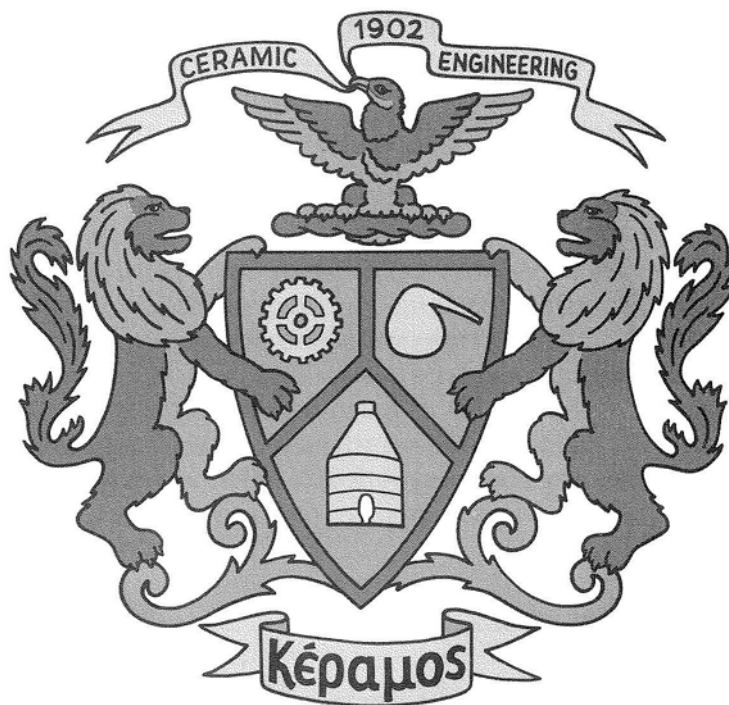


Keramos

Keramos National Professional Ceramic Engineering Fraternity



Procedures Manual 2008-2009

Through Fire to Perfection

Keramos National Professional Ceramic Engineering Fraternity is arguably one of the oldest, if not the oldest, professional engineering fraternity in continuous existence in the United States. Tracing its roots to 1902 at the Ohio State University, Keramos grew throughout the next seven decades to encompass chapters at nearly all of the Universities possessing formal instructional programs in ceramic science and engineering.

The mission of Keramos is to promote and emphasize scholarship and character in the thoughts of ceramic students, to stimulate mental development, and to promote interest in the professional aspects of ceramic engineering, technology, and science. To that end, Keramos has been from its inception a professional Fraternity, with membership open to any and all students possessing good scholarship, an interest in the ceramic arts, sciences and technology, and of strong personal character¹.

The Fraternity exists today to promote interest in the ceramic disciplines, to promote good scholarship and professional development, and to encourage and recognize service to the ceramics community by its members. As such, procedures by which members are elected, chapters are run, professional development opportunities are experienced, and service is recognized have been codified in our By-Laws (Appendix 1). However, over the years, the National Board of Directors has found that a more succinct and focused summary of procedures is helpful in assisting Keramos chapters in efficiently executing and reporting their annual activities. Such is the purpose of this manual.

All officers of Keramos Chapters are encouraged to familiarize themselves with the content of this manual to ensure efficient and effective governance of their chapters. Questions regarding content or interpretation thereof may be directed to the General Secretary of the Fraternity.

¹ Keramos – A Biographical History, W.W. Kreigel, copyright 1982 by Keramos, Library of Congress N. 82-81436; available on the Keramos website at: <http://ceramics.org/classes/keramos/>

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1.0 Duties of the Officers

As stated in the By-Laws (Appendix 1), the Fraternity is comprised of a National Board of Directors, (hereafter referred to as “the Board”), whose primary responsibility is the oversight and management of the Fraternity. The Board is comprised of four elected officers (President, Vice President, Treasurer and Recording Secretary) and two appointees (General Secretary and Herald). Elected members of the Board serve two-year terms and ascend through all of the officer positions. Appointees serve without term limits at the discretion of the Board. In addition, a Student Representative to the Board is elected each year by the rank and file of the Fraternity at the biennial Convocation and Business Meeting. A list of Directors is included in Appendix 2.

Similarly, individual chapters are governed by five elected members of the Chapter: President, Vice President, Secretary, Treasurer and Herald. In addition, Fraternity By-Laws call for the election of two Delegates, and two alternates for representing the Chapter at the biennial Convocation. Furthermore, each Chapter shall have an Advisor, selected from the faculty and appointed by the Department in which the Chapter is housed, to oversee and guide the activities of the Chapter. A list of Chapter addresses and Advisors is included in Appendix 3

The responsibilities of each of these Chapter officers include, but are not limited to the following; (note that individual chapters may add duties to the responsibilities of each of the officer’s positions as defined here):

President:

Principal executive officer of the chapter, and responsible for establishing agendas for and presiding over Chapter meetings; ensuring performance of all Chapter officers in the conduct of Fraternity business; overseeing assembly and presentation of the annual report of the Chapter to the Board and at the biennial Convocation and Business Meeting; coordinating the nomination of Honorary Members and overseeing the initiation and induction of new members in accordance with the Fraternity By-Laws.

Vice President:

The Vice President shall, in the absence or disability of the President, assume and perform all duties and exercise the powers of that office; assist the President in establishing agendas for Chapter meetings and new member inductions; coordinate the nomination and election of Chapter Delegates to the biennial Convocation and Business Meeting.

Treasurer:

The Treasurer is the financial officer of the Chapter and shall have charge of and responsibility for all funds belonging to the Chapter. The Treasurer shall be responsible for providing an accurate accounting for all Chapter funds and expenditures upon request by the officers of the Chapter and/or the Board. In order to promote longevity and security of Chapter funds, it is highly recommended that the Treasurer share the responsibility with the Chapter Advisor.

Secretary:

The Secretary is responsible for keeping an accurate record of all meetings of the Chapter; maintaining a comprehensive and accurate tally of the Chapter membership; providing timely notice of the location and time of all Chapter meetings to the membership; compiling and archiving all correspondence of the Chapter, and overseeing all communications of the Chapter with the National Board.

Herald:

The Herald shall serve as the historian of the Chapter; maintain and keep current an archive of the Chapter's activities and records and; serve as the sergeant-at-arms for all Chapter meetings, including but not limited to induction ceremonies.

Delegates and Alternates:

The Delegates present the Chapter report at the biennial Convocation and represent the Chapter in all matters of business conducted at the Convocation and Business Meeting and related activities. Alternates shall, in the absence or disability of the elected Delegates, assume and perform all duties expected of the Delegates at the Convocation.

Advisor:

The Advisor shall oversee the activities of the Chapter; mentor the members on professional development and service; ensure that the By-Laws of the Fraternity are upheld in all Chapter activities; The Advisor shall represent the Chapter to the Board executive sessions as requested by the Board.

Elections and Term of Office:

Election of Chapter officers and Delegates shall occur no later than April 1st in the spring of the academic year, and prior to the submission of the Chapter annual report to the Board of Directors. Election results shall be documented in the Chapter annual report. All Chapter officers, Delegates, and Alternates shall serve for one year commencing at the start of the semester following that in which the elections are held.

2.0 Chapter Deadlines

In order to enhance the efficiency in which information is transmitted from the Chapters to the Board, several deadlines have been established. Furthermore, the process has been significantly streamlined by requiring that the majority of the information be included in the Chapter's annual report. The following deadlines have been established:

September 15 th :	Confirmation of Chapter delegates and/or alternates to represent Chapter at the biennial Convocation to be sent to the Fraternity General Secretary
November 15 th :	Submissions of nominations for Honorary Member to be submitted to the General Secretary (guidelines for the nomination of Honorary Members are summarized in Section 5.0, Honorary Members). New initiate transmittal to General Secretary. Keragram article input due to General Secretary.
January 15 th :	Honorary Member nomination approvals to be transmitted from the Board to Chapters
February 15 th :	Keragram article input to be submitted to General Secretary
March 14 th :	Close of Fraternity Fiscal Year
April 1 st :	Deadline for Chapter elections for the coming academic year
April 15 th :	Chapter annual report due to the Fraternity General Secretary; report guidelines are discussed in Section 3.0, Annual Report Content and Format

3.0 Annual Report Content and Format

The Chapter annual report is the most important document that a Chapter will compile. It contains the Chapter's annual plan, documents the results of elections, serves as an archival document detailing the Chapter's activities for the year, and is the sole basis upon which selection of Outstanding Chapter is made by the Board. Timeliness, thoroughness, and quality of presentation are all characteristics of a quality report.

In an effort to streamline the process, and to allow maximum transmittal of information while encouraging concise, factual presentations of data consistent with identifying Chapters who are achieving high levels of performance, the Board has revamped the Annual Report content and format as follows:

<u>Report Content</u>	<u>Scoring value</u>
Chapter Advisor Executive Summary	10%
Annual Plan for the upcoming academic year	15%
List of Officers, Delegates, and Alternates for the coming academic year (names, addresses, phone, and e-mail)	5%
List of active members (students, faculty, and Honorary names and titles; Indicate new initiates and dates initiated)	5%
Honorary Member biosketch (1 page with photo)	5%
Treasurer's report	10%
Chapter Activities - maximum 10 pages summarizing: <ul style="list-style-type: none">- educational outreach- professional development- service to the ceramics community- alumni engagement- participation at the biennial Convocation and Annual Meeting- interchapter communications and collaboration	40%
Summary article worthy of publication in Keragram (maximum 1 page)	10%
TOTAL	100%

Please Note: Chapter annual reports are due in electronic format to the General Secretary of the Fraternity by April 15th. The Board will use these criteria in the selection of the Outstanding Chapter-, Diamond-, Sapphire-, and Most Improved Chapter Awards to be presented at the biennial Convocation and Business Meeting.

4.0 Membership Criteria

The By-Laws (Appendix 1) state that the purposes of the Fraternity are to provide a professional fraternity open to students enrolled in ceramic science and engineering programs in the US and Canada; to promote and emphasize scholarship and character in the thoughts of ceramic students; to stimulate mental development; to promote interest in the professional aspects of ceramic engineering, technology and science; and to bind alumni more closely to their Alma Mater.

The classes of membership in the Fraternity include:

- Resident students
- Resident teaching staff
- Alumni
- Honorary

The Fraternity's founding fathers made it abundantly clear that Keramos is a professional fraternity, not an honorary society. Equally important in the criteria for membership is the quality of character and service to the profession. It was the intent of the Fraternity's Founding Fathers, and reinforced by the Fraternity's Board that these criteria be exercised equally in nominating candidates for membership.

Nomination of candidates for initiation must adhere to several guiding principles and procedures as discussed below:

Resident students:

Resident students include undergraduate and graduate students. However, membership criteria differ slightly for each as follows:

- Resident undergraduate students must have been registered as a student in a ceramics-oriented program for at least the last term or semester of the sophomore year, and possess a grade point average of at least 2.2 on a 4.0 scale (Note: students with a lower semester standing than ascending sophomore are ineligible for membership.) The By-Laws specify a grade point criteria for admission (GPA not lower than 2.2 on a 4.0 scale); however, application of a higher grade point average criterion for admission to a Chapter is permitted at the discretion of the Chapter.
- Resident graduate students are eligible for membership one semester after admission into a program granting a ceramics-oriented degree (Note: graduate students who were previously inducted as members in another Chapter are not eligible for re-initiation in the Chapter where they are currently located. They retain their original National number, but their affiliation will be transferred to the Chapter where they are currently located.)

Resident Teaching Staff:

Resident teaching staff are defined as those holding the rank of instructor or above in a ceramics-oriented program at an institution in which a Chapter is located, and who have not previously been inducted at another Chapter. As with graduate students, if they were previously inducted as members of another Chapter, they retain their original National number from that Chapter, but their affiliation will be transferred to the Chapter where they are currently located.

Alumni:

Alumni are defined as graduates who were formerly students in a ceramics-oriented program but who are no longer formerly connected with the institutions from which they graduated. As with Resident Graduate Students and Resident Teaching Staff, in the event that an Alumnus was previously inducted as a member of another Chapter, he/she will retain his/her original National number from that Chapter, but his/her affiliation will be transferred to the Chapter which he/she wishes to be affiliated.

Honorary:

Honorary members are candidates who the Chapter wishes to recognize for their attainments in the field of ceramics. Honorary members may be inducted only after meeting several special requirements:

- Honorary membership is reserved for individuals who have made a significant contribution to the ceramic arts, sciences, or engineering. Support and administrative staff, friends of a program, or any other individuals who have not contributed substantially to the arts, science, engineering, or technology of ceramics are not eligible for Honorary membership. See the Keramos Award for Distinguished Service on page 12 to recognize candidates who do not meet the criteria for Honorary membership.
- Chapters must nominate Honorary members by formal submission of a one page biosketch and photograph to the Board(via the General Secretary) no later than November 15th of the academic year in which they wish to induct them;
- Prior approval of the nomination by the Board is required before the nominee may be inducted; upon approval, the Board shall notify the chapter no later than January 15th, and provide the Chapter with a signed induction certificate to be used by the Chapter in inducting the Honorary Member;
- Upon induction of the Honorary Member, the Chapter must submit a completed electronic member record for the Honorary Member (see Appendix 4);
- There shall be no induction fee or dues required for an honorary member;

- Chapters may induct only one Honorary Member per academic year.

5.0 Induction Procedures

The procedures by which new members shall be inducted shall be:

- Chapter officers, in consultation with the Chapter Advisor, shall each semester identify a suite of nominees for induction into the Chapter;
- Chapter President shall forward the biosketch and photograph of an Honorary member nominee to the General Secretary no later than November 15th for Board approval;
- Chapter President shall invite, in writing, the nominees to determine their interest in joining the Fraternity;
- Chapter shall organize and implement an inductee orientation program on the history of Keramos, the background of the local chapter, and obligations of our members; it is highly recommended that Chapters include a service or engagement project focused on the ceramics discipline as part of the orientation process;
- Honorary members may only be inducted after formal approval of their nomination by the National Board;
- Induction of new members shall occur within two weeks of completing the orientation program, and in accordance with the *Official Ritual of Keramos National Professional Ceramic Engineering Fraternity* (Appendix 5).
- The Herald shall collect dues and completed new membership records for each inductee prior to the induction ritual; Dues in the amount of \$10 per inductee shall be collected for transmittal to National; Chapters may collect additional dues for Chapter activities at their discretion;
- The Chapter Treasurer and Secretary shall submit the dues and completed electronic new member cards to the National General Secretary no later than one week after the induction; the format for the electronic membership record is given in Appendix 4; The attached spreadsheet (<http://ceramics.org/classes/keramos/>) should be used to provide new initiate information to the General Secretary. Please note that address information should be the home (permanent) address for the initiate. Information required is: Name and title, date of birth, email address, permanent address (street, city, state, zip and country), initiation year, major and degree, and graduation year.
- The General Secretary, upon receipt of the dues and electronic membership records, shall return formal induction certificates to be signed by the Chapter President and awarded to the inductees within one month.

6.0 Fraternity Awards and Recognition

The Fraternity By-Laws and Procedures allow for several different awards to recognize accomplishments among Chapters and Members:

- Student Chapter Awards: These include Outstanding Chapter, Diamond Chapter, Sapphire Chapter and Most Improved Chapter awards, the criteria for which are:
 - Outstanding Chapter Award – reserved for the chapter that has demonstrated *superior performance* in their activities for the past year. The award is determined by the highest overall score based on the annual report discussed in Section 3.0, Annual Report Content and Format, and is awarded at the biennial Convocation and Business Meeting of the Fraternity.
 - Diamond Chapter Award – reserved for the chapter(s) that have demonstrated *exemplary performance and leadership* in their activities for the past year. The award is determined by placing in the top tenth percentile of the annual reports scores, and is awarded at the biennial Convocation and Business Meeting of the Fraternity.
 - Sapphire Chapter Award – reserved for the chapter(s) that have demonstrated *notable performance* in their activities for the past year. The award is determined by placing in the top quartile of the annual report scores, and is awarded at the biennial Convocation and Business Meeting of the Fraternity.
 - Most Improved Chapter – reserved for the chapter that has demonstrated *significant progress* in leadership and activity relative to the prior year. The award is determined based on the chapter’s annual report, awarded by consensus of the Board when warranted, and presented at the biennial Convocation and Business Meeting of the Fraternity.

Each of these awards consists of an engraved plaque for display at the Chapter’s home institution; the Outstanding Chapter Award is also recognized by an engraved entry on a master plaque which travels with the annual winning chapter.

- Greaves-Walker Roll of Honor – this award is derived from the *Honorary Member of the Grand Chapter* award and honors one of the original founders of the Fraternity, Arthur F. Greaves-Walker. The award was formally established by the Board in 1961.

Arthur F. Greaves-Walker was an engineer, educator, leader and champion of ceramic engineering as a recognized profession. He served as the First Grand National Potter (National President) of Keramos, and his influence dominated the growth of Keramos for decades. His imprint on our activities and ethos continues to this day.

The Greaves-Walker Roll of Honor Award recognizes senior members of Keramos who by nature of their long and honorable service to the Fraternity may be placed on the Roll by consensus of the Board upon nomination by any member in good standing. Nominations may be submitted to the General Secretary at any time; the award is made at the biennial Convocation and Business Meeting, with no necessity of making the award each year.

- Keramos Award for Distinguished Service – This award was established in 1978 to honor candidates whose contributions to ceramic science, engineering, or technology are considered laudable, but who might not strictly satisfy the criteria for Honorary membership. In general, the award is made at the local chapter level, to individuals who have provided exemplary service to the Chapter in a non-ceramic engineering function. The Chapter must nominate the individual, including a biosketch and photograph, for approval by the Board prior to making the award. The award is comprised of a certificate of appreciation for distinguished service, is presented at a local Chapter meeting and recognized at the biennial Convocation, and entitles the awardee to inclusion on the membership rolls of the Fraternity.
- Keramos-sponsored Contest Awards – The Fraternity has a long standing tradition of sponsoring ceramics-related competitions at the Annual Meeting of the American Ceramic Society, and more recently has expanded the competition to include participation by all members of the Material Advantage™ student group at the Materials Science and Technology (MS&T) meeting each fall.

The Ceramic Putting Contest, which is described more fully in Appendix 6, includes awards in the amount of \$100 and an inscribed trophy for the team winning the contest, and an award for the *Most Aesthetic Putter and Ball*.

The Ceramic Mug Drop Contest, also described in Appendix 6, includes awards in the amount of \$100 and an inscribed trophy for the mug that survives a drop from the highest height onto a concrete floor, as well as recognition for the individual deemed to have entered the *Best Looking Mug* in the competition.

7.0 Information on Meetings

The Fraternity holds several types of meetings throughout the year. Routine business is conducted by the Board using periodic teleconferencing and semiannual meetings at the International Conference on Advanced Ceramics and Composites (Daytona Beach) in January and at the Annual Meeting of the American Ceramic Society in conjunction with the MS&T meeting each fall. Topics suggested for discussion at Board meetings may be submitted through the elected Keramos Student Representative or to the General Secretary for inclusion on the next meeting agenda.

The rank and file of the Fraternity meets at a biennial Convocation and General Business Meeting on the Sunday morning of the Annual Meeting of the American Ceramic Society during the MS&T meeting each fall. Chapter reports by the designated delegates, Fraternity business, reports from the Board, and a Career Speaker presentation are the highlights of the Convocation. A post-Convocation meeting of the Board with all Chapter advisors will be included starting in 2009.

Convocations adhere to the following agenda (Sunday of the ACerS Annual Meeting at MS&T):

- 7-9 am Board breakfast and business meeting (conference hotel restaurant)
 - Officers reports
 - Student representative report
 - Results of Annual Report scoring and chapter awards
 - Review of MS&T/Keramos activity preparations
 - New business

- 8-9 am Student Chapter business meeting(Keramos Convocation room TBA)-Chaired by Vice President
 - Agenda to be determined by elected Student Representative in consultation with chapters (review of past year, best practices discussion, general business, etc.)
 - Election of student representative for next year

- 9-11 am Biennial Convocation and Business Meeting (Keramos Convocation room TBA)
 - Welcome and Introductions
 - Fraternity President's report
 - Election of new Board member (even years)
 - History of Keramos tutorial
 - Chapter reports
 - Awards and recognitions

- 11 am – noon Career Speaker (Keramos Convocation room TBA)

- Noon – 1:30 pm Board, student representative, and chapter advisors meeting (conference hotel restaurant)

8.0 Delegate Travel Subsidies

Chapters shall select two delegates and two alternates in the spring of the academic year to represent their Chapter at the biennial Convocation and Business meeting. The Chapter's annual report must include the Delegates' and alternates' names, addresses, phone and e-mail contact information.

The Board will help defray the costs of the delegates or their alternates to travel to the biennial Convocation and Business meeting to represent their chapter. The subsidy will be determined by the National Treasurer, and will be the lesser of the cost of economy airfare for one person or mileage determined from the standard Internal Revenue Service mileage reimbursement rate. Only those delegates and/or alternates who have been so designated in their Chapter reports and who attend the full Convocation will be eligible for the travel subsidy.

9.0 Keramos Jewelry

High quality jewelry is available to show your pride in membership, and can be ordered by request through the General Secretary. Plain badges, badges decorated with a crown pearl perimeter, and a Key shaped badge are available. Engraving and velvet lined jewelry boxes to store the badges are also available. Prepaid orders are required, there is no minimum order or service charge, but orders are subject to shipping and applicable state taxes. Examples of the badges and their costs are given below; prices are subject to change:

Engraving is available (initials, chapter, letters, date) for all items at an additional cost of \$4.00

Plain Badge: \$91.20 in 10K gold, \$23.75 in gold clad



Crown Pearl Badge: \$160.30 in 10K gold, \$93.85 in gold clad



Key: \$120.20 in 10K gold, \$37.80 in gold clad



Appendix 1. Current Keramos By-Laws (Revised 1995)

Keramos

NATIONAL PROFESSIONAL CERAMIC ENGINEERING FRATERNITY BY-LAWS

ARTICLE I Title and Purpose

Section 1 - The name of this non-profit corporation shall be Keramos.

Section 2 - The purposes for which this corporation is organized are:

- (a) To provide a professional fraternity open to students internationally in the schools, departments, divisions, or options in Ceramic Science or Engineering at universities and colleges.
- (b) To promote and emphasize scholarship and character in the thoughts of students, to stimulate mental development, and to promote interest in the professional aspects of ceramic engineering, technology, and science.
- (c) To bind alumni more closely to their Alma Mater and to the alumni of other universities and colleges having schools, departments, divisions, or options in Ceramic Science or Engineering and to furnish an additional tie of college friendship.

ARTICLE II
Definitions

Section 1 - As used in these By-laws the terms below are defined as follows:

- (a) Ceramics – Ceramics shall mean educational programs leading to a baccalaureate degree in Ceramic Engineering or a designated Ceramic option in a baccalaureate degree in Materials Science and Engineering.
- (b) Student – A student or graduate student registered in a university, college, department, or division of Ceramics or allied discipline with a focus program in Ceramics.
- (c) Teaching staff – Any person on the teaching staff of a university, college, department, or division of Ceramics holding the rank of instructor or above.
- (d) Alumni – Graduates who were formerly students, as defined above, but who are no longer connected with the institutions from which they graduated.

ARTICLE III
Constituent Organizations

Section 1 - This Fraternity shall consist of constituent organizations designated as Chapters and named for the institution in which they are located.

- (a) Institutions with ABET, Inc. accredited baccalaureate Ceramic Engineering programs or accredited Ceramic options in Materials Science and Engineering programs will qualify for Chapters upon application to the Board of Directors.
- (b) Institutions which offer an ABET, Inc. accredited Materials Science and Engineering program may petition the Board of Directors to charter a Chapter. The petition will consist of written material which clearly indicates that the Materials Science and Engineering program has substantial content relating to ceramic materials, that the faculty of the department is substantially involved in research on ceramic materials, and that graduates of the program are active in engineering, manufacturing, research, or development of ceramic materials. Any student of the department who, as determined by the Chapter, has actively demonstrated interest in Ceramic Science and Engineering and compatibility with the purpose and goals of this Fraternity would then be eligible for membership if all requirements for membership stated in these by-laws and the requirements of the Chapter are met.
- (c) A Chapter shall consist of at least five active members.
- (d) Chapter members will be students, teaching staff, alumni, or honorary, as defined in Article IV.

ARTICLE IV
Membership at Large

- Section 1 - The membership of this Fraternity shall consist of the members of its Chapters.
- Section 2 - The classes of membership shall be as follows:
- (a) Resident students
 - (b) Resident teaching staff
 - (c) Alumni
 - (d) Honorary
- Section 3 - Classes of membership are defined as follows:
- (a) Resident student – A student enrolled at the same institution at which a Chapter is established.
 - (b) Resident teaching staff – Teaching staff at an institution where a Chapter is established.
 - (c) Alumni – As defined in Article II, Section 1 (d).
 - (d) Honorary – A membership conferred on those persons whom the Fraternity wishes to recognize for their attainments in the field of Ceramics. Faculty members are not eligible for Honorary member status at their own institution.
- Section 4 - The presentation of official lists of members to the General Secretary by the secretaries of the Chapters, by April 15 of each year, shall establish the membership of this Fraternity as of that date.
- Section 5 - The names, addresses, and records of members newly elected and initiated into the Chapters hereof shall be forwarded, within seven days of the initiation of such members, to the General Secretary by the secretaries of the Chapters.

ARTICLE V
Finance

- Section 1 - The fiscal year of this Fraternity shall begin on March 15 and end on March 14 of each calendar year.
- Section 2 - The Treasurer of this Fraternity shall be bonded in an amount sufficient to cover all monies handled. The cost of said bond shall be borne by this Fraternity and paid out of its treasury.
- Section 3 - A bank shall be selected by each succeeding Treasurer of this Fraternity and designated as the depository of this corporation.
- Section 4 - Within seven days after the initiation of a new member into a Chapter hereof, the Secretary of that Chapter shall transmit ten dollars (\$10.00) of the initiation fee collected from the new member to the General Secretary with a record of the name of the member for whom such payment is made and other information as specified in the current Procedures Manual.
- The General Secretary shall deposit received funds in a Fraternity business account and report funds received to the Treasurer. The General Secretary is authorized to use such funds for the conduct of Fraternity business such as (but not limited to) printing and postage.
- Section 5 - In case of a financial emergency to be determined by the Board of Directors hereof, the Board of Directors may assess a tax to be levied on each member of this Fraternity, provided that such a tax shall not exceed the sum of ten dollars (\$10.00) per member in any one fiscal year.
- Section 6 - In the event that this Fraternity should cease to exist on a national level, all monies in the treasury shall be distributed equally among all currently active Chapters. Should there be no active Chapters at such time, all monies shall be distributed to the materials science programs of the universities having the last ten active Chapters of this organization. This stipulation is in keeping with this organization being a non-profit organization.
- Section 7 - Other matters pertaining to finance are set forth herein-below in Article VII, Section 4, under duties of the Treasurer.

ARTICLE VI
Officers, General Secretary and Herald of the Fraternity

- Section 1 - The elected officers of this Fraternity shall be a President, Vice President, Treasurer, and Recording Secretary.
- Section 2 - Officers shall hold office for two years or until their successors are duly elected and installed. Individuals will normally progress through the offices of the Fraternity in the following order: Recording Secretary, Treasurer, Vice President, President. They will serve on the Board of Directors for an additional two-year period as Past President.
- Section 3 - The terms of office of all officers elected at the annual convocation and business meeting on even numbered years shall commence at the adjournment of such meeting.
- Section 4 - Only resident teaching staff, alumni and honorary members of this Fraternity, as defined in Article IV Section 3, are eligible to be elected officers.
- Section 5 - The Board of Directors shall establish the offices of General Secretary and Herald, and appoint members to fill these offices who shall serve without term limits at the discretion of the Board of Directors.
- Section 6 - The officers, General Secretary and Herald of this Fraternity shall perform the duties usually performed by such officers, together with such duties as shall be prescribed by the By-laws of this Fraternity, as set forth herein-below in Article VII, or by the Board of Directors.
- Section 7 - Any vacancy in any office because of death, resignation, removal or any other cause shall be filled for the unexpired term by a majority vote of the Board of Directors upon recommendation of the President; the officer so selected shall hold office until a successor is chosen.

ARTICLE VII

Duties of Officers, General Secretary and Herald

Section 1 - President – The President shall be chairperson of the Board of Directors and an ex officio member of all committees except the committee on nominations. The President shall be the principal executive officer of this Fraternity and, subject to the control of the Board of Directors, shall supervise the activities of this Fraternity in accordance with these By-laws and shall take all necessary steps to ensure its wellbeing. This may include the removal from office of any officer who is derelict in the performance of the duties of that office as defined by the By-Laws. The President shall, when present, preside at all meetings of the Board of Directors, the Fraternity membership, and at the annual convocation and business meeting. The President shall sign, with any other officer, other instruments which may be lawfully executed on behalf of this corporation except where the signing and execution thereof shall be designated by the Board of Directors to some other officer or agent. The President shall cause all meetings of this Fraternity to be called in accordance with the provisions of the By-laws. Immediately upon assuming office the President shall appoint the standing committees set forth herein-below in Article X, the members of which shall serve until the conclusion of the following biennial convocation, or until their respective successors are appointed. The President shall appoint chairpersons of special activities designated by the Board of Directors and make all other necessary appointments. The President shall prepare the official program agenda for the annual convocation and business meeting, as well as any other meetings as appropriate. The President shall make an annual report to the Fraternity members for their acceptance and approval. This report shall be made at the annual convocation and business meeting during the tenure of office. The President shall file all reports with the General Secretary. The President, within thirty days after the Treasurer of this Fraternity has assumed office, shall ascertain whether or not the Treasurer is bonded and take any action necessary to secure the bonding of the Treasurer in accordance with these By-laws. The President shall notify the Chapter President of the action of the Board of Directors relative to that Chapter's recommendation of an individual for honorary membership.

Section 2 - Vice President – The Vice President, in the absence or disability of the President, shall assume and perform the duties of the President and exercise the powers of that office. In addition, the Vice President shall perform such other duties and have such other powers as the Board of Directors shall prescribe. In the event of a vacancy occurring in the office of President, the Vice President is elected and assumes the duties of the President at the next annual convocation and business meeting. The Vice President shall fulfill the duties prescribed herein by Article X, Section 4. In addition, the Vice President shall plan the program for the annual student meeting, and shall

plan and implement the student contests sponsored by the Fraternity at the Annual Meeting of the American Ceramic Society.

Section 3 -

Treasurer – The Treasurer shall be the financial officer of this Fraternity. The Treasurer shall have charge and custody of, and be responsible for, all funds of this Fraternity. The Treasurer shall receive and give receipts for monies due and payable to the Fraternity from any source whatsoever. The Treasurer shall render to the President and the Board of Directors an account of all transactions as Treasurer and of the financial condition of this Fraternity whenever the same shall be required. The Treasurer shall, by April 1 of each year, make an annual report to the Board of Directors of the financial condition of this Fraternity. Each year the Treasurer shall submit a like report to the representatives of the membership at the annual convocation and business meeting. The Treasurer shall file all reports with the General Secretary. The Treasurer shall secure and file with the General Secretary a bond in an amount sufficient to cover all monies likely to be handled during the Treasurer’s term of office and sufficient for the restoration to the Fraternity in case of death, resignation, retirement, or removal from office of all monies and other valuable instruments whatsoever in the possession of or under the control of the Treasurer and belonging to the Fraternity. The Treasurer shall file this bond with the General Secretary within thirty days after assumption of duties as Treasurer. The Treasurer shall notify the President of the coverage of the bond and of the filing of it with the General Secretary as soon as the bond is secured. The Treasurer shall pay the premium for such bond from funds in the Fraternity treasury. The Treasurer shall assist the Vice President in planning and implementing the student contests sponsored by the Fraternity at the Annual Meeting of the American Ceramic Society.

Section 4 -

Recording Secretary – The Recording Secretary shall keep an accurate record of all meetings of the Board of Directors and of the membership. The Recording Secretary shall present to the Board of Directors all applications of groups seeking charters as Chapters of this Fraternity. The Recording Secretary shall give notice of all regular and special meetings of the Board of Directors, stating the place, day, and hour of the meeting, and, in case of a special meeting, the purpose or purposes for which the meeting is called, such notice to be delivered not less than ten nor more than fifty days before the date of the meeting, personally, by postal mail or by electronic mail to each person entitled to vote at such meeting. The Recording Secretary shall give notice to each Chapter and the Board of Directors stating the dates and place of the annual convocation and business meeting. The Recording Secretary shall distribute copies of the official program agenda for the annual convocation and business meeting to the Chapters prior to, or at the opening of, the meeting, as well as any other meetings as appropriate. The Recording Secretary shall record minutes at each meeting of the Board of Directors and at the annual convocation and business meeting, and shall transmit the

minutes to the General Secretary for archival within seven days of said meeting. The Recording Secretary shall work with staff of the American Ceramic Society to maintain the Fraternity website. The Recording Secretary shall ensure that all Fraternity annual reports, Keragrams, and student contest results are maintained on the Fraternity website. The Recording Secretary shall assist the Vice President in planning and implementing the student contests sponsored by the Fraternity at the Annual Meeting of the American Ceramic Society.

Section 5 -

General Secretary – The General Secretary shall act as executive secretary of this Fraternity and shall assume the duties prescribed by the Board of Directors. The General Secretary shall preserve and have the custody of the Articles of Incorporation of this Fraternity and of all other records, papers, letters, transactions, annual reports, and other instruments belonging to this Fraternity. The General Secretary shall keep a master list of the membership of the Chapters and of the Alumni of this Fraternity. The General Secretary shall keep an interim record of the names and addresses of newly elected and initiated members together with a record of the payment of their national initiation fee. The General Secretary shall receive and report all initiation fees to the Treasurer of this Fraternity. As agreed by the Treasurer, a portion of such fees may be retained by the General Secretary in a Fraternity business account for conduct of Fraternity business. The General Secretary shall keep copies of the By-laws of this Fraternity and shall distribute a copy of said By-laws to each Chapter at the time the latter's charter is issued, and to each new national officer following his/her election. Copies of the By-Laws shall also be sent to each active Chapter at the beginning of each school year. The General Secretary shall have custody and charge of all books and literature of this Fraternity and shall distribute the same as requested and receive payment for the same, such monies received to be turned over to the Treasurer of this Fraternity. The General Secretary shall make all necessary arrangements for the annual convocation and business meeting. The General Secretary shall receive and compile a list of the names of delegates, alternates, and proxies to the annual convocation and business meeting prior to the event. The General Secretary shall annually compile a list of the officers of the Chapters of this Fraternity. The General Secretary shall maintain an archive of meeting minutes received from the Recording Secretary. The General Secretary shall answer all inquiries to and concerning this Fraternity within the authorization granted by the Board of Directors. The General Secretary shall have custody of the corporate seal of this Fraternity and shall affix it on all instruments on which it is required. After authorization by the Board of Directors, the General Secretary shall cause a charter to be prepared and shall transmit it to the officers designated to install a new Chapter. The General Secretary shall issue certificates of membership to all new members through the Chapters. The General Secretary shall assure that the Keramos Trademark will remain registered and current with the United States Patent and Trademark Office.

Section 6 -

Herald – The Herald shall act as historian of the Fraternity and keep an up-to-date history of all its activities, shall secure membership statistics from the official list kept by the General Secretary, and shall give an annual report at each annual convocation and business meeting.

Section 7 -

All officers shall turn over to their successors all records and property of the Fraternity in their possession promptly at the expiration of their term of office.

ARTICLE VIII
Board of Directors

- Section 1 - In the intervals between the annual convocation and business meeting all executive power of this Fraternity shall be vested in a Board of Directors who shall conduct the business and affairs of this Fraternity.
- Section 2 - The Board of Directors shall consist of the President, Vice President, Treasurer, Recording Secretary, Herald, Past President, General Secretary, and a student member as an Observer. The President shall serve as the Chairman of the Board of Directors. The number of directors may be decreased to not less than three or increased to any number, from time to time, by amendment of this Section; but no decrease shall have the effect of shortening the term of any incumbent director. Each director shall assume the duties of office and hold it until the election of a successor at the next annual convocation and business meeting on an even numbered year, with the exception of the General Secretary and the Herald, whose terms shall coincide with the incumbency of that position as determined by the Board of Directors.
- Section 3 - Any vacancy occurring in the Board of Directors may be filled by the affirmative vote of the majority of the remaining directors. Any office to be filled by reason of an increase in the number of directors shall be filled by election at the annual convocation and business meeting or at a special meeting of representatives of the membership called for that purpose.
- Section 4 - Regular meetings of the Board of Directors shall be held immediately preceding the annual convocation and business meeting at the place where such annual meeting shall be held. Meetings of the Board of Directors also shall be held at such times and places as may be deemed necessary by resolution of the Board of Directors.
- Section 5 - Special meetings of the Board of Directors may be called by the President on five (5) day's notice to each director and shall be called by the President in like manner or on like notice upon the request of not less than five (5) Chapters or three (3) members of the Board of Directors. Special meetings shall be held at such time and place as may be specified in the notice thereof, such notice to specify the purpose for which the meeting is called. Notice of any special meeting of the Board of Directors may be waived by the person or persons entitled to such notice, whether before or after the time stated therein, and shall be equivalent to the giving of such notice. Attendance of a director at a special meeting shall constitute a waiver of notice of such special meeting except where a director attends a meeting for the express purpose of objecting to the transaction of any business because such special meeting is not lawfully convened.

- Section 6 - In the intervals between meetings of the Board of Directors the President may refer and submit to the Board of Directors definite questions relating to the affairs of the Fraternity which, in the opinion of the President, require a referendum. This requires a majority vote of the Board of Directors and shall control the action of the Fraternity, its Board of Directors, Chapters, and committees.
- Section 7 - Except as otherwise specified herein, a majority of the number of directors shall constitute a quorum for the transaction of business. The act of the majority of the directors present at a meeting at which a quorum is present shall be the act of the Board of Directors. Directors may not vote by proxy at any time. Directors may vote in absentia when necessary either in writing or by other means of verbal or written communication.
- Section 8 - The Board of Directors shall have the power to determine when a financial emergency exists such that it is necessary to authorize the assessment of the tax specified in Article V, Section 5, herein above.
- Section 9 - The Board of Directors shall be the final court of appeals in all questions of interpretation of the Articles of Incorporation and By-laws and in all matters of discipline of members and Chapters which may be referred to it.
- Section 10 - A student member of the Fraternity shall be selected to meet with the Board of Directors as an Observer and resource person, without vote. The period of appointment shall be one year. The individual selected shall be elected by a plurality vote at the student meeting prior to the annual convocation and business meeting.

ARTICLE IX
Duties of the Board of Directors

Section 1 - The Board of Directors shall:

- (a) Transact the general business of the Fraternity in the interim between annual convocation and business meetings.
- (b) Establish major administrative policies governing the affairs of the Fraternity and devise measures for the Fraternity's growth and development.
- (c) Establish the office of General Secretary and make such office the center of information of the Fraternity, appoint a person to serve as General Secretary, fix compensation, and assign duties.
- (d) Act upon applications for the issuance of a Charter to Chapters, and withdraw a Charter if the membership falls below five members, or for other good cause.
- (e) Fill any vacancies on the Board of Directors.
- (f) Decide upon the exact date and place for holding the annual convocation and business meeting, approve the program thereof, and provide for the payment for a place of meeting, when necessary; and hold meetings of the Board of Directors before each annual convocation and business meeting as herein before provided.
- (g) When meeting in a body, ratify referendum votes of the Board of Directors.
- (h) Approve the nomination of honorary members selected by the Chapters.
- (i) Establish the office of Herald.

ARTICLE X
Standing Committees

- Section 1 - Standing committees may be composed of any or all classes of members of this Fraternity.
- Section 2 - The following standing committees shall be appointed by the incoming President at or immediately after each biennial convocation to serve until the termination of the next biennial convocation, or until their respective successors are appointed:
- (a) Committee on Nominations
 - (b) Committee on Programs
 - (c) Committee on Greaves-Walker Roll of Honor Nominations
- Section 3 - The Committee on Nominations shall consist of three members of the Fraternity, two of whom are Chapter advisors. The third member will be the current Past President, who will chair the committee. Immediately after each biennial convocation, the committee shall request of each Chapter the names of persons qualified to serve and willing to serve if elected as officers of this Fraternity. From these names the Committee on Nominations shall select nominees for the offices of the Fraternity and report such slate when called upon by the President to do so at the biennial convocation.
- Section 4 - The Committee on Programs shall consist of the Vice President as chairperson. This committee shall be responsible for planning the program for the annual convocation and business meeting. The program shall be completed and transmitted to the General Secretary sufficiently far in advance for inclusion in annual convocation and business meeting publicity.
- Section 5 - The Committee on Greaves-Walker Roll of Honor Nominations shall consist of the immediate three Past Presidents of the Fraternity. The nomination shall be submitted to the Board of Directors for approval prior to the annual convocation and business meeting.

ARTICLE XI
Voting and Elections

- Section 1 - Voting on issues at the annual convocation and business meeting and on issues and the election of officers shall be carried out by delegates voting either in person or by an alternate or proxy as hereinafter provided.
- Section 2 - Each Chapter shall be entitled to two delegates to the annual convocation and business meeting. Their mode of election shall be as provided hereinafter under Article XIII. Chapters may elect alternates to act in place of elected delegates if the latter are unable to attend the annual convocation and business meeting. If neither a delegate nor alternate is able to attend the annual convocation and business meeting, the elected delegates may appoint a proxy to act in their stead. Such proxies shall be in writing, approved by the Chapter Advisor, and submitted to the General Secretary prior to the beginning of the annual convocation and business meeting.
- Section 3 - In the election of officers and directors, the Committee on Nominations shall first report its slate of nominees. The presiding officer shall thereafter call for the names of write-in nominees from the floor. Voting shall be by a show of hands unless a request is made for election by secret ballot.
- Section 4 - A majority vote out of the total number of votes cast shall decide a vote on an issue. In an election a plurality vote, that is, election of a nominee by the greatest number of votes out of those cast, shall constitute an election. In the case of a tie between two candidates for election, the choice shall be decided by lot.
- Section 5 - Voting for officers and directors shall be concluded at one session of the annual convocation and business meeting on even numbered years, as set forth in Article VI. Tellers, appointed by the President, shall report the results of their count on each office to the presiding officer, who, in turn, shall announce the results to the membership.

ARTICLE XII
Time and Place of Meetings

Section 1 - The Fraternity shall hold an annual convocation and business meeting each year. This meeting will be at the time and place of the Annual Meeting of the American Ceramic Society, or as determined by the Board of Directors. Any and all business of this Fraternity may be transacted at the annual convocation and business meeting.

ARTICLE XIII
Chapters

- Section 1 - A Chapter shall be established and composed of the members as set forth in Article III, Section 1 hereinabove.
- Section 2 - Subject to the Articles of Incorporation and the By-laws of this Fraternity, each Chapter shall have full control of its individual affairs and may enact By-laws for its own guidance in all matters not set forth in or not in conflict with the Articles of Incorporation and By-laws of the Fraternity.
- Section 3 - A Chapter shall be named after the institution in which it is established.
- Section 4 - Any petition from a group desiring a charter to establish a Chapter shall be submitted to the Board of Directors by the General Secretary. The General Secretary, as hereinbefore provided, after approval of the Board of Directors, shall transmit a charter to the officers designated to install each newly-formed Chapter. The General Secretary shall also send a copy of the By-laws of this Fraternity to each Chapter.
- Section 5 - After a Chapter has received its charter and a copy of the By-laws of this Fraternity, it shall prepare a Code of By-laws and submit it to the Board of Directors which shall determine whether or not it is sufficient and not in conflict with the Articles of Incorporation and By-laws of this Fraternity, and return the Chapter's Code of By-laws, with any suggestions, promptly.
- Section 6 - The eligibility and admission of classes of members to Chapters shall be as follows:
- (a) Resident undergraduate students – A resident undergraduate student in an institution at which there is a Chapter of this Fraternity must have been registered for at least the last term or semester of the sophomore year. In addition, an undergraduate student must have a scholastic average at the time of election not lower than 2.0 based on the following system of grading: A = 4, B = 3, C = 2, D = 1. Each Chapter has the privilege of increasing this minimum scholastic average requirement.
 - (b) Resident graduate students – A resident graduate student in an institution at which there is a Chapter of this Fraternity shall be eligible for election to membership one semester or two terms after admission to full graduate standing.
 - (c) Resident teaching staff – A member of the teaching staff in an institution at which there is a Chapter of this Fraternity shall be eligible to election as a member of the Chapter.

- (d) Alumni – Any alumni who were formerly student members of this Fraternity or who would have been eligible to be student members of this Fraternity had there been a Chapter of this Fraternity at the institution with which they were affiliated are eligible to be elected as alumni members of a Chapter. A person seeking affiliation with a Chapter not of his or her original membership will not be reinitiated and will retain his or her original membership number but will be carried on the rolls of the new Chapter of affiliation.
- (e) Honorary members – After securing the approval of the Board of Directors, a Chapter may elect as honorary members those persons who have made notable contributions to Ceramic Science or Engineering, provided, however, that a Chapter may not elect more than one honorary member each Fraternity year. The Chapter shall request approval of the Board of Directors of any individual desired to be elected to honorary membership by the Chapter. Faculty members should be selected as resident teaching staff members as opposed to being considered for honorary membership. After securing this approval a Chapter may elect the individual as an honorary member and the individual will be notified of such election by the Chapter President.

Section 7 - Each Chapter shall conduct the initiation of its new members in accordance with the ceremony prescribed in the official Ritual and at a time and place prescribed by the Chapter Officers. An honorary member need not be present for initiation, but shall be sent a copy of the Official Ritual to be read, signed, and returned to the Chapter Secretary for permanent filing.

Section 8 - Upon election and initiation of new members to a Chapter the Secretary of the Chapter shall immediately transmit to the General Secretary a record containing the full name, date of birth, home residence and other pertinent information as specified by the General Secretary, together with \$10.00 of the initiation fee. A certificate of membership and all other insignia of the Fraternity shall be sent to or made available to all new members. Each year the Secretary of the Chapter shall send an official list of its membership to the General Secretary of this Fraternity (to be included in the Annual Report).

Section 9 - Each Chapter shall decide what causes are sufficient to require expulsion of a member.

Section 10 - Each Chapter shall determine the amount of its dues and initiation fee, \$10.00 of which shall be transmitted to the General Secretary with the initiates' records as herein before provided.

- Section 11 - Chapters of the Fraternity shall hold meetings at least once each month between the months of October and May, inclusive.
- Section 12 - The voting rights of classes of members of a Chapter shall be as follows:
- (a) Each student member shall have one vote.
 - (b) Teaching staff members, alumni and honorary members who are active members of the Chapters shall have one-half vote each.
- Section 13 - The voting procedure of a Chapter shall be as follows:
- (a) The number of persons necessary to constitute a quorum shall be determined by each Chapter, as required by its By-laws. No business shall be transacted without a quorum.
 - (b) A majority shall be sufficient to elect new members and to carry any issue. A majority vote shall be computed by adding the numerical value of whole and half votes, dividing the sum by two, and adding one half to the quotient. In an election, a nominee who receives the highest number when the numerical value of half and whole votes has been totaled, shall be elected. Every voter shall vote by secret ballot one vote or one-half vote, whichever is in accordance with the voter's class of membership.
 - (c) Nominations for officers and delegates or alternates to the annual convocation and business meeting shall be made at one meeting prior to the election thereof.
- Section 14 - Elected officers of each Chapter shall be a President, Vice President, Secretary, Treasurer and Herald. Officers shall be elected not later than April 1 of each year. At the same meeting at which the election of officers is held each Chapter shall elect a member of the teaching staff who is a member of this Fraternity to be its Faculty Advisor. The officers and Faculty Advisor shall constitute the Executive Committee of the Chapter. The Secretary shall transmit the names of the Executive Committee of the Chapter to the General Secretary immediately after each election.
- Section 15 - Each Chapter shall elect two official delegates as its representatives to the annual convocation and business meeting and shall elect an alternate for each delegate to substitute if the delegate is unable to attend the annual convocation and business meeting. Delegates and alternates shall be elected by April 1 of each year.
- Section 16 - An elected delegate may appoint a proxy, as set forth herein above in Article XI, Section 2, if neither the delegate nor the alternate is able to attend the

annual convocation and business meeting.

Section 17 - Immediately after the election of delegates and alternates, or appointment of proxies, the Secretary of each Chapter shall send the names of such persons to the General Secretary.

Section 18 - If the membership of any Chapter falls below five members, or if other good reason exists, an officer of the Chapter shall petition the Board of Directors of this Fraternity to dissolve the Chapter.

ARTICLE XIV
North Carolina Registered Office and Agent

Section 1 -

In order to fulfill the requirements of the law of the State of North Carolina in which this Fraternity is incorporated, it shall be the duty of the Board of Directors to maintain continuously in the State of North Carolina, registered with the Corporation Division in the Office of the Secretary of State of North Carolina, a registered office and a registered agent designated as the person and place on whom and at which all legal notices and process may be served on this corporation. The registered agent and registered office may be a member, either alumni or teaching staff, together with a business address or a corporation domesticated in North Carolina, whether for profit or non-profit. Upon failure to appoint or maintain a registered agent in the State of North Carolina, the Secretary of State of the State of North Carolina shall be an agent of this Fraternity upon whom any such process, notice, or demand may be served.

ARTICLE XV
Insignia

- Section 1 - The colors of the Fraternity shall be light cobalt blue and gold.
- Section 2 - The badge of the Fraternity shall be in the form of an oblong having four concave sides composed of sections of the circumference of four tangent circles of two different diameters, the larger one having a radius of 16 mm. and the smaller one a radius of 13mm. The length of the oblong from tip to tip shall be 15 mm. and the width from tip to tip shall be 13 mm. Within a plain or jeweled border of uniform width, on a raised panel of black enamel the name “Keramos” shall be placed equidistant between top and bottom. The name shall be in Greek letters, with the first letter in upper case and the balance being in lower case. Above the name shall be placed three stars, the center one being slightly below the other two and below the name two stars and a new moon, the moon being between the stars and slightly above them.
- Section 3 - The ribbons of this Fraternity shall be one of light cobalt blue and one of gold, each five-eighths inch wide.
- Section 4 - The seal of the Fraternity shall be one and five-eighths inches in diameter. Inside the border, at the top shall be the name “Keramos”, the first letter being in upper case and the balance lower case; at the bottom the words “Founded 1902”. In the center shall be a new moon surrounded by five stars or mullets and the words “Seal of the Fraternity.”

ARTICLE XVI

Motto

Section 1 -

The motto of the Fraternity shall be: "Through Fire to Perfection." The publicizing of the motto to the general public shall be authorized by the Board of Directors, when in their opinion such serves the interest of the Fraternity. The Chapter officers may, with the approval of the Faculty Advisor, use the motto in material published for distribution on the campus upon which the Chapter is chartered.

ARTICLE XVII
Amendment

- Section 1 - These By-Laws may be amended at any annual convocation and business meeting by a two-thirds vote of the accredited delegates, present in person or by proxy. All proposed amendments shall be referred to the General Secretary for study and recommendation. The General Secretary shall see that all proposed amendments with recommendation shall be referred to the Board of Directors at least two months prior to the date of the following annual convocation and business meeting. Notice of a proposed amendment to these By-laws which sets forth the proposed amendment shall be shown on the agenda for each annual convocation and business meeting.
- Section 2 - These By-laws may be amended at any annual convocation and business meeting by a unanimous vote without the notice required in Section 1 of this Article.

Appendix 2. Keramos Board of Directors (2008-2010)

PRESIDENT	<p>Dr. John R. Hellmann Associate Dean for Education College of Earth and Mineral Sciences Professor - Dept. of Materials Science & Engineering The Pennsylvania State University 14 Deike Bldg. University Park, PA 16802 Phone: (814) 865-0163 Email: jrh3@ems.psu.edu</p>	PAST PRESIDENT	<p><u>Dr. Robert W. Schwartz</u> Vice Provost for Academic Affairs 110 ERL 500 W. 16th St. Missouri University of Science & Technology Rolla, MO 65409-0840 Phone: (573) 341-7887 Fax: (573) 341-4979 rschwartz@mst.edu</p>
VICE PRESIDENT	<p>Dr. William F. Hammetter Sandia National Laboratories MS 1349 P. O. Box 5800 Albuquerque, NM 87185 Phone: (505) 272-7603 Email: wfhamme@sandia.gov</p>	HERALD	<p><u>Mr. Stephen G. Hess</u> 33 Spring Street Shrewsbury, MA 01545 Phone: 508-842-1542 Email: shess@idexcorp.com</p>
TREASURER	<p>Dr. Gregory E. Hilmas Professor of Ceramic Engineering 222 McNutt Hall N. Bishop Ave Rolla, Missouri 65409 (573)341-6102 ghilmas@mst.edu</p>	STUDENT REPRESENTATIVE	<p>Stephanie Whitson Clemson University 3637 University Station Clemson, SC 29632 swhitso@clemson.edu</p>
RECORDING SECRETARY	<p>Dr. Kevin M. Fox Savannah River National Laboratory Bldg. 999-W Aiken, SC 29808 (803)819-8462 kevin.fox@srnl.doe.gov</p>	GENERAL SECRETARY	<p>Dr. Robert W. Schwartz Vice Provost for Academic Affairs 110 ERL 500 W. 16th St. Missouri University of Science & Technology Rolla, MO 65409-0840 Phone: (573) 341-7887 Fax: (573) 341-4979 rschwartz@mst.edu</p>

Appendix 3. Chapter Addresses and Advisors

Chapter	Advisor
<p>Arizona: The University of Arizona North Campus Drive Mines Bldg. Room # 131 Tucson, AZ 85721 Fax: 520-621-8059</p>	<p>B.G. Potter The University of Arizona PO Box 210012 Tucson, AZ 86721-0012 Phone: 520-322-2981 Fax: 520-322-2993 E-mail: kaj@aml.arizona.edu</p>
<p>Florida: University of Florida Dept. of Materials Science and Eng. 100 Rhines Hall Gainesville, FL 32611-6400 Fax: 352-846-3355</p>	<p>Susan B. Sinnott University of Florida Dept. of Materials Science and Engineering 100 Rhines Hall Gainesville, FL 32611-6400 Phone: 352-846-3778 Fax: 352-846-3355 E-mail: ssinn@mse.ufl.edu</p>
<p>Georgia: Georgia Institute of Technology School of Materials Engineering Atlanta, GA 30332-0245 Fax: 404-894-9140</p>	<p>Joe. K. Cochran Georgia Institute of Technology School of Materials Engineering Atlanta, GA 30332-0245 Phone: 404-894-6104 Fax: 404-894-9140 E-mail: joe.cochran@mse.gatech.edu</p>
<p>Illinois: University of Illinois Dept. of Materials Science & Eng. 204 Ceramics 105 South Goodwin Ave. Urbana, IL 61801 Fax: 217-333-5877</p>	<p>Trudy Kriven University of Illinois 302 Ceramics 105 S. Goodwin Ave Urbana, IL 61801 Phone: 217-333-2937 Fax: 217-333-5877 E-mail: kriven@uiuc.edu</p>
<p>Iowa: Iowa State University Dept. of Materials Science & Eng. 110 Engineering Annex Ames, IA 50011 Fax: 515-294-5444</p>	<p>Mufit Akinc Iowa State University 110 Engineering Annex Ames, IA 50011 Phone: 515-294-0738 Fax: 515-294-5444 E-mail: makinc@iastate.edu</p>
<p>Missouri: Missouri University of Sci & Tech. School of Mines & Metallurgy Dept. of Ceramic Engineering 222 McNutt 1400 N. Bishop St. Rolla, MO 65401-0249 Fax: 573-341-693</p>	<p>Jeffrey D. Smith Missouri University of Science & Technology 222 McNutt Rolla, MO 65401-0330 Phone: 573-341-4447 Fax: 573-341-6934 E-mail: jsmith@mst.edu</p>

<p>New Jersey: Rutgers State University School of Ceramics College of Engineering PO Box 909 New Brunswick, NJ 08903 Fax: 732-445-3258</p>	<p>Dr. Manish Chhowalla Rutgers University Dept. of Ceramics, College of Engineering PO Box 909 Piscataway, NJ 08903 Phone: 732-445-4931 Fax: 732-445-3258 E-mail: manish1@rci.rutgers.edu</p>
<p>New York: NYS College of Ceramics Alfred University Alfred, NY 14802 Fax: 607-871-2354</p>	<p>Matthew M. Hall Alfred University NYS College of Ceramics Alfred, NY 14802 Phone: 607-871-3143 Fax: 607-871-2354 E-mail: hallmm@alfred.edu</p>
<p>Ohio: Ohio State University Dept. of Materials Science & Eng. 177 Watts Hall 2041 College Rd. Columbus, OH 43210-1179 Fax: 614-292-1537</p>	<p>Eric R. Kreidler Ohio State University Dept. of Materials Science and Engineering 143 Fontana Labs 116 W. 19th Ave. Columbus, OH 43210-1179 Phone: 614-292-6754 Fax: 614-292-1537 E-mail: kreidler.1@osu.edu</p>
<p>Pennsylvania: Pennsylvania State University Dept. of Materials Sci & Eng. 212A Steidle Bldg University Park, PA 16802 Fax: 814-865-2917</p>	<p>R. Allen Kimel Pennsylvania State University Dept. of Materials Science & Engineering 212A Steidle Bldg University Park, PA 16802 Phone: 814-865-5397 Fax: 814-865-2917 E-mail: rak189@psu.edu</p>
<p>South Carolina: Clemson University Dept. of Ceramic Engineering 110 Olin Hall Box 340907 Clemson, SC 29634-0907 Fax: 864-656-1453</p>	<p>Eric Skaar Clemson University Department of Ceramic Engineering 110 Olin Hall Box 340907 Clemson, SC 29634-0907 Phone: 864-656-5351 Fax: 864-656-1453 E-mail: ecskr@clemson.edu</p>
<p>Washington: University of Washington Dept. of Materials Science & Eng. Roberts Hall Box 352120 Seattle, WA 98195 Fax: 206-543-3100</p>	<p>Rajendra K. Bordia Department of Materials Science and Engineering Box 352120 University of Washington Seattle, WA 98195-2120 Phone: 206-543-2600 Fax: 206-543-3100 E-mail: boardia@u.washington.edu</p>

Keramos Officer	PET Chapter
<p>Dr. <u>Robert W. Schwartz</u> Vice Provost for Academic Affairs 110 ERL 500 W. 16th St. Missouri University of Science & Technology Rolla, MO 65409-0840 Phone: (573) 341-7887 Fax: (573) 341-4979 <u>rschwartz@mst.edu</u></p>	<p>Missouri University of Science and Technology</p> <p>Iowa State University</p>
<p>Dr. John R. Hellmann Associate Dean for Education College of Earth and Mineral Sciences Professor - Dept. of Materials Science & Engineering The Pennsylvania State University 14 Deike Bldg. University Park, PA 16802 Phone: (814) 865-0163 Email: <u>jr3@ems.psu.edu</u></p>	<p>Alfred University</p> <p>Penn State University</p>
<p>Dr. William F. Hammetter Sandia National Laboratories MS 1349 P. O. Box 5800 Albuquerque, NM 87185 Phone: (505) 272-7603 Email: <u>wfhamme@sandia.gov</u></p>	<p>University of Arizona</p> <p>University of Washington</p> <p>Rutgers University</p>
<p>Dr. Gregory E. Hilmas Professor of Ceramic Engineering 222 McNutt Hall 1400 N. Bishop Ave Rolla, Missouri 65409 (573)341-6102 <u>ghilmas@mst.edu</u></p>	<p>University of Illinois</p> <p>Ohio State University</p>
<p>Dr. Kevin M. Fox Savannah River National Labs Bldg. 999-W Aiken, SC 29808 (803)819-8462 Kevin.fox@srl.doe.gov</p>	<p>Clemson University</p> <p>Georgia Institute of Technology</p> <p>University of Florida</p>

Appendix 4. Format for Electronic Member Card Transmittal

An electronic copy of the membership card is available for download at: <http://ceramics.org/classes/keramos/>

Last Name	First Name	Middle Init.	Maiden	Title	D.of B.	e-mail	Street	City	State	Zip	Country	Dues pmt	Chapter	Init. Year
Smith	John	Q		Mr.	11/9/90	Abc123@wxy.edy	123 Elm	University Park	PA	16802	USA	Y	PA	1998

Appendix 5. Official Ritual of Keramos

OFFICIAL RITUAL OF *KERAMOS* PROFESSIONAL CERAMIC ENGINEERING FRATERNITY

(The meeting room is arranged with the table at the end opposite the entrance door. The President is seated behind the table with the Secretary on the right and the Vice President on the left. The Herald's station is beside the entrance door that is monitored by the Herald during the entire ceremony. At all meetings, whether business or initiation, a ceramic product, preferably one that is artistic and attractive, shall occupy the center of the table. At initiations only, the centerpiece shall be surrounded by five candlesticks containing lighted tapers which shall represent the "light of ceramic knowledge" and the five officers of the chapter and the fraternity.)

OPENING

(The president raps three times with the gavel and all officers rise. The others remain seated.)

President: Mr/Ms Vice President, are the members of the *Keramos* Fraternity present and ready to proceed with our initiation?

Vice President: The members are present and prepared to proceed.

(The President then raps once with the gavel and the officers seat themselves. The candidates for initiation shall be assembled in a room adjoining the meeting room under the charge of the Treasurer, who shall collect the initiation fee and obtain the personal data required. The President, having opened the meeting, shall then address the Vice President as follows:)

President: Mr/Ms Vice President, I am informed that there are candidates waiting who desire to join our membership.

Vice President: There are, Mr/Ms President.

President: You will instruct the Herald to determine their identity and inform us as to their worthiness.

Vice President: Mr/Ms Herald, you will perform the duty.

(The Herald will go to the room where the candidates are assembled and obtain from the Treasurer a list of those to be initiated. The Herald will then return to the meeting room.) (Revised 4/93)

Herald: Mr/Ms Vice President, the Treasurer has a company of candidates for

admission to our Fraternity. Their names are as follows:

(The Herald reads the list of names.)

Vice President: The candidates have been determined worthy. May I ask if the financial obligations have been satisfactorily attended to?

Herald: They have, Mr/Ms Vice President.

Vice President: You will admit the candidates, Mr/Ms Herald.

(The Herald opens the door and admits the Treasurer who leads the candidates into the meeting room and conducts them to a position in front of the table. The Treasurer is then seated to the right of the Secretary.)

Vice President: Mr/Ms Treasurer, who brings you here?

Treasurer: These are worthy aspirants for initiation into *Keramos*. Their academic achievements show that they have the high standards for honor and scholarship that make a worthy member.

(Candidates will be seated.)

Vice President: My friends, you come to us at this initiation to accept membership in *Keramos*. This Fraternity's main objective is the recognition and promotion of scholarship and character. Your election to membership challenges you to become leaders and benefactors of our profession. We believe you will add honor to our chapter. Mr/Ms President, I am pleased to present these candidates for further instruction in the ideals and customs of *Keramos*. They possess the attributes of mind and heart that entitle them to admission

President: My friends, I bid you welcome. Mr/Ms Vice President, would you explain the role of the Ceramist in our society?

Vice President: The Ceramist takes the ubiquitous materials of the earth: the clays, the sands, the minerals, the rocks, and the chemicals derived from these and changes them into useful products for society by the application of high energy in the form of heat.

President: Mr/Ms Secretary, would you explain the effect of the labor of the Ceramist? (Revised 4/93)

Secretary: Mankind is served in the struggle toward perfection by the availability of

stable materials which satisfy needs in construction, in products for easy and gracious living, in products for industry and for the national welfare, and in products of beauty and adornment. Ceramic products are obviously of great benefit and importance to mankind.

President: Thus my friends, you will see the important challenge of our profession. It is my privilege to charge you to follow your chosen path of Ceramic Engineering and to challenge you to rise to the heights of our profession. Mr/Ms Herald and Mr/Ms Secretary, you will now explain to our candidates the symbolism of the articles before them and of our badge.

(Two large pieces of a ceramic raw material shall be placed on the table: on the candidates' left will be unrefined material and on their right a refined material. Example - crude red firing clay on the left and white refined kaolin on the right; impure alumina on the left and pure alumina on the right.)

Herald: My friends, you see on your left a piece of crude, low grade ceramic material and on your right a refined, high-grade ceramic material. These materials symbolize not only the extremes of our profession, but also the extremes of honor and scholarship. One will produce, as you know, only crude products; the other, products of great beauty and worth. In your time here at (name of university) and in your life afterwards, you will have constant contact with such materials. Always keep this symbolism fresh in mind and let it remind you that your life can become as perfect and useful as these products which were made from the most refined materials.

Secretary: *Keramos* is a professional fraternity composed of graduates and undergraduates in Ceramic Engineering. Its prime objective is to promote and emphasize scholarship and character among Ceramic Engineering students. Its secondary objective is to keep its alumni tied to their alma mater and to their fellow Ceramic Engineers. The badge has four concave sides composed of one-fourth of the circumference of four tangent circles of two different diameters, surrounding a new moon and five stars and the Greek word "*Keramos*". The word *keramos* comes from the ancient Greek and Sanskrit word meaning "burned earth". The form was much used in early fortifications because of its strength and the ease with which a defense could be maintained. It denotes strength of character and resistance to harmful influences. The new moon represents hope, youth, and aspiration; the five stars represent the heights of scholarship and attainment to which the members of this Fraternity should always aspire, and they also represent the five officers of the chapter who should guide the members. (Revised 4/93)

President: My friends, you are now instructed in the most pertinent points of *Keramos*. You are charged to emphasize scholarship and character in your own lives and to set an example among your fellow students. If you do this, your light will shine in the darkness as do these tapers on the table before you, and the bonds of this Fraternity will hold us in a common tie that will strengthen as the years pass. I now ask you to take an obligation that will bind you to us.

(The President will instruct the candidates to rise if seated.)

President: You will raise your hand and repeat after me: Of my own free will and accord, I (name) do hereby solemnly promise that I will work to sustain and strengthen *Keramos*. I promise that I will strive to improve my own scholarship and will conduct myself in an honorable manner at all times. I further promise to give aid to any needy member whenever it is within my power.

President: Remember well the words of this oath that you have just taken, for it binds you together from this moment on.

President: My friends, I will now give you the Pass and Motto of the Fraternity. You will communicate the Pass to no one in its entirety except within the walls of the meeting room or to one whom you know has the right to receive it.

*(The President gives the Pass orally and has each candidate repeat it aloud. The same is done for the Motto: **through fire to perfection.**)*

President: Let me impress on each of you that you have been admitted to membership in *Keramos* because we have faith in your ability to success in this profession. We also have faith in your honor and in your desire to contribute to the building of honored traditions in *Keramos*. (Revised 4/93)

Appendix 6. Ceramic Putting and Mug Drop Contest Rules

REVISED March 2007

KERAMOS CERAMIC PUTTING CONTEST

PURPOSE:

The purpose of the Keramos Ceramic Putting contest is to promote spirited and collegial competition among students by demonstrating their prowess in manufacturing a ceramic putter and ball possessing high strength, mechanical reliability, and aesthetics.

RULES:

1. All student members of Material Advantage are eligible to participate; entrants DO NOT have to be members of Keramos. All work on the putters and balls must be performed by students; Faculty members and non-students may only advise.
2. Each Institution may submit one team consisting of four members.
3. Each team member shall have his/her own putter and ball
4. Putters and balls must be made entirely from ceramic, glass, or glass ceramic materials; no metal, plastic, paint, organics, or non-ceramic materials are permitted.
5. Putters and balls must be monolithic, and have been processed at a temperature of at least 800°C; post processing anneals at lower temperatures are permitted.
6. No commercially made parts may be incorporated in the putters or balls. Raw materials such as powders, liquid precursors, chemicals, and fibers are legal to purchase, but any reinforcing components must be made by entirely by the students and can not be purchased.
7. All putters must have a serviceable shaft of at least 75 centimeters, and a blade of at least 5 centimeters in length at one end
8. Putters may not exceed 1.5 kg in weight.
9. Putters may have a leather, polymer, or cloth grip no greater than 23 centimeters in length
10. Putters and balls may be glazed, but may not be painted after high temperature processing
11. Balls must be nominally spherical, of dimension 4.3 ± 0.3 cm, and weigh no more than 50 gms.
12. The year of the contest shall be permanently inscribed into the surface of both the putter and ball; only putters and balls manufactured in the current academic year are eligible

JUDGING:

1. The judges of the contest will consist of at least 2 members of the Keramos National Executive Board
2. All entrants shall register for the competition one hour before the designated start of the competition. Each team shall submit their team roster to the judges at that time. Each team must have four members; no late arrivals shall be permitted.
3. All putters and balls shall be weighed, measured, and judged for aesthetic merit prior to the putting contest; only putters deemed eligible under the rules will be permitted in the competition.
3. Putting surface shall be carpet, nominally 7 meters by 2 meters, placed on a level surface with no barriers along the edges. A pin or practice cup shall be placed nominally 2 meters from the end of the putting surface. Putting will start within 1 meter of the opposite end of the putting surface. The putting surface shall be available for practice one hour before the start of the contest.

4. Putting order will be determined alphabetically by name of the institution.
5. Each team member may use only his/her designated putter and ball.
6. Each team will have one member putting in each of four rounds; all members must putt for the team to be eligible to win.
7. Each team member will putt one ball
8. The normal two handed-standing-beside-the-ball putting stance shall be used
9. The ball must be struck with the face of the putter, within one minute of the judge placing the ball on the putting surface, to constitute a legal putt
10. After each putt, the judge(s) will measure the distance from the center of the target to the ball to the nearest ½ centimeter
11. If the ball does not remain on the putting surface, then a penalty of 120 centimeters will be added to the student's score. The student will be allowed a second putt; if this ball also rolls out of bounds, the student is eliminated from the competition.
12. If a putter breaks during practice or competition, it may only be used if it still meets the criteria for eligibility
13. If a ball breaks during competition, the putting score will be determined by the distance from the target to the broken part of the ball farthest away from the target
14. The three best balls per team determine team score
15. The team with the smallest total distance will be declared winner
16. In the event of a tie, all four members of the tying teams shall putt a second ball, using the same order as in the formal competition; smallest total distance of three best balls per team determine tiebreaker.

PRIZES:

1. The winning team shall receive a \$100 award and a trophy
2. "Best Aesthetics" awards shall be given to the individuals deemed by the judges to have used the most aesthetically pleasing putter and ball in the competition; the prize is awarded at the discretion of the judges.

CONTEST ADMINISTRATION

1. The contest will be held during the Annual Meeting of the American Ceramic Society.
2. Please register your intent to compete no later than one week before the meeting by contacting the Keramos National Vice President (see Keramos website at www.ceramics.org)
3. Contest Location and time will be announced in the Annual Meeting Agenda; late arrivals will not be eligible to compete.
4. Winners will be announced in the Keragram and forever recorded in the Keramos Record book; pictures of the winners are often included in the ceramic bulletin.

KERAMOS CERAMIC MUG DROP CONTEST

PURPOSE:

The purpose of the Keramos Ceramic Mug Drop contest is to promote spirited and collegial competition among students by demonstrating their prowess in manufacturing a ceramic mug possessing high strength, mechanical reliability, and aesthetics.

RULES:

1. All student members of Material Advantage are eligible to participate; entrants DO NOT have to be members of Keramos. All work on the mugs must be performed by students; Faculty members and non-students may only advise.
2. Each Institution may submit up to five mugs for judging.
3. Mugs must be made entirely from ceramic or glass materials, and may not contain any metal, plastic, paint, organics, or non-ceramic materials.
4. No commercially made parts may be incorporated in mugs, to include rods or pre-woven fiber mats. Raw materials such as powders, liquid precursors, chemicals, and fibers are legal to purchase and use to fabricate a mug; however, any woven textile fiber architecture created so as to reinforce the mug must have been fabricated by the students and not purchased.
5. All mugs must have a serviceable handle(s) which permits gripping and retaining a mug filled with at least 500 ml of liquid.
6. Dimensions of the mugs must not be greater than 25 centimeters in height, nor greater than 20 centimeters in diameter with the handle(s).
7. Mugs must be able to contain at least 500 ml and not more than 625 ml of liquid, and be useable for drinking purposes. Mugs must not decompose when they contain a liquid.
8. Mugs can be enameled or glazed, but cannot be painted or coated after final firing.
9. Mugs must be a single monolithic piece and the final mug (including all coatings, layers, etc.) must be fired or formed at a temperature of 300°C or higher. No parts may be glued or tied on after firing.
10. No poisonous materials, e.g., arsenic, are to be incorporated into the mugs. Prior to the contest, pertinent MSDS's must be submitted for verification of compositional safety.
11. The year of the contest must be inscribed (or glazed) into the surface of the mug. No paint or marker etc.
12. Only mugs made during the current academic year may be used.

JUDGING:

1. The judges of the contest will consist of at least 2 members of the Keramos National Executive Board
2. Each mug will be judged in the categories of drop strength and artistic merit (aesthetics.) The strongest mug will be named winner of the Keramos Mug Drop Contest and the most aesthetically pleasing/creative mug will be recorded as the "Best Looking" mug.
3. Before the strength test, each mug must be proven useable by a representative drinking liquid from it.
4. Mugs will be dropped in alphabetical order by institution name.
5. The drop test for evaluating strength will be performed as follows:

- The original orientation of the mug will be with the base of the mug perpendicular to the floor
- Each mug will be dead-dropped from a starting point of 30 centimeters from the ground
- Those mugs which do not fail during the drop test are eligible for the next drop height.
- The mug will be dropped from successively higher heights (15 centimeters greater each time) until it is broken.
- "Broken" shall be defined as not being able to hold 500 ml of liquid without leaking, loss of handle(s), or loss of more than 20% of starting weight
- An entrant may "pass" at any height; however, all mugs must be evaluated at the 30 cm, 105 cm, and 210 cm levels
- The winner shall be determined by the highest survived drop height.
- The maximum drop height that will be tested will be 400 cm.

PRIZES:

1. The winning team (strongest mug) shall receive a \$100 award and a trophy
2. The "Best Looking Mug" award shall be awarded to the team with the most aesthetically pleasing mug in the competition; the prize is awarded at the discretion of the judges.

CONTEST ADMINISTRATION:

1. The contest will be held during the Annual Meeting of the American Ceramic Society.
2. Please register your intent to compete no later than one week before the meeting by contacting the Keramos National Vice President (see Keramos website at www.ceramics.org)
3. Contest Location and time will be announced in the Annual Meeting Agenda; late arrivals will not be eligible to compete.
4. Winners will be announced in the Keragram and forever recorded in the Keramos Record book; pictures of the winners are often included in the ceramic bulletin.