, credit plans, specific product costs, profit margin information or terms of sale.

Any question regarding the legality of a discussion topic or business practice should be brought to the attention of SGCC legal counsel* or your company's individual legal counsel.

April 2006

* William M. Hannay, Schiff Hardin LLP, 7200 Sears Tower, Chicago, IL 60606; (312) 258-5617; (312) 258-5700 (fax); e-mail: whannay@schiffhardin.com.

Company	Cert. Exp.	Corresp	Update
ACI Distribution	10/01/06		10/20/05
AFG Industries, Inc.	01/01/06	03/28/06	12/02/05
All Team Glass & Mirror, Ltd.	08/24/06		10/20/05
AMSCO Windows	01/01/07		01/27/06
Anthony International	01/01/07		01/31/06
Berkowitz, J.E.	05/01/06		05/13/05
Bronco Industries, Inc.	05/11/06		08/26/05
Cameron Glass, Inc.	07/01/06		07/12/05
Cardinal IG	10/01/05	10/11/05 01/10/06	10/15/04
Cat I Manufacturing, Inc.	11/08/07		01/13/06
Changshu Hard Glass	07/21/05	09/09/05 01/10/06	07/29/04
Changshu Zhongcheng Building Material Co., Ltd.	04/26/06		09/03/06
Cheil Glass Industrial Co., Inc.	12/10/05	01/10/06	12/21/04
Coastal Glass Distributors	10/01/06		10/01/05
Colonial Mirror & Glass Corp	05/31/06		08/16/05
Commercial Insulating Glass Co.	05/01/06		05/31/05
Consolidated Glass Corporation	11/15/07		12/14/04
Contour Industries, Inc.	01/01/06	03/28/06	12/14/04
Coraglass, Inc.	12/31/05	01/10/06	04/13/05
Craftsman Tempered Glass Division of Glass Wholesalers	08/01/06		02/02/06
Day Specialties Corporation AGC America, Inc.	01/01/06	03/28/06	10/11/05
Desert Glass Products, Inc.	10/25/05	01/10/06	02/09/05
Dlubak Corporation	07/07/06		09/16/05
Dong Sung Glass	12/27/05	03/27/06	06/21/05
Dongli Tempered Glass	09/30/05	10/11/05 01/10/06	01/06/05
Downey Glass Industries, LLC	11/08/05	01/10/06	05/05/05
Downey Glass (Oldcastle)	09/01/06		09/12/05
Eckelt Glas GmbH	01/01/05	04/14/04 06/29/04	04/13/04
Edge Seal Technologies	01/07/07		01/11/06
EFCO Corp.	10/01/06		10/04/05
Engineered Glass Products L.L.C.	06/01/06		05/31/05
Florida Laminated and Tempered Glass d/b/a FLT Glass	06/28/06		07/13/05
FTG of NC LLC	12/21/06		01/27/06
Galaxy Glass Corp., Inc.	11/21/04	01/04/05 03/25/05	01/31/04
Gemtron Corp.	09/30/06		10/31/05
GGI Glass Distributors Corp.	01/10/05	03/25/05 08/08/05 8/15/05 SGCC	04/25/04
Glass Distributors of America (Oldcastle)	09/01/06		09/12/05
Glass Dynamics, Inc.	12/10/06		01/26/06
Glasswall LLC	02/01/07		03/27/06
Glass, Inc.	12/19/06		01/18/06
Goldray, Inc.	05/22/06		09/22/05
Grand Glass Corporation	06/22/06		09/06/05
Guardian Industries/Fab	06/01/06		05/31/05
Haida Safety Glass, Ltd.	04/06/07		04/19/06

Company	Cert. Exp.	Corresp	Update
Hoffer's (Oldcastle)	09/01/06		09/12/05
Jiangyin Jingcheng High Quality Glass	07/10/06		09/13/05
Laminated Glass Corp. (Oldcastle)	09/01/06		09/12/05
Laurier Glass Ltd.	02/04/07		04/05/06
Mid Ohio Tempering	08/24/05	10/11/05 01/10/06	10/01/04
Milgard Tempering, Inc.	06/30/06		06/28/04
Mirror Crafters Custom Beveling, Inc.	05/30/06		06/07/05
Mirror Factory Inc.	04/01/07		03/27/06
Multiver	12/03/06		01/18/06
Nashville Tempered Glass Corp.	12/01/06		01/24/06
North American Glass Industries, Inc. (Oldcastle)	09/01/06		09/12/05
Oldcastle Glass	09/01/06		09/12/05
Patio Enclosures, Inc.	07/05/06		07/19/05
PDC Glass & Metal Services	08/24/06		01/19/06
PGT Industries	01/01/07	01/10/06	12/29/04
Philips Products, Inc.	06/01/06		04/14/06
PPG Industries, Inc.	Self-insured		12/04/96
Prelco, Inc.	11/30/06		01/17/06
PT Sinar Rasa Kencana	07/10/06		03/20/05
PT Surya Adhitia Fortuna Glass	07/10/06		01/17/06
PT Tunggal Majuasri Glass	02/11/06	03/28/06	02/24/05
Quaker Window Products	04/01/07		03/30/06
Quality Glass & Mirror Inc.	09/17/06		09/26/05
Shanghai Yaohua Pilkington Glass Co.	09/28/06		10/11/05
Shaw Glass Co., Inc.	12/31/06		01/19/06
SIGCO, Inc.	08/30/06		09/16/05
Sovis North America	03/01/07		03/21/06
Specialty Building Products	04/01/06		05/31/05
Swift Glass Co., Inc.	01/01/07		01/11/06
Syracuse Glass Co., Inc.	08/06/06		08/30/05
Techni-Glass, Inc.	09/22/06		08/30/05
Tecnoglas	09/12/06		01/10/06
Temperbent Glass	03/01/06		05/19/05
Tempered Glass, Inc.	08/24/05	10/11/05 01/10/06	10/01/04
Tempglass Group, Inc. (Oldcastle)	09/01/06		09/12/05
TRACO (Three Rivers Aluminum)	04/01/06		05/12/05
Triple Seal Ltd.	02/28/06	03/28/06	04/07/05
United Plate Glass Co., Inc.	01/01/07		01/31/06
Unitex Glass Corp.	08/01/06		08/16/05
Vetzeria Valentini S.R.L.	12/31/05	01/10/06	02/11/05
Vidrieria Argentina	04/01/06		05/31/05
Vidrio Saint Gobain de Mexico	07/01/05	09/09/05 01/10/06	10/26/04
Vidrios Lirquen	03/31/05	05/05/05 08/08/05 8/15/05 SGCC	09/23/04
Viracon, Inc.	03/01/07		03/06/06
Virginia Glass Products Corp.	08/01/06		09/12/05
Vitrerie April (Oldcastle)	09/01/06		09/12/05
Viwinco, Inc.	03/01/07		01/11/06
Westshore Glass	06/01/06		09/09/05

Company	Cert. Exp.	Corresp	Update
XYG Glass	01/01/07	03/15/06	03/08/06

ADMINISTRATIVE REPORT**SGCC April Meeting****April 27 & 28, 2006****January 1, 2006 Certified Products Directory (CPD)**

<i>Cut-off Date</i>	<i>Copies</i>	<i>Subscription List Mailing</i>
January 1, 2006	2300	2150

Certification Removed Since Publishing January 1, 2006 CPD**ANSI Program****Arch Aluminum & Glass Co.; Magnolia, TX**

SGCC #2622 1/8-inch TPG

SGCC #2623 3/16-inch TPG

Guardian Fabrication Inc.; Webster, MA

SGCC #2450 1/8-inch TPG

CPSC Program

None

Composite Program**Arch Aluminum & Glass Co.; Waukesha, WI**

SGCC #2493 1/4-inch LTG

Cardinal LG; Amery, WI

SGCC #2166 5/32-inch LTG

Dong Sung Glass Korea, Co., Ltd.; Inchon, Korea

SGCC #2771 3/16-inch TPG

Glass Innovations LLC; Gunagdong, China

SGCC #2938 1/2-inch TTG

Prelco, Inc.; Riviere-du-Loup, QC Canada

SGCC #2037 1/4-inch LTG

Qinhuangdao Topgem Glass Co., Ltd.; Qinhuangdao, China

SGCC #2949 1/8-inch TTG

Republic Windows & Doors, Inc.; Chicago, IL

SGCC #2274 1/8-inch TTG

SGCC #2744 3/16-inch TTG

SGCC #2745 1/4-inch TTG

SGCC #2454 1/8-inch TPG

Certified Products NOT in January 1, 2006 CPD**ANSI Program**

None

CPSC Program

None

Composite Program

A1 Glass Unlimited; South Gate, CA

SGCC #3388	3/16-inch	TTG
SGCC #3389	1/4-inch	TTG
SGCC #3390	3/8-inch	TTG
SGCC #3391	1/2-inch	TTG

Attachment # 5

AFG Industries St-Augustin-de-Desmaures, QC Canada

SGCC #3351	1/8-inch	TTG
SGCC #3352	5/32-inch	TTG
SGCC #3353	3/16-inch	TTG
SGCC #3354	1/4-inch	TTG
SGCC #3355	5/16-inch	TTG
SGCC #3356	3/8-inch	TTG
SGCC #3357	1/2-inch	TTG

Anlin Industries; Clovis, CA

SGCC #3076	1/8-inch	TPG
SGCC #3077	5/32-inch	TPG
SGCC #3078	3/16-inch	TTG
SGCC #3079	1/8-inch	TTG
SGCC #3360	3/16-inch	TTG

Arch Aluminum & Glass Co.; Waukesha, WI

SGCC #3430	1/4-inch	TTG
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Cardinal IG Mountain Top; Mountain Top, PA

SGCC #3072	3/16-inch	TPG
SGCC #3115	5/32-inch	TPG

Dlubak Corporation; Blairsville, PA

SGCC #3017	1/4-inch	TTG
SGCC #3018	1/2-inch	TTG
SGCC #3019	3/4-inch	TTG
SGCC #3020	1/4-inch	LTG
SGCC #3021	9/16-inch	LTG

Glass Design of Miami; Miami, FL

SGCC #3453	1/4-inch	TTG
SGCC #3454	3/8-inch	TTG

GMS Tempering Corporation; Hollywood, FL

SGCC #3449	3/16-inch	TTG
SGCC #3450	1/4-inch	TTG
SGCC #3451	3/8-inch	TTG
SGCC #3452	1/2-inch	TTG

Grand Glass; Jakarta, Indonesia

SGCC #3300	1/2-inch	TTG
SGCC #3301	1/4-inch	LTG
SGCC #3302	3/8-inch	LTG
SGCC #3303	1/2-inch	LTG

Intex Glass Co., Ltd.; Xiamen, China

SGCC #3025	5/16-inch	TTG
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Oldcastle Glass Warrenton; Warrenton, MO

SGCC #3144	1/8-inch	TTG
SGCC #3145	5/32-inch	TTG
SGCC #3146	3/16-inch	TTG
SGCC #3147	1/4-inch	TTG
SGCC #3148	3/8-inch	TTG
SGCC #3149	1/2-inch	TTG
SGCC #3150	3/4-inch	TTG
SGCC #3151	1/8-inch	TPG
SGCC #3152	5/32-inch	TPG
SGCC #3153	3/16-inch	TPG
SGCC #3154	1/4-inch	TPG
SGCC #3155	3/8-inch	TPG

Oldcastle Glass Tampa; Tampa, FL

SGCC #3116	1/8-inch	TTG
SGCC #3117	5/32-inch	TTG
SGCC #3118	3/16-inch	TTG
SGCC #3119	1/4-inch	TTG
SGCC #3120	3/8-inch	TTG
SGCC #3121	1/2-inch	TTG
SGCC #3122	1/8-inch	TPG
SGCC #3123	5/32-inch	TPG
SGCC #3124	3/16-inch	TPG
SGCC #3125	1/4-inch	TPG
SGCC #3216	1/4-inch	LTG

Oldcastle Glass Albertville; Albertville, MN

SGCC #3104	1/8-inch	TTG
SGCC #3105	5/32-inch	TTG
SGCC #3106	3/16-inch	TTG
SGCC #3107	1/4-inch	TTG
SGCC #3108	3/8-inch	TTG
SGCC #3109	1/2-inch	TTG
SGCC #3110	3/4-inch	TTG
SGCC #3111	1/8-inch	TTG
SGCC #3112	5/32-inch	TPG
SGCC #3113	3/16-inch	TPG
SGCC #3114	1/4-inch	TPG
SGCC #3127	3/8-inch	TPG

Oldcastle Glass Shawnee; Shawnee, OK

SGCC #3095	1/8-inch	TTG
SGCC #3096	5/32-inch	TTG
SGCC #3097	3/16-inch	TTG
SGCC #3098	1/4-inch	TTG
SGCC #3099	3/8-inch	TTG
SGCC #3100	1/2-inch	TTG
SGCC #3101	3/4-inch	TPG
SGCC #3102	1/8-inch	TPG
SGCC #3103	5/32-inch	TPG

Oldcastle Glass Phoenix; Phoenix, AZ

SGCC #3128	1/8-inch	TTG
SGCC #3129	5/32-inch	TTG
SGCC #3130	3/16-inch	TTG
SGCC #3131	1/4-inch	TTG
SGCC #3132	3/8-inch	TTG
SGCC #3133	1/2-inch	TTG
SGCC #3134	3/4-inch	TPG
SGCC #3135	1/8-inch	TPG
SGCC #3136	5/32-inch	TPG

Oldcastle Glass CPG; Wright City, MO

SGCC #3137	1/8-inch	TTG
SGCC #3138	5/32-inch	TTG
SGCC #3139	3/16-inch	TTG
SGCC #3140	1/4-inch	TTG
SGCC #3141	3/8-inch	TTG
SGCC #3142	1/2-inch	TTG
SGCC #3143	3/4-inch	TTG

Oldcastle Glass Houston; Houston, TX

SGCC #3156	1/8-inch	TTG
SGCC #3157	5/32-inch	TTG
SGCC #3158	3/16-inch	TTG
SGCC #3159	1/4-inch	TTG
SGCC #3160	3/8-inch	TTG
SGCC #3161	1/2-inch	TTG
SGCC #3162	1/4-inch	LTG
SGCC #3163	5/32-inch	TPG
SGCC #3164	3/16-inch	TPG
SGCC #3165	1/4-inch	TPG
SGCC #3166	3/8-inch	TPG

Oldcastle Glass Wausau, Schofield, WI

SGCC #3167	1/8-inch	TTG
SGCC #3168	5/32-inch	TTG
SGCC #3169	3/16-inch	TTG
SGCC #3170	1/4-inch	TTG
SGCC #3171	5/16-inch	TTG
SGCC #3172	3/8-inch	TTG
SGCC #3173	1/2-inch	TTG
SGCC #3174	3/4-inch	TTG
SGCC #3175	1/8-inch	LTG
SGCC #3176	1/4-inch	LTG
SGCC #3177	5/32-inch	TPG
SGCC #3178	3/16-inch	TPG
SGCC #3179	1/4-inch	TPG

Oldcastle Glass Moorestown; Moorestown, NJ

SGCC #3180	1/8-inch	TTG
SGCC #3181	5/32-inch	TTG
SGCC #3182	3/16-inch	TTG
SGCC #3183	1/4-inch	TTG
SGCC #3184	3/8-inch	TTG
SGCC #3185	1/2-inch	TTG
SGCC #3186	1/8-inch	TPG
SGCC #3187	5/32-inch	TPG
SGCC #3188	3/16-inch	TPG
SGCC #3189	7/32-inch	TPG
SGCC #3190	3/8-inch	TPG

Oldcastle Glass Fremont; Fremont, CA

SGCC #3191	1/8-inch	TTG
SGCC #3192	5/32-inch	TTG
SGCC #3193	3/16-inch	TTG
SGCC #3194	1/4-inch	TTG
SGCC #3195	3/8-inch	TTG
SGCC #3196	1/2-inch	TTG
SGCC #3197	3/4-inch	TPG
SGCC #3198	1/4-inch	LTG
SGCC #3199	1/8-inch	TPG
SGCC #3200	5/32-inch	TPG
SGCC #3201	3/16-inch	TPG
SGCC #3202	7/32-inch	TPG
SGCC #3203	3/8-inch	TPG

Oldcastle Glass Louisville; Louisville, KY

SGCC #3204	1/8-inch	TTG
SGCC #3205	5/32-inch	TTG
SGCC #3206	3/16-inch	TTG
SGCC #3207	1/4-inch	TTG
SGCC #3208	3/8-inch	TTG
SGCC #3209	1/2-inch	TTG
SGCC #3210	5/16-inch	LTG
SGCC #3211	1/8-inch	TPG
SGCC #3212	5/32-inch	TPG
SGCC #3213	3/16-inch	TPG
SGCC #3214	1/4-inch	TPG
SGCC #3215	3/8-inch	TPG

Oldcastle Glass Vancouver; Battle Ground, WA

SGCC #3219	1/8-inch	TTG
SGCC #3220	5/32-inch	TTG
SGCC #3221	3/16-inch	TTG
SGCC #3222	1/4-inch	TTG
SGCC #3223	5/16-inch	TTG
SGCC #3224	3/8-inch	TTG
SGCC #3225	1/2-inch	TTG
SGCC #3226	1/8-inch	TPG
SGCC #3227	5/32-inch	TPG
SGCC #3228	3/16-inch	TPG
SGCC #3229	1/4-inch	TPG
SGCC #3230	3/8-inch	TPG

Oldcastle Glass Perrysburg; Perrysburg, OH

SGCC #3233	1/8-inch	TTG
SGCC #3234	5/32-inch	TTG
SGCC #3235	3/16-inch	TTG
SGCC #3236	1/4-inch	TTG
SGCC #3237	3/8-inch	TTG
SGCC #3238	1/2-inch	TTG
SGCC #3239	5/8-inch	TTG
SGCC #3240	3/4-inch	TTG
SGCC #3241	9/32-inch	LTG
SGCC #3242	1/8-inch	TPG
SGCC #3243	3/16-inch	TPG
SGCC #3244	1/4-inch	TPG
SGCC #3245	3/8-inch	TPG

Oldcastle Glass Calgary; Calgary, AB Canada

SGCC #3262	3/8-inch	TTG
SGCC #3263	1/8-inch	TTG
SGCC #3264	5/32-inch	TTG
SGCC #3265	3/16-inch	TTG
SGCC #3266	1/4-inch	TTG
SGCC #3267	5/16-inch	TTG
SGCC #3268	3/8-inch	TTG
SGCC #3269	1/2-inch	TTG
SGCC #3270	5/8-inch	TTG
SGCC #3271	3/4-inch	TTG
SGCC #3272	1/8-inch	TPG
SGCC #3273	5/32-inch	TPG
SGCC #3274	3/16-inch	TPG
SGCC #3275	1/4-inch	TPG

Oldcastle Glass Rock Hill; Rock Hill, SC

SGCC #3276	1/8-inch	TTG
SGCC #3277	3/16-inch	TTG
SGCC #3278	1/4-inch	TTG
SGCC #3279	3/8-inch	TTG
SGCC #3280	1/2-inch	TTG
SGCC #3281	1/8-inch	TPG
SGCC #3282	5/32-inch	TPG
SGCC #3283	3/16-inch	TPG
SGCC #3284	1/4-inch 3	TPG
SGCC #3285	3/8-inch	TPG

Attachment # 5

Oldcastle Glass Burnaby; Burnaby BC Canada

SGCC #3286	1/8-inch	TTG
SGCC #3287	5/32-inch	TTG
SGCC #3288	3/16-inch	TTG
SGCC #3289	1/4-inch	TTG
SGCC #3290	5/16-inch	TTG
SGCC #3291	3/8-inch	TTG
SGCC #3292	1/2-inch	TTG
SGCC #3293	5/8-inch	TTG
SGCC #3294	3/4-inch 3	TTG
SGCC #3295	1/8-inch	TPG
SGCC #3296	5/32-inch	TPG
SGCC #3297	3/16-inch	TPG

Oldcastle Glass Lithia Springs; Lithia Springs, GA

SGCC #3304	1/8-inch	TTG
SGCC #3305	3/16-inch	TTG
SGCC #3306	1/4-inch	TTG
SGCC #3307	1/4-inch	TPG
SGCC #3308	1/8-inch	TPG
SGCC #3309	3/16-inch	TPG

Oldcastle Glass District of Columbia; Warrenton, VA

SGCC #3341	1/8-inch	TTG
SGCC #3342	5/32-inch	TTG
SGCC #3343	3/16-inch	TTG
SGCC #3344	1/4-inch	TTG
SGCC #3345	3/8-inch	TTG
SGCC #3346	1/2-inch	TTG
SGCC #3347	5/32-inch	TPG
SGCC #3348	3/16-inch	TPG
SGCC #3349	1/4-inch 3	TPG
SGCC #3350	3/8-inch	TPG

Oldcastle Glass Stone Mountain; Stone Mountain, GA

SGCC #3329	1/8-inch	TTG
SGCC #3330	5/32-inch	TTG
SGCC #3331	3/16-inch	TTG
SGCC #3332	1/4-inch	TTG
SGCC #3333	3/8-inch	TTG
SGCC #3334	1/2-inch	TTG
SGCC #3335	3/4-inch	TTG
SGCC #3336	1/8-inch	TPG
SGCC #3337	5/32-inch	TPG
SGCC #3338	3/16-inch	TPG
SGCC #3339	1/4-inch	TPG
SGCC #3340	3/8-inch	TPG

Oldcastle Glass Indianapolis; Indianapolis, IN

SGCC #3259 3/8-inch TPG

Attachment # 5

Oldcastle Glass Everett; Everett, WA

SGCC #3371 1/8-inch TTG

SGCC #3372 5/32-inch TTG

SGCC #3373 3/16-inch TTG

SGCC #3374 1/4-inch TTG

SGCC #3375 3/8-inch TTG

SGCC #3376 1/2-inch TTG

SGCC #3377 1/8-inch TPG

SGCC #3378 5/32-inch TPG

SGCC #3379 3/16-inch TPG

SGCC #3380 1/4-inch TPG

SGCC #3381 3/8-inch TPG

Oldcastle Glass Rock Hill Specialty; Rock Hill, SC

SGCC #3397 1/8-inch TTG

SGCC #3398 5/32-inch TTG

SGCC #3399 3/16-inch TTG

SGCC #3400 1/4-inch TTG

SGCC #3401 5/16-inch TTG

SGCC #3402 3/8-inch TTG

SGCC #3403 1/2-inch TTG

SGCC #3404 3/16-inch TPG

Oldcastle Glass Denver; Denver, CO

SGCC #3310 1/8-inch TTG

SGCC #3311 5/32-inch TTG

SGCC #3312 3/16-inch TTG

SGCC #3313 1/4-inch TTG

SGCC #3314 3/8-inch TTG

SGCC #3315 1/2-inch TTG

SGCC #3316 3/4-inch TTG

SGCC #3317 1/8-inch TPG

SGCC #3318 5/32-inch TPG

SGCC #3319 3/16-inch TPG

SGCC #3320 1/4-inch TPG

SGCC #3321 3/8-inch TPG

SIGCO, Inc.; Portland, ME

SGCC #3028 3/16-inch TPG

Simonton Windows; Lyons, GA

SGCC #3369 1/8-inch TTG

SGCC #3370 3/16-inch TTG

SGCC #3384 9/32-inch LTG

SGCC #3385 13/32-inch LTG

Spec-Temp, Inc.; Antwerp, OH

SGCC #3358 5/32-inch TBG

Triple Seal Ltd.; Toronto, ON Canada

SGCC #3023 3/8-inch TTG

Val S.P.A.; Lammari, Italy

SGCC #3362 5/32-inch TBG

SGCC #3363 3/16-inch TBG

SGCC #3364 1/4-inch TBG

SGCC #3375 5/16-inch TBG

Vitro Colombia S.A.; Cundinamarca, Colombia

SGCC #3260 5/16-inch TTG

Viwinco, Inc.; Morgantown, PA

SGCC #3405 3/16-inch TTG

Attachment # 5

XYG Glass; GuangDong, China

SGCC #3085 3/16-inch TTG

SGCC #3261 1/8-inch TTG

SGCC #3361 5/8-inch TTG

Name ChangesFuNing HuaChangLong Glass Co.; Qinhuangdao City, China
n/k/a Qinhuangdao AMPAC Building ProductsUnitex Glass (Xiamen) Co., Ltd.; Xiamen, China
n/k/a Intex Glass Co., Ltd.Vitemco S.A. – Glasswall, Inc.; Cundinamarca, Colombia
n/k/a Vitro Colombia S.A.**Changes from ANSI only to Composite****Cardinal CG; Buford, GA**

SGCC #2146 1/8-inch TPG

SGCC #2147 5/32-inch TPG

SGCC #2148 3/16-inch TPG

Requests to become an SGCC® Approved Laboratory

- Hurricane Test Lab, Lithia Springs, GA
- See agenda item on Non-US Labs

SGCC Participation Comparison

	F05 (AS OF 3/29/05)	L05 (AS OF 10/11/05)	F06 (AS OF 4/17/06)
No. of Participating Plants	164	166	199
No. of Offshore Plants (Non US & Canada)	25	30	34
No. of Licensees	100	102	105
Total Certified Products	867	894	1196
ANSI Only	125	121	108
CPSC Only	58	51	62
COMPOSITE	684	722	1026

SGCC Website Report

<u>2005- 2006</u>	<u>Total Visitors</u>	<u>Most Visited Section</u>	<u>2nd Most Visited</u>	<u>3rd Most Visited</u>	<u>Downloads of CPD</u>	<u>Top Visiting Country</u>
<u>October</u>	<u>3,246</u>	Who's certified	Approved Labs	Initial Process	149	China 5.9% of all visitors
<u>November</u>	<u>2,921</u>	Who's Certified	Approved Labs	Initial Process	412	China 13% of all visitors
<u>December</u>	<u>2,655</u>	Who's Certified	Approved Labs	About SGCC	320	China 14.2% of all visitors
<u>January</u>	<u>3,296</u>	Who's Certified	Approved Labs	Initial Process	131	China 6.3% of all visitors
<u>February</u>	<u>2,829</u>	Who's Certified	Upcoming Meetings	About SGCC	117	China 6.8% of all visitors
<u>March</u>	<u>3,698</u>	Who's Certified	Approved Labs	About SGCC	284	China 8.1 % of all visitors

ANSI Z97.1 –2004 Standard Development Update

Chair: Kevin Olah – Out for ballot (Valerie Block former chair)
Vice Chair: John Kent – Current, but out for ballot to reaffirm
Secretary: Julie Schimmelpenningh
Secretariate: GISC – Glazing Industry Secretariate Committee

March 13, 2006: Communication and ballots distributed by Secretary. Update,
Request for membership, 3 ballots due April 21, 2006

1. ASC operating procedures
2. Chair – Kevin Olah
3. Vice Chair – John Kent

2nd Quarter 2006: Proposed conference call to discuss any outstanding issues and
results of ballot

3rd Quarter 2006: Proposed face-to-face meeting to initiate standard review

SGCC Testing Laboratory Status (as of 4-27-06)

5. *Laboratory agrees that initial approval by the SGCC Certification Committee is contingent upon an initial survey of Laboratory's test facilities by the SGCC. Laboratory agrees to pay the cost of the initial survey and inspection of the testing facilities. Ongoing laboratory approval is subject to approval by the SGCC Certification Committee and shall be for a period of two (2) years. During this period the laboratories facilities shall be re-surveyed and all issues arising from this survey resolved. A fee of \$1000 annually for each facility shall be charged for SGCC Laboratory approval and surveys. This fee shall be waived under the following conditions:*

1. *During the first 2 calendar years of initial SGCC Lab approval.*
2. *When 5 or more SGCC participating plants have selected the facility as their designated testing laboratory for that year.*

7. *Approval as an SGCC Approved Testing Laboratory may be removed for failure to adhere to any of the above provisions or failure to pay any outstanding fees older than 60 days.*

Company	Location	Date of Initial Approval	Date of Last Inspection	Approved by SGCC	Signed Agreement	Lab fee PAID (Inv 1/19/06)
Architectural Testing Inc.	St. Paul, MN	10/6/92	11/8/05	4/14/05	9/9/04	
Architectural Testing Inc.	York, PA	6/30/85	5/2/05	4/14/05	10/26/04	
Architectural Testing Inc.	Fresno, CA	11/18/97	4/20/05	4/14/05	9/9/04	
Architectural Testing Inc.	Southlake, TX	7/1/04	3/16/06	4/14/05	6/25/04	\$1000 - PD
Bowser-Morner, Inc.	Dayton, OH	1991	4/21/04 – Tent 4/25/06	4/14/05	1/19/90	
Construction Consulting Laboratory West	Ontario, CA	11/19/97	1/27/06	4/14/05	9/7/04	
ETC Laboratories	Rochester, NY	3/8/94	10/13/05	4/14/05	7/30/04	
Fenestration Testing Laboratories	Hialeah, FL	10/2/97	4/13/05	4/14/05	10/22/04	
Intertek	Duluth, GA	1989	10/25/05	4/14/05	3/9/90	
Intertek	Cortland, NY	1981	6/22/04	4/14/05	6/23/04	
Intertek	Middleton, WI	1992	4/6/01 – Tent 5/11/06	4/14/05	9/21/04	\$1000 – Not PD as of 4/17/06
Quality Testing, (Formerly Performance Testing, Inc.)	Everett, WA	10/14/97	8/11/04	4/14/05	2/2/06	
Rone Engineers, Ltd.	Dallas, TX	3/31/00	3/16/06	4/14/05	7/14/04	\$1000 - PD
Stork-Patzig Testing Laboratories	Des Moines, IA	6/11/99	5/13/05	4/14/05	4/4/05	
Stork-Southwestern Laboratories	Houston, TX	1/15/90	3/13/06	4/14/05	7/15/04	

(B10) Laboratory Testing Issues

Over the last 6 years SGCC has averaged 30 product test failures per year. 2006 year to date we have had 28 failures. Although I do not have any tangible data to explain this increased failure rate, I have had several comments of concern from licensees for unusual test results. Here are a few comments:

1. The L05 certification selection period which the 2006 failures are a result of were tested to the new ANSI Z97.1-2004 standard in PROTOTYPE (34 X 76) size.
2. For some laminated products the test was clearly more severe than before. All impacts were at 48-inches where as before 4 samples were impacted at the graduated height 12, 18, 48. Often samples broke at 12 or 18-inches thus not receiving the full 48-inch impact.
3. Lab 300 had personnel leave in September 05 and to date have not notified us of a replacement. After significant delays, lab 300 choose to re-ship SGCC test samples to a sister facility lab 975 for testing. Among other problems with communication, this re-shipping resulted in the breakage of a number of test samples.
4. Lab 975, until testing lab 300's glass had not done any SGCC testing in over 3 years. 2 of the SGCC participants involved reported experienced failures from this test for the first time ever. Additionally, Lab 975 as of this date has not paid their annual lab fee invoice.
5. An SGCC participant who also has a self certification testing program reported high rates of failure from Lab 275.
6. 8 of the 4th Q 2005, 1st Q 2006 failures are attributed to 2 plants testing with Labs 900 and 550
7. One plant that had 3, 2006 failures stated they have an extensive QA in house testing program (bag drop testing). In testing with Lab 100, each of 4 groups tested had 3 samples pass easily and 1 sample fail.
8. 2 Boil failures experienced at lab 100 were reported to be because of "bubbles" being present after boil testing. The participant has alleged that the "bubbles" observed are within normal production practices and were most likely present prior to sending the samples to the lab. After review of the samples, the SGCC Administrator who support the position of the participant.

Program Testing Results

ATTACHMENT #9

		2000	2001	2002	2003	2004	2005	F06
Selections (Certification Period)	Total	1281	1373	1470	1536	1620	1729	
	Participant	925 (72)	755 (55)	627 (43)	365 (24)	682 (42)	925 (54)	
	Inspector	356 (28)	618 (45)	843 (57)	1171 (76)	938 (58)	804 (46)	
	Total Tempered Products						1643 (95)	
	Total Laminated Products						86 (5)	
Product Failures (Calendar Year) % Total Failures/% Total Products	Total	21 (1.6)	33 (2.4)	26 (1.8)	31 (2)	36 (2.2)	31 (1.8)	28
	Participant Selected	7 (33/.5)	25 (76/1.8)	21 (81/1.4)	17 (55/1.1)	24 (67/1.5)	18 (58/1)	25
	Inspector Selected	14 (67/1.1)	8 (24/.6)	5 (19/.4)	14 (45/.9)	12 (33/.7)	13 (42/.8)	3
	34x76	20 (95/1.6)	30 (91/2.2)	23 (88/1.6)	16 (52/1)	25 (69/1.5)	30 (97/1.7)	28
	Odd Size	1 (5/.1)	3 (9/.2)	3 (12/.2)	14 (45/.9)	6 (17/.4)	0	0
	16x30			0	1 (3/.1)	5 (14/.3)	1 (3/.1)	0
Tempered Failures						24 (67/1.5)	22 (71/1.3)	20
Laminated Impact Failures						4 (11/.2)	4 (13/.2)	5
Laminated Boil Failures						8 (22/.5)	5 (16/.3)	3

Revised Date: 9/25/06

Failure Log

Failure ID	Product Type	Thickness	Size Tested	Inspector or Participant?	Type of Failure	Interlayer?	Cert. Period	Lab?
05-01	TTG	3/16	34x76	I	Impact		L04	ATI York
05-02	LTG	7/32	34x76	I	Boil	(.030)(b)	L04	Intertek Cortland
05-03	LTG	1/4	34x76	I	Boil	(.030)(b)	L04	Intertek Cortland
05-04	LTG	1/2	34x76	I	Boil	(.030)(b)	L04	Intertek Cortland
05-05	TPG	1/8	34x76	P	Impact		F05	BM
05-06	TPG	5/32	34x76	P	Impact		F05	BM
05-07	LTG	1/4	16x30	I	Impact	(.030)(b)	F05	Intertek Cortland
05-08	TPG	1/8	34x76	I	Impact		F05	Stork-SW
05-09	TPG	1/2	34x76	I	Impact		F05	ATI York
05-10	TPG	1/4	34x76	I	Impact		F05	ATI York
05-11	TPG	1/8	34x76	P	Impact		F05	CCL
05-12	LTG	1/4	34x76	P	Boil	(.030)(b)	F05	ATI York
05-13	TPG	1/4	34x76	P	Impact		L04RT	ATI York
05-14	LTG	1/4	34x76	P	Boil	(.030)(b)	F05RT	ATI York
05-15	TTG	1/8	34x76	P	Impact		L05	Stork-SW
05-16	TTG	1/4	34x76	P	Impact		L05	Stork-SW
05-17	TPG	5/32	34x76	P	Impact		L05	Stork-SW
05-18	TTG	3/8	34x76	P	Impact		L05	Stork-SW
05-19	TPG	1/8	34x76	I	Impact		L05	Stork-SW
05-20	LTG	5/32	34x76	P	Impact	(.015) (b)	L05	ATI St. Paul
05-21	LTG	1/4	34x76	P	Impact	(.030) (b)	L05	ATI St. Paul
05-22	LTG	7/32	34x76	P	Impact	(.030) (b)	L05	ATI St. Paul
05-23	TBG	1/4	34x76	P	Impact		L05	ATI St. Paul
05-24	TPG	5/32	34x76	I	Impact		L05	Quality Testing
05-25	TTG	3/16	34x76	P	Impact		L05	ATI York
05-26	TTG	3/16	34x76	P	Impact		L05	BM
05-27	TTG	5/16	34x76	P	Impact		L05	BM
05-28	TTG	1/8	34x76	I	Impact		L05	Stork-SW
05-29	TPG	3/16	34x76	P	Impact		L05	ATI York
05-30	TPG	5/32	34x76	I	Impact		L05	Stork-SW
05-31	TPG	1/8	34x76	I	Impact		L05	Stork-SW

Failure ID	Product Type	Thickness	Size Tested	Inspector or Participant?	Type of Failure	Interlayer?	Cert. Period	Lab?
06-01	TTG	1/8	34x76	P	Impact		L05	Intertek Duluth
06-02	TTG	3/4	34x76	P	Impact		L05	Bowser-Morner
06-03	TTG	5/32	34x76	I	Impact		L05	Bowser-Morner
06-04	TPG	5/32	34x76	I	Impact		L05	Bowser-Morner
06-05	TPG	3/16	34x76	I	Impact		L05	Intertek
06-06	TPG	3/16	34x76	P	Impact		L05	ATI York
06-07	LTG	1/4	34x76	P	Impact	(.030)(b)	L05	ETC Labs
06-08	TTG	1/4	34x76	P	Impact		L05	Bowser-Morner
06-09	TTG	1/8	34x76	P	Impact		L05	Intertek Duluth
06-10	TTG	1/8	34x76	P	Impact		L05	Bowser-Morner
06-11	TTG	1/4	34x76	P	Impact		L05	Bowser-Morner
06-12	TPG	3/16	34x76	P	Impact		L05	Intertek Cortland
06-13	TPG	3/8	34x76	P	Impact		L05	Stork
06-14	TTG	1/4	34x76	P	Impact		L05	Intertek Duluth
06-15	TPG	3/16	34x76	P	Impact		L05	Intertek Duluth
06-16	LTG	1/4	34x76	P	Impact	(.015)(b)	L05	ETC Labs
06-17	LTG	1/4	34x76	P	Impact	(.030)(b)	L05	ATI York
06-20	LTG	1/4	34x76	P	Impact	(.030)(b)	L05RT	ETC Labs
06-21	TTG	1/4	34x76	P	Impact		L05	Bowser-Morner
06-22	TTG	1/8	34x76	P	Impact		L05	FTL
06-23	LTG	1/4	34x76	P	Boil	(.030)(b)	L05	ATI York
06-24	TTG	3/8	34x76	P	Impact		L05	ATI York
06-25	TTG	3/16	34x76	P	Impact		L05	ATI York
06-26	TPG	1/8	34x76	P	Impact		L05	ATI York
06-27	TBG	1/4	34x76	P	Impact		L05	Intertek
06-28	LTG	5/32	34x76	P	Impact	.015 (b)	L05RT	ATI St. Paul

As of 4/7/06

Measuring Thickness

SGCC Lab Manual

Instruction TP.4

For each specimen, measure the maximum thickness by using two flat steel bars six inches long. The two bars are placed on each side of the glass, away from tong marks, and the maximum thickness of the specimen is determined by subtracting the known thickness of the steel bars from the overall measurement. The measurement is to be taken on two adjacent sides and the maximum thickness in inches reported. It is recommended that 0.250 or 0.500 inch steel gauge blocks be used. They are obtainable from Starrett, DoAll, and other vendors.

Instruction L.1

Each impact test specimen - measure the overall thickness.

One impact test specimen - measure the thickness of each light of glass and the plastic interlayer.

One boil test specimen - measure the thickness of each light of glass and the plastic interlayer.

Note: SGCC standard test method one - see page 10.

SGCC standard test method two - see page 10.

ASTM C1036 - 01

6.2.5 Measuring the Thickness of Patterned Glass – The thickness of patterned glass shall be determined by measuring high point to high point to the precision and accuracy in table 8, using a measuring device with 19 mm (3/4 in.) diameter or greater contact surfaces. As an alternate method, the thickness may be measured using two bars with flat and parallel surfaces 75 mm (3 in.) long or greater X 6 mm (0.25 in.) wide or greater X (0.25 in.) thick or greater.

PROCEDURE ONE
FOR MEASURING THICKNESS OF PLASTIC INTERLAYER USED IN ORDINARY LAMINATED GLASS

(Refer to Figure No. 1 on Page 11)

1. Measure the thickness of the laminated sheet at three places; Compute the average.
2. At a corner of the sheet, score the glass on one side from (0,4) to (2,0) using an ordinary glass cutter.
3. Turn the sheet over and score the other side from (0', 2') to (4', 0').
4. Using a pair of cut running pliers, such a Red Devil #1936, run each of these scores, taking care not to crush the glass.
5. Warm the corner by contact with a hot plate, or steam bath, turning every few seconds, until the plastic starts to soften, separate and remove the two triangles of glass with a knife or spatula.
6. Scrape the newly exposed glass surfaces clean and measure each glass layer with a micrometer.
7. Subtract the sum of the glass thicknesses from the average thickness of the laminated sheet.
8. Report the difference as the thickness of the plastic interlayer.

PROCEDURE TWO

1. Measure the thickness of two (2) steel gauge blocks having nominal thicknesses of 0.125 and 0.500 inches. Measurement is to be made with a calibrated micrometer.
2. Calibrate the ultrasonic thickness gauge using the above steel gauge blocks as the standard. Note that calibration of the ultrasonic thickness gauge prior to each use and the use of couplers are required.
3. Measure the overall laminated sheet thickness at three (3) places near the corner selected. Compute the average of these readings.
4. Measure each lite of glass in the laminated sheet at the corner selected in step 3 above. Record these two (2) thicknesses and total them.
5. Subtract the total of the two (2) thicknesses obtained in step 4 above from the average thickness of the laminated sheet.
6. Report the difference as the thickness of the plastic interlayer.

NOTE: An ultrasonic thickness gauge demonstrating an accuracy of plus or minus 0.001 inches is mandatory. The transducer employed shall have a diameter of 0.500 to 1.000 inches. The frequency may be 2.25MHz, 5.0 Mhz or 10 Mhz.

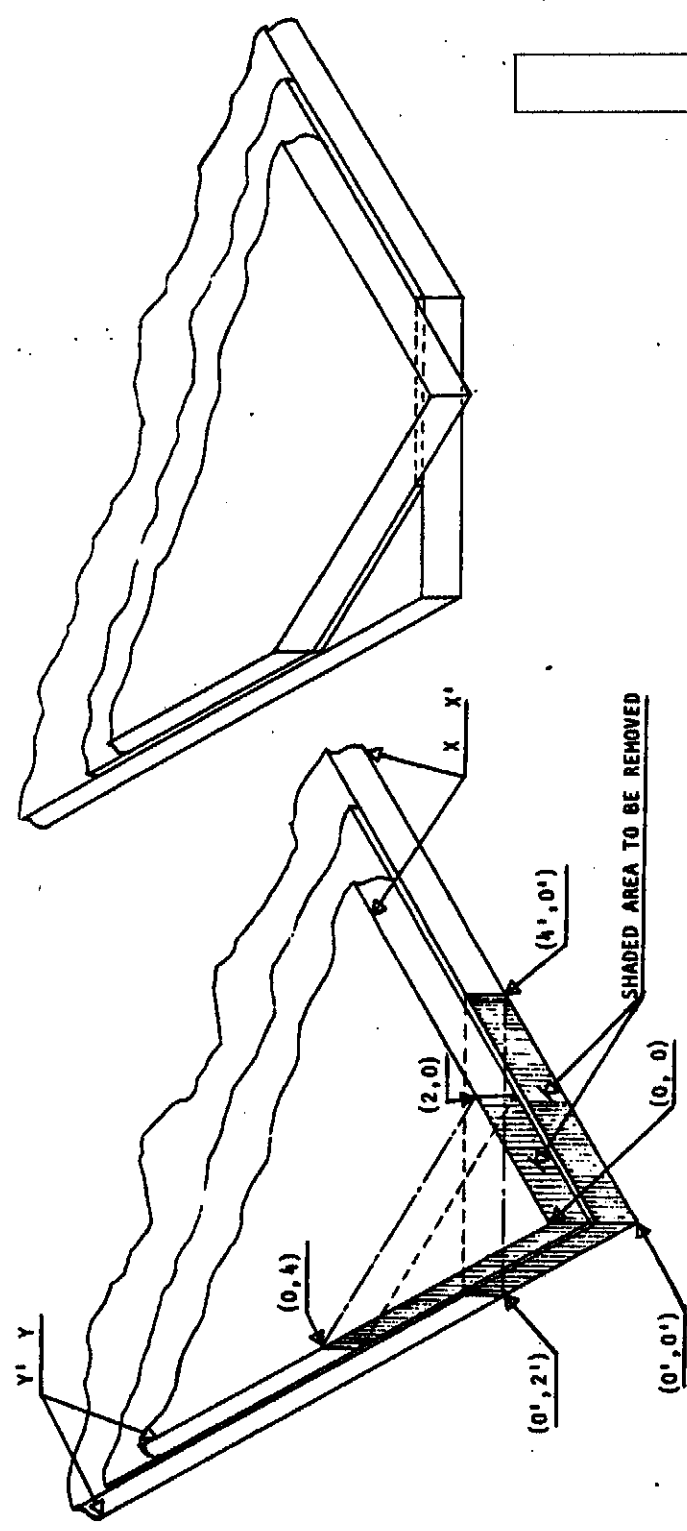


Figure No. 1

FIGURE 1
MEASUREMENT OF PLASTIC INTERLAYER IN LAMINATED GLASS

SGCC Quick Action Sub-Committee

(1-6-06)

Committee Members:

President	-	Currently Richard Paschel
Certification Committee Chair	-	Currently Mark Cody
Administrative Manager	-	Currently John Kent
Public Interest Member	-	Currently June Willcott

Subject: Certification of Non-US Patterned Glass

Reference:

G.29

For the purposes of certification, the thickness requirements of Specification ASTM C1036 shall apply.

10.5.04.10 Review of Guideline G. 29

Guideline G.29 states that the thickness requirements of ASTM C1036 shall apply to SGCC certification, yet a number of SGCC guidelines refer to ranges and values outside the 1036 ranges. It was the feeling of the group that these guidelines must have been adopted to address gaps or inadequacies in earlier versions of C1036. After discussion, a motion was made by Carmen/Cody to delete SGCC guideline(s) G.30, G.31 and TP.4

Vote: 16 Affirmative
1 Negative
Motion Passed

ASTM C 1036 thickness ranges Patterned Glass			
Nominal	Nominal (mm)	Thickness Min	Thickness Max
7/32	5.5	0.214	0.232
1/4	6.0	0.233-0.224	0.299

European EN 572 Thickness Tolerances (Apparently same as ISO)		
Nominal thickness (mm)	Tolerances (mm)	English Range (inch)
5	+/- 0.5	0.177 – 0.217
6	+/- 0.5	0.217 – 0.256

Explanation: (Although I will speak to a specific example, there are other products, probably already being certified in the program that this same situation would apply to.)
A company has expressed an interest in certification of what is commonly known as 1/4-inch (6mm) reeded patterned glass made by Pilkington. Since this product is made in Europe, it complies with European thickness tolerances. The product typically measures out in a range of 0.224 to 0.240-inch which overlaps the US nominal thickness' of 7/32 and 1/4-inch.

US 7/32-inch Range ASTM C1036	0.214 – 0.232 - inch
US 1/4-inch Range ASTM C1036	0.233 – 0.299 - inch
European 6mm Range	0.217 – 0.256 – inch

Additionally, it should be kept in mind that the SGCC participant may wish to certify other patterns that do comply with the ASTM C1036 values under the same certification number.

Question:

1. Is this product certifiable in the SGCC program?
2. If so, what do we call it?

Possible Resolutions:

1. For these products, include an asterisk (*) = "Some products certified under this certification number may comply with non-US thickness tolerance ranges.
2. Revise guideline G.29
G.29
For the purposes of certification, the thickness requirements of Specification ASTM C1036 or equivalent ISO specifications shall apply.
3. Establish new guideline "When certifying products that comply with Non-US glass thickness specifications, the product shall be certified at the US nominal thickness corresponding to the products minimum allowable thickness". In the case I have given above, the product "6mm reeded" would need to be certified at 7/32-inch nominal.

Resolutions:

Glass certified in the SGCC program must meet ASTM C1036. Guideline G.29 shall be maintained. It was noted that ASTM C1036 has recently been revised and has deleted 7/32-inch nominal TPG and expanded the minimum thickness for 1/4-inch TPG to 0.224.

(C13) Certification of Products Not Included in ASTM C1036

(This topic is a continuation of the Quick Action Sub-committee Report)

G. 29

For the purposes of certification, the thickness requirements of Specification ASTM C1036 shall apply.

C 1036 Values (Transparent)			
Nominal (mm)	Nominal (inch)	Min (inch)	Max (inch)
2.5	Single	0.085	0.101
2.7	Lami	0.102	0.114
3.0	Double 1/8	0.115	0.134
4.0	5/32	0.149	0.165
5.0	3/16	0.180	0.199
6.0	¼	0.219	0.244
8.0	5/16	0.292	0.332
10.0	3/8	0.355	0.406

There are various products that are routinely sold in the US that do not comply with thickness ranges as stated in ASTM C 1036. Either the products fall between 1036 thickness ranges or the product overlaps 2 of the thickness ranges in 1036. How should SGCC handle these products?

Examples:

Patterned Glass:

European patterned glass as explained in the Quick Action Sub-committee Report

Laminated Glass:

- | | |
|---|--|
| • SS (0.086) + (0.030) + SS (0.086) = 0.202 | Called ¼ (high for 3/16, low for ¼) |
| • Lami (0.112) + (0.030) + Lami (0.112) = 0.254 | Called ¼ (high for ¼, low for 5/16) |
| • SS (0.09) + (0.090) + SS (0.09) = 0.27 | Called 9/32 (high for ¼, low for 5/16) |
| • DS (0.12) + (0.030) + DS (0.12) = 0.27 | Called ¼ (high for ¼, low for 5/16) |
| • DS (0.12) + (0.090) + DS (0.12) = 0.33 | Called 5/16 (on upper edge of 5/16) |
| • 5/32 (0.153) + (0.030) + 5/32 (0.153) = 0.336 | Called 5/16 (high for 5/16, low for 3/8) |

Certification of Laminated Glass

In General

Current guidelines for the Certification of laminated glass may not be reflective of the actual product available in the marketplace. Additionally, participation in 3rd party certification by laminators is relatively low. The question was asked, might there be a better way?

SGCC Meeting Discussion

“Current SGCC thinking is to certify on a per overall nominal thickness per generic interlayer. The concept of grouping tests of individual “products” to qualify or certify a broader “product line” was discussed. It was noted, however, that CPSC 16 CFR 1201 specifically states that each nominal thickness must be tested. It was the feeling of the group that the GANA Laminating Division was the most knowledgeable group to address these concerns.”

From CPSC 16 CFR 1201.4(a)(3)

"Separate testing is required for different glazing materials or for differences within a type of glazing material that could noticeably affect performance in the impact or environmental durability tests. Such differences could include (but are not limited to): Nominal thickness or thicknesses, method of manufacture (in appropriate cases), types and amounts of additives, and composition of base materials and adhesives."

Possible Considerations

- ◆ Certification of Range of thickness (Product 1 = 4-6mm, Product 2 = 7-12mm)
- ◆ Initially test all laminated make-ups. On a re-certification basis, test "a percent of all products certified" (example: if a company is certified, and initially tests 4,6,8,10 and 12mm, then @ first recertification test "say" 4 and 12mm, @ second recertification test 6 and 10mm.
- ◆ Is the consideration for laminated glass certification equitable to Temperers?

QUALITY SYSTEM REQUIREMENTS

Minimum Requirements

1. A Quality Manual – a document that identifies and, describes ~~and contains~~ the operation workings of the plant's quality system.
2. A quality system representative – A designated management representative responsible for overseeing the plant's quality system. ~~the designated point of contact for the quality system.~~
3. Regular production product testing, including, but not limited to:
 - a. Written procedures for testing
 - i. Tempered
 1. Center punch test (For example GANA standard XXX)
 - ii. Laminated (~~examples may be~~)
 1. Pummel test (Recommend contact interlayer suppliers for guidance)
 2. Boil test (For example ANSI Z97.1 and/or CPSC 16 CFR 1201)
 3. Ball drop test (For example GANA standard YYY)
 - b. Frequency (as a minimum)
 - i. Tempered
 1. First of each product thickness per shift
 2. Additional testing based upon square footage produced
 - ii. Laminated
 1. Consult your interlayer supplier for recommendations
 2. Laminated glass fabricators should consider the variability and complexity of the factors involved in fabrication in determining minimum requirements for an acceptable quality system.
 - c. Documentation and retention of product testing records as a minimum:
 - i. 10 Year minimum
 - d. Testing personnel training records

Comparison of Safety Glazing Testing Standards

Test Standard	ANSI Z97.1-2004	CPSC 16 CFR 1201
Products Covered	Safety Glazing, also address "Bent" products and plastics	Safety Glazing, does not speak to plastics
Sponsor Organization	ANSI	US Government, Consumer Product Safety Commission (CPSC).
Class/Category/Type	U=Unlimited Size L=Limited Size Drop height class A,B,C	Cat I = 18 inch drop < 9ft2 Cat II = 48 inch drop
Method of Impact Test	Single impact at designated Category	Single impact at designated Category
Boil Test	Yes- Laminated Glass	Yes-Laminated Glass
Weathering Tests	Yes-Laminated, OCG, Plastic	Yes-OCG
# Specimens Required for Impact	4 – if asymmetric material, 2 shall be impacted from each side	Not specified, except for non-symmetrical construction, an equal number shall be impacted on each surface
Test Sample Size	U=34X76-inches L= < 34X76-inches, min 24 X30	Largest manufactured, up to 34X76-inches
Impact Test Procedure Differences	1) Rotation and pummel of impactor 2) Laminated glass may be evaluated in the vertical	
Acceptance Criteria	1) No opening > 3 inches with (sample vertical) horizontally applied 4# force or less 2) 10 largest particles < equal weight of 10 in2 3) Plastic hardness 4) No Break, remains in frame 5) No Break, separates from frame 6) Separates from frame but meets 1) and 2) above	1) No opening which allows 3-inch / 4# sphere to pass horizontally applied for 1 second 2) 10 largest particles < equal weight of 10 in2 3) Does not remain in subframe and no break 4) No Break
Impactor Frame	Intended to be the same as CPSC (suggested that 04 version requires a more ridged frame than the 84/94 version of Z97)	3 X 5 X ¼ steel angle or ≥
Frame Shims	Yes	Yes
Sub-Frame	Does not need to be removable	Must be removable
Sample Clamping or Compression	≤15% compression	Between 10 and 15%
Impactor Bag	100# +/- 4oz Lead shot filled leather bag, taped, bladder in place	100# +/- 4oz Lead shot filled leather bag, taped, bladder in place
Covering of Impactor	Terry cloth towel	None

Question proposed to SGCC – If ANSI Z97.1-2004 (Class A) is equal to or more severe than CPSC 16 CFR 1201, might composite testing be reduced to the impacting of 4 samples, and so claiming compliance to ANSI and CPSC? Currently composite testing requires 4 samples tested to ANSI and 1 or 2 samples tested to CPSC.