



ASTM INTERNATIONAL  
Selected Technical Papers

# Advances in Gypsum Technologies and Building Systems

STP 1588

Editors:  
Robert A. Wessel  
Paul H. Shipp  
Guy L. Rosenthal



**SELECTED TECHNICAL PAPERS**  
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# Advances in Gypsum Technologies and Building Systems

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## Foreword

THIS COMPILATION OF *Selected Technical Papers, STP1588, Advances in Gypsum Technologies and Building Systems*, contains peer-reviewed papers presented at a symposium held May 21, 2015, in Anaheim, CA. The symposium was sponsored by ASTM International Committee C11 on Gypsum and Related Building Materials and Systems and Subcommittee C11.01 on Specifications and Test Methods for Gypsum Products.

Symposium Chairpersons and STP Editors:

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## Overview

### C11: A Celebration of a Century of Service

This year, 2015, ASTM Committee C11 on Gypsum and Related Building Materials and Systems celebrates 100 years of service and standardization. Through a century marked by significant growth and development, punctuated by economic downturns, recessions, and the great depression, plus a number of wars and domestic upheaval, Committee C11 met and functioned continuously.

Surviving committee documents, mostly annual reports of the committee, give us the names and enable the recognition of those who have served as main committee officers and subcommittee chairmen, along with those who have been honored with various committee and society awards across the decades. Although many of these named individuals occupied leadership positions and others received public recognition of exemplary service, a committee is more than just its leaders and award recipients. It should always be remembered that the work, contributions, and participation of those whose names have been lost performed valuable services along the way to move the committee and its documents forward.

### Committee C11: Officers, Subcommittees, and Membership

The first annual report filed by Committee C11 on Standard Specifications for Gypsum and Gypsum Products appeared in the 1915 ASTM book of annual committee reports. At that time, the Committee consisted of 22 members and five subcommittees.

The 1916 annual report lists a total of 30 members and the 1917 report identifies the committee as “Committee C-11 on Gypsum.” The name of the committee was changed again in 1973 to the committee “on Ceilings and Walls.” In either 1979 or 1980 (there was no annual report filed in 1979) the committee was redesignated as Committee C11 “on Gypsum and Related Building Materials and Systems,” the current name for the committee.

The number of active subcommittees has hovered steadily between five and seven as the committee scope was expanded from gypsum and gypsum plaster to include associated products such as studs and accessories, and most recently, Exterior Insulation and Finishing Systems (EIFS). The membership has grown each year from the original 22 members to over 360 members today.

The founding officers, members, and subcommittees listed in the 1915 annual report were:

**Committee Officers**

R. J. Wig, Chairman  
H. W. Forster, Vice-Chairman  
V. G. Marani, Vice-Chairman  
L. I. Neale, Secretary

**Members—Non-Producers**

Abrams, D. A.  
Emley, W. E.  
Forster, H. W. (*Vice-Chairman*)  
Froehling and Robertson  
Froehling, H.  
Handy, J. O.  
MacGregor, J. S.  
Miller, R. P.  
Norton, C. L.  
Pittsburg Testing Laboratory  
Riddle, C. W.  
Slater, W. A.  
Underwriters' Laboratories  
Waid, D. E.  
Wig, R. J. (*Chairman*)

**Members—Producers**

American Cement Plaster Company  
Apted, A. H.  
Brown, H. J.  
Grand Rapids Plaster Company  
Gypsum Industries Association Inc.  
Haigh, De Lagnel  
Jewett, M. B.  
Marani, V. G. (*Vice-Chairman*)  
Neale, L. I. (*Secretary*)  
Southard, G. L.  
Southern Gypsum Company  
Tupper, E.  
United States Gypsum Company  
Webb, S. G.  
Wilder, F. A.



The Committee was made up of the following five subcommittees:

Subcommittee I on Gypsum for Various Uses, chaired by H. J. Brown

Subcommittee II on Gypsum Plasters, chaired by De Lagnel Haigh

Subcommittee III on Structural Gypsum Products, chaired by W. A. Slater

Subcommittee IV on Testing Methods, chaired by W. E. Emley

Subcommittee V on Nomenclature, chaired by S. G. Webb

The original officers of the committee consisted of the chairman, two vice-chairmen, and a secretary. The number of vice-chairmen was reduced to one in 1938. By 2010 the number of new member applications, which were managed and processed by the secretary, was deemed to be sufficient to justify the creation of a new officer position in the form of a membership secretary. Over the 100-year life of the committee, the following individuals served as main committee officers in the offices indicated:

### **Chairmen**

1915–1919	R. J. Wig
1919–1926	W. E. Emley
1926–1937	J. W. Ginder
1937–1953	L. S. Wells
1953–1964	G. W. Josephson
1964–1968	Max Barth
1968–1972	G. W. Josephson
1972–1979	Richard A. Kuntze
1979–1980	C. E. Kallem
1980–1986	Richard A. Kuntze
1986–1992	Archie E. “Gene” Erwin
1992–1994	George W. Green
1994–1995	James L. Houser
1996–2001	Dick C. Engbrecht
2002–2007	Keith A. Poerschke
2008–2013	Michael C. Kerner
2014–	Pamela Shinkoda

### **Vice-Chairmen**

1915–1916	H. W. Forster & V. G. Marani
1916–1926	F. A. Wilder & R. P. Miller
1926–1931	H. E. Brookby & R. P. Miller
1931–1936	H. J. Brown & R. P. Miller
1936–1938	H. J. Brown & L. S. Wells
1938–1943	H. J. Brown
1943–1944	vacant

1944–1954	H. F. Gardner
1954–1961	B. W. Nies
1961–1967	G. B. Kirk
1967–1971	Rex L. Selbe
1971–1976	John D. Shull
1976–1979	H. J. Schneiter
1979–1980	John D. Shull
1980–1982	H. T. Schneiter
1982–1990	George W. Green
1990–1995	Dick C. Engbrecht
1996–1998	James L. Houser
1998–2001	Keith A. Poerschke
2002–2007	Michael C. Kerner
2008–2013	Pamela Shinkoda
2014–	Michael Logue

#### **Secretaries**

1915–1918	L. I. Neale
1918–1926	V. G. Marani
1926–1947	Henry J. Schweim
1947–1948	Lloyd H. Yeager
1948–1950	Chester E. Abby
1950–1954	Lloyd H. Yeager
1954–1958	O. H. Storey, Jr.
1958–1960	R. H. Faber
1960–1970	Henry Omson
1970–1971	David E. Brackett
1971–1979	Herb B. Carlsen
1979–1987	David E. Brackett
1987–2013	Robert A. Wessel
2014–	Richard Ladwig

#### **Membership Secretaries**

2010–2013	Richard Ladwig
2014–	Ben Duterte

Nothing remains static forever and, over time, the committee passed through a number of iterations as it evolved through several name changes and expansions in its scope. The subcommittee structure also went through a number of changes as subcommittees were created, deactivated, redesignated, combined, and renamed to fit the needs of the evolving scopes, membership, and interests.

The following individuals served as chairmen of the subcommittees under which they are listed. The year in which the individual took office is given and that person

served continuously until the year in which the next individual in the list took office. Subcommittees I-V were formed in 1915 and Subcommittee VI was formed in 1922. These subcommittees operated until the subcommittee structure was changed in 1950.

#### **Subcommittee I on Gypsum for Various Uses**

1915	H. J. Brown
1918	F. A. Wilder
1930	H. E. Brookby
1931	H. J. Brown

#### **Subcommittee II on Gypsum Plasters**

1915	De Lagnel Haigh
1926	J. Miller Porter
1941	D. D. Crandell
1942	G. W. Farrell
1948	H. F. Gardner

#### **Subcommittee III on Structural Gypsum Products**

1915	W. A. Slater
1922	L. I. Neale
1923	Fitzhugh Taylor
1926	H. W. Reel
1932	L. S. Wells
1947	N. D. Mitchell

#### **Subcommittee IV on Testing Methods**

1915	W. E. Emley
1919	G. L. Southard
1920	H. E. Brookby
1926	H. F. Gardner
1928	H. E. Brookby
1930	C. K. Roos
1943	H. N. Huntzicker

#### **Subcommittee V on Nomenclature**

1915	S. G. Webb
1918	Vacant
1919	A. H. Apted
1923	L. I. Neale
1925	subcommittee disbanded

### **Subcommittee VI on Fire Resisting Properties of Gypsum Products, Created 1922**

1922     S. H. Ingberg  
1925     subcommittee disbanded

The 1950 reorganization reduced the number of subcommittees from six to two; one on Plasters and the other on Structural Products. A third subcommittee, on Aggregates, was added in 1955 and a fourth, on Research, was added in 1967. Those subcommittees and their chairmen are listed below:

### **Subcommittee I on Plasters**

1950     H. N. Huntzicker  
1954     B. W. Nies  
1961     C. G. Shuttleworth  
1966     J. D. Shull  
1969     R. L. Selbe

### **Subcommittee II on Structural Products**

1950     N. D. Mitchell  
1952     F. L. Marsh  
1954     R. G. Buergin  
1962     H. R. Nelson  
1965     vacant  
1966     Clarion Kallam

### **Subcommittee III on Aggregates, Created 1955**

1955     Stanton Walker  
1957     E. T. Carlson  
1969     vacant

### **Subcommittee IV on Research, Formed in 1967**

1967     P. J. Sereda

The most recent major restructuring of the subcommittees took place in 1972 and, with a few minor tweaks, is essentially the same as the subcommittee structure used today. In 1976, Subcommittee .04 was redesignated as .91 and given a new name. A new Subcommittee .04 was created in 1985 to develop specifications on synthetic gypsum and Subcommittee .05 on Application of EIFS was added in 1990. The subcommittees and their chairman are listed below:

### **Subcommittee .01 on Specifications and Test Methods for Gypsum Products**

1972     H. L. Weightman  
1980     V. H. Noble  
1981     E. J. Salamon

1982	D. O. Baehr
1990	George Shortreed
2006	Brad Wing
2007	Dick C. Engbrecht
2013	Keith A. Poerschke

**Subcommittee .02 on Specifications and Test Methods for Accessories and Related Products**

1972	J. E. Gillespie
1980	R. N. Parker
1991	M. C. Kerner
2010	J. R. Smith
2014	M. C. Kerner

**Subcommittee .03 on Specifications for the Application of Gypsum and Other Products in Assemblies**

1972	G. Erwin
1980	R. N. Gulick
1990	J. W. Fell
1994	A. Eugene Erwin
1997	Michael Gardner
1999	vacant
2001	Lee G. Jones
2006	Michael Logue
2008	Don Smith
2013	Lee G. Jones

**Subcommittee .04 on Research, Redesignated in 1976 as Subcommittee .91**

1972	G. W. Green
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**Subcommittee .04 on Synthetic Gypsum for Use in Building Products, Organized in 1985, Deactivated in 1987, Reactivated in 1991, and Deactivated in 1996**

1985	J. W. Pressler
1991	R. W. Styron
1994	John R. Glasscock

**Subcommittee .05 on Application of Exterior Insulating and Finish Systems and Related Products, Organized in 1990**

1990	R. G. Reitter III
1992	J. D. Hopkins, Jr.
1998	Frank E. Nunes
2001	John L. Mulder
2006	Peter B. Harrison

**Subcommittee .91 on Nomenclature, Definitions and Research, Organized in 1976 to Replace Subcommittee .04 and Renamed as the Subcommittee “on Terminology and Editorial” in 1993**

1976	G. W. Green
1993	David E. Brackett
1995	Robert A. Wessel
2013	Robert Mercer
2014	Darin Coats

**Subcommittee .92 on Editorial, Organized in 1976 and Disbanded and Combined with .91 in 1993**

1976	L. Katz
1980	R. O. Kidd
1991	David E. Brackett

The companies and organizations represented by these individuals are largely unknown. A few of the earlier documents consulted in the compiling of this list included company names when the individual was serving as a representative of a corporate member. Some individuals changed employment one or more times during their membership so any attempt to compile a comprehensive list of companies would be prohibitive and, most likely, also be either incomplete or incorrect.

## **Committee C11: Awards and Their Recipients**

In addition to the subcommittee chairmen, a large number of individuals served as secretaries to the subcommittees and, no doubt, as task group chairmen. The names of these individuals seldom get recorded outside of the minutes, most of which are no longer available. To compile a list of task group chairmen and subcommittee secretaries would be close to impossible but the Committee honors them as the unnamed heroes behind much of the real standards development work undertaken over the years by Committee C11. Many of these individuals have been recognized over the years by being presented with one or more Society or Committee awards. Beginning with the first one presented in 1959, the Award of Merit, the Society’s highest award given to an individual, has been presented to 17 members of the committee. In addition to the Award of Merit, the committee has presented members with 56 Awards of Appreciation, two Awards of Recognition, and one Special Service Award. In 2002, the tradition of awarding a Past Chairman Award was begun to honor outgoing main committee chairmen.

**Awards of Merit**

1959	Henry J. Schweim
1964	Edward R. Murphy
1969	Lloyd H. Yeager

1979	James E. Gillespie
1980	John D. Shull
1986	Robert O. Kidd
1987	David E. Brackett
1990	Donald O. Baehr
1990	Archie E. Erwin
1992	Richard A. Kuntze
1996	George W. Green
1998	George D. Shortreed
2000	Robert A. Wessel
2002	Michael C. Kerner
2004	Dick C. Engbrecht
2006	Keith A. Poerschke
2011	Gary J. Maylon

### **Awards of Appreciation**

1999	Michael Gardner
1999	J. Dick Hopkins
1999	Michael C. Kerner
1999	Gary J. Maylon
1999	Keith A. Poerschke
2000	Hiram P. Ball
2000	Dick C. Engbrecht
2000	George W. Green
2000	Robert L. Madsen
2000	Gregory S. Ralph
2003	Joseph R. Hagan
2003	Thomas E. Palmer
2003	Paul G. Schlote
2003	Kerie Turchin
2003	Brad Wing
2004	Lee G. Jones
2004	Brian E. Maag
2004	John L. Mulder
2004	George D. Shortreed
2005	Pamela M. Shinkoda
2005	Marjorie Spencer
2006	Mila P. Raymundo
2007	Joseph A. Feldner
2007	George W. Green
2007	Richard E. Kuntze
2007	Joseph C. Mohen
2007	Robert A. Wessel

2008	Bob Bruce
2008	Jason W. Fell
2008	Michael C. Kerner
2008	Michael M. Logue
2008	Brad Wing
2009	Russell T. Flynn
2009	George D. Shortreed
2010	William F. Egan
2010	Dick C. Engbrecht
2010	Louis W. Ferrara
2010	Stephen F. Holderness
2010	Russell J. Kenney
2010	Michael C. Kerner
2010	Larry W. Kingston
2010	Gary J. Maylon
2010	John M. Melander
2010	John L. Mulder
2010	Frank E. Nunes
2010	R. Gabe Reitter III
2010	Thomas L. Savoy
2010	Fernando H. Sesma
2010	Robert A. Wessel
2011	Keith A Poerschke
2011	Gregory S. Ralph
2012	Marvin L. Stokoe
2012	Michael J. Tate
2012	Brad Wing
2013	Robert Madsen
2014	Robert N. Mercer
2015	Michael Gardner
2015	Michael Moore
2015	Brad Wing
2015	Bill F. Egan

#### **Awards of Recognition**

2002	Dick C. Engbrecht
2013	Donald E. Smith

#### **Special Service Award**

2012	Pamela M. Shinkoda
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## Past Chairman Awards

2002	Dick C. Engbrecht
2007	Keith A. Poerschke
2013	Michael C. Kerner

## Committee C11: Standards and Publications

In 1916, the committee published *Tentative Definitions of Terms Relating to the Gypsum Industry*, ASTM C 11-16T, its first tentative standard. This document contained 19 pages of terms and their definitions and it included an extensive appendix describing how many of the definitions were developed. Additional tentative standards were issued through the early 1920s covering:

- *Tentative Standard for Gypsum* (C22-23T),
- *Tentative Standard for Gypsum Plastering Sand* (C35-21T),
- *Tentative Standard for Gypsum Wall Board* (C36-22T),
- *Tentative Standard for Gypsum Plaster Board* (C37-22T), and
- *Tentative Standard for Gypsum Partition Tile or Block* (C52-23T).

By 1924, the committee had several official standards on the books:

- *Standard Specification for Calcined Gypsum* (C23-22),
- *Standard Specification for Gypsum Plasters* (C28-21), and
- *Standard Methods of Testing Gypsum and Gypsum Products* (C26-23).

From these humble beginnings, with just a few standards narrowly focused on gypsum and gypsum products, the committee's jurisdiction has grown to include standards for fasteners, adhesives, accessories, steel studs, exterior insulating and finish systems, and numerous other related materials and accessories, as well as many of the test methods used to evaluate these materials and the specifications for using these products in construction. The list below contains all 57 of the active standards currently under the jurisdiction of Committee C11. And, this rather extensive list does not include the many standards that have been transferred to other committees or withdrawn over the years. Nor does it contain the draft standards currently under consideration by task groups within the committee.

- C11-13 Standard Terminology Relating to Gypsum and Related Building Materials and Systems
- C22/C22M-00(2010) Standard Specification for Gypsum
- C28/C28M-10 Standard Specification for Gypsum Plasters

- C35-01(2014) Standard Specification for Inorganic Aggregates for Use in Gypsum Plaster
- C59/C59M-00(2011) Standard Specification for Gypsum Casting Plaster and Gypsum Molding Plaster
- C61/C61M-00(2011) Standard Specification for Gypsum Keene's Cement
- C317/C317M-00(2010) Standard Specification for Gypsum Concrete
- C318/C318M-13 Standard Specification for Gypsum Formboard
- C471M-14 Standard Test Methods for Chemical Analysis of Gypsum and Gypsum Products (Metric)
- C472-99(2014) Standard Test Methods for Physical Testing of Gypsum, Gypsum Plasters and Gypsum Concrete
- C473-12 Standard Test Methods for Physical Testing of Gypsum Panel Products
- C474-13 Standard Test Methods for Joint Treatment Materials for Gypsum Board Construction
- C475/C475M-12e1 Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board
- C514-04(2014) Standard Specification for Nails for the Application of Gypsum Board
- C587-04(2014) Standard Specification for Gypsum Veneer Plaster
- C631-09(2014) Standard Specification for Bonding Compounds for Interior Gypsum Plastering
- C645-14 Standard Specification for Nonstructural Steel Framing Members
- C754-11 Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products
- C840-13 Standard Specification for Application and Finishing of Gypsum Board
- C841-03(2013) Standard Specification for Installation of Interior Lathing and Furring
- C842-05(2010)e1 Standard Specification for Application of Interior Gypsum Plaster
- C843-99(2012) Standard Specification for Application of Gypsum Veneer Plaster
- C844-04(2010) Standard Specification for Application of Gypsum Base to Receive Gypsum Veneer Plaster
- C847-14a Standard Specification for Metal Lath
- C897-05(2014) Standard Specification for Aggregate for Job-Mixed Portland Cement-Based Plasters

- C926-14a Standard Specification for Application of Portland Cement-Based Plaster
- C932-06(2013) Standard Specification for Surface-Applied Bonding Compounds for Exterior Plastering
- C933-14 Standard Specification for Welded Wire Lath
- C954-11 Standard Specification for Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Steel Studs from 0.033 in. (0.84 mm) to 0.112 in. (2.84 mm) in Thickness
- C955-11c Standard Specification for Load-Bearing (Transverse and Axial) Steel Studs, Runners (Tracks), and Bracing or Bridging for Screw Application of Gypsum Panel Products and Metal Plaster Bases
- C956-04(2010) Standard Specification for Installation of Cast-In-Place Reinforced Gypsum Concrete
- C1002-14 Standard Specification for Steel Self-Piercing Tapping Screws for Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs
- C1007-11a Standard Specification for Installation of Load Bearing (Transverse and Axial) Steel Studs and Related Accessories
- C1032-14 Standard Specification for Woven Wire Plaster Base
- C1047-14a Standard Specification for Accessories for Gypsum Wallboard and Gypsum Veneer Base
- C1063-14d Standard Specification for Installation of Lathing and Furring to Receive Interior and Exterior Portland Cement-Based Plaster
- C1177/C1177M-13 Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing
- C1178/C1178M-13 Standard Specification for Coated Glass Mat Water-Resistant Gypsum Backing Panel
- C1264-14a Standard Specification for Sampling, Inspection, Rejection, Certification, Packaging, Marking, Shipping, Handling, and Storage of Gypsum Panel Products
- C1278/C1278M-07a(2011) Standard Specification for Fiber-Reinforced Gypsum Panel
- C1280-13a Standard Specification for Application of Exterior Gypsum Panel Products for Use as Sheathing
- C1355/C1355M-96(2011) Standard Specification for Glass Fiber Reinforced Gypsum Composites
- C1381/C1381M-97(2013) Standard Specification for Molded Glass Fiber Reinforced Gypsum Parts

- C1396/C1396M-14a Standard Specification for Gypsum Board
- C1397-13 Standard Practice for Application of Class PB Exterior Insulation and Finish Systems (EIFS) and EIFS with Drainage
- C1467/C1467M-00(2012) Standard Specification for the Installation of Molded Glass Fiber Reinforced Gypsum Parts
- C1513-13 Standard Specification for Steel Tapping Screws for Cold-Formed Steel Framing Connections
- C1516-05(2011) Standard Practice for Application of Direct-Applied Exterior Finish Systems
- C1535-05(2011) Standard Practice for Application of Exterior Insulation and Finish Systems Class PI
- C1546-02(2014) Standard Guide for Installation of Gypsum Products in Concealed Radiant Ceiling Heating Systems
- C1629/C1629M-14a Standard Classification for Abuse-Resistant Nondecorated Interior Gypsum Panel Products and Fiber-Reinforced Cement Panels
- C1658/C1658M-13 Standard Specification for Glass Mat Gypsum Panels
- C1764-12 Standard Test Methods for Non Metallic Plaster Bases (Lath) Used with Portland Cement Based Plaster in Vertical Wall Applications
- C1766-15 Standard Specification for Factory-Laminated Gypsum Panel Products
- C1787-14 Standard Specification for Installation of Non Metallic Plaster Bases (Lath) Used with Portland Cement Based Plaster in Vertical Wall Applications
- C1788-14 Standard Specification for Non Metallic Plaster Bases (Lath) Used with Portland Cement Based Plaster in Vertical Wall Applications
- C1789-14 Standard Test Method for Calibration of Hand-Held Moisture Meters on Gypsum Panels

In addition to standard specifications, guides, practices, and test methods, the Committee sponsored a Symposium on the Chemistry and Technology of Gypsum and Gypsum Products Atlanta, Georgia, on April 14–15, 1983. The papers from the symposium were published as *The Chemistry and Technology of Gypsum*, ASTM STP861, edited by Richard A. Kuntze of Ontario Research Foundation in Mississauga, Ontario, Canada. The symposium focused on properties and testing of synthetic, or “byproduct” gypsum used as a raw material in the manufacture of gypsum products. These synthetic materials were not currently addressed in ASTM standards and the symposium raised awareness across the industry as to the importance and usability of synthetic gypsum from specific sources.

The papers presented at the symposium, and their authors, were:

- Physical Testing of Gypsum Board Per ASTM C473—Robert F. Acker
- Gypsum Analysis with the Polarizing Microscope—George W. Green
- The Effect of Sorbed Water on the Determination of Phase Composition of  $\text{CaSO}_4 \cdot \text{H}_2\text{O}$  Systems by Various Methods—Danica H. Turk and Larbi Bounini
- A Simple Apparatus for Measurement of the Hydration Ratio of Plasters and Plaster Rocks—Etienne Karmazsin
- Determination of Sulfur Trioxide in Gypsum—S. Goswami and D. Chandra
- Rapid Multielement Analysis of Gypsum and Gypsum Products by X-Ray Fluorescence Spectroscopy—Vladimir Kocman
- The Relationship Between Water Demand and Particle Size Distribution of Stucco—Lydia M. Luckevich and Richard A. Kuntze
- Retardation of Gypsum Plasters With Citric Acid: Mechanism and Properties—Thomas Koslowski and Udo Ludwig
- Byproduct Gypsum—Jean W. Pressler
- Assessment of Environmental Impacts Associated with Phosphogypsum in Florida—Alexander May and John W. Sweeney
- Evaluation of Radium and Toxic Element Leaching Characteristics of Florida Phosphogypsum Stockpiles—Alexander May and John W. Sweeney
- Drying and Agglomeration of Flue Gas Gypsum—Franz Wirsching

Clearly the members who have served on Committee C11 over the years have accomplished much. But this is not a committee to “rest on its laurels.” Technology continues to evolve and all of the Committee’s standards are recognized to be “living documents” that demand the full attention of the members on an ongoing basis to keep them current and relevant to today’s construction marketplace.

Today’s committee officers, subcommittee officers, and members thank, honor, and remember all of the past and current task group, subcommittee, and main committee officers as well as the companies or organizations by whom they were supported in this work. In addition, we thank all those who were not officers but who gave of their time, knowledge, and talents for the development and continual maintenance of the standards that continue to shape our industry today. Without their pioneering efforts, our work today would no doubt be much more difficult. It is the hard work and dedication of these individuals that has enabled Committee C11 to become and remain one of the most effective committees in ASTM—a tradition born a century ago—and one in which all members, past and present, can take great pride. Committee C11 never forgets that, regardless of its past, it is *still* a work in progress.

Robert A. Wessel

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