POTTERS COUNCIL of The American Ceramic Society

POTTER'S PAGES

The official newsletter of Potters Council of The American Ceramic Society
Vol. 2 Issue 1 1st Quarter 2002

Potters Council Founders

Karen Terpstra, University of Wisconsin
Steven Hill, Red Star Pottery
Cynthia Bringle, Studio Potter
Patrick Horsley, Studio Potter
Joyce Lee, Studio Potter
Dannon Rhudy, Studio Potter
Mel Jacobson, Studio Potter
Susan Filley, Studio Potter
Cindy Butler-Jones, Butler-Jones Pottery
Jonathan Kaplan, Ceramic Design Group
Steven Branfman, The Potters Shop
Tim Frederich, Orton Foundation

In addition, the following ACerS staff members are helping to set direction:
Ruth Butler, *Ceramics Monthly*
Bill Jones, *Pottery Making Illustrated*
Mark Mecklenborg, Publisher
Steve Hecker, Advertising Sales Manager
David Houghton, Graphic Designer
Garry Moon, Membership Manager

Editor

Christine Schnitzer, Director-Membership, Meetings & Expositions

Production

David Houghton, Graphic Designer

Organizational Update

At the end of January 2002, membership had grown to 2082. What a remarkable response in just 9 months. Obviously there was a need to be addressed and The American Ceramic Society is thrilled to have had the opportunity to help this get started.

The Potters Council Founders have been working hard to appoint new Board members and committee members. In order to ensure a smooth and expediant transition in our first year, the Founders have decided to appoint volunteers who came forward rather than hold a general membership election this year. Everyone who stepped up shall be included.

The new Potters Council Board will be:

Jonathan Kaplan, President
Ceramic Design Group, Steam Boat Springs, CO

Joyce Lee, President-Elect
Potter, Ridgecrest, CA

Dannon Rhudy, Past-President
Studio Potter and Educator, Paris, TX

Karen Terpstra, Appointed Board Member
University of Wisconsin, Lacrosse, WI

David Hendley, At-Large Board Member
Studio Potter, Rusk, TX

Brad Reitz, At-Large Board Member
Professional Potter, Henderson, NV

Mitch Kotula, At-Large Board Member
Studio Potter, Geneva, IL

Mel Jacobsen, Clay Art Moderator
Master Potter, Minnetonka, MN

Christine Schnitzer, ex-officio
American Ceramic Society, Westerville, OH

Time and space do not allow me to provide any biographical information on the new Board, but look for more in the next issue of Potters Pages.

I would also like to take this opportunity to thank the Founders for their work in helping to organize the Potters Council. Their expertise and dedication are evident in the tremendous progress we have made in this first year. We are forever in your debt.

If you are going to the NCECA meeting in Kansas City, please plan on attending the Potters Council membership meeting on Wednesday, March 13, 2002, from 4:30-5:30 pm at the Hyatt Regency Crown Center in the Empire Room. President Kaplan will introduce the new Board, review the past year and present information on future activities. The last 30 minutes will be devoted to hearing comments, issues, concerns from members.

In These Pages

RULES FOR THE POTTERS COUNCIL OF THE AMERICAN CERAMIC SOCIETY

These rules were approved by The American Ceramic Society Board in December 2001. The Rules are reprinted in their entirety below and will be posted on the Potters Council Website. Updates will periodically be communicated via this newsletter and/or the website—www.potterscouncil.org.

I. NAME

The official title of this subsidiary shall be The Potters Council of The American Ceramic Society.

II. PURPOSE

It shall be the purpose of the Potters Council to meet the needs of studio potters and ceramic artists by providing forums for knowledge exchange and professional enhancement.

The Potters Council shall:

- support studio pottery as a profession and recreational activity
- provide forums for discussion of issues
- facilitate organization of local chapters
- work with existing groups,
- promote public awareness of art ceramics.

III. MEMBERSHIP

The Potters Council shall consist of individual members in good standing whose major interest lies within the field covered by the purpose of the Potters Council.

All members of the Potters Council shall be entitled to vote in Potters Council general elections.

Potters Council members may not vote in The American Ceramic Society elections.

All members shall be eligible to be nominated for election as a Potters Council at-large board member and as President-Elect.

All members are eligible for committee appointments.

IV. GOVERNMENT

The affairs of the Potters Council shall be directed by the Potters Council Board, subject to approval by The American Ceramic Society Board of Directors.

The Potters Council Board shall consist of the following:

- President
- President-Elect
- Immediate Past President
- Clay-Art Moderator
- 1 Board-appointed member
- 3 at-large members
- ACerS Executive Director or his representative (ex officio)

A quorum shall be defined as a simple majority.

The roles of the Potters Council Board shall be to:

- support the purpose, mission and goals of the Potters Council
- set strategic direction
- represent Potters Council membership
- establish policy
- approve annual budget
- measure progress of goals, objectives and programs
- approve annual slate of Board candidates
- approve standards

V. TERMS OF SERVICE

At-large Board members shall serve 3 year terms.

Appointed Board members shall serve a 2 year term.

Clayart Moderator and ACerS ex officio shall be permanent positions.

President-Elect, President and Immediate Past President shall each serve for 1 year.

No elected or appointed position may serve a consecutive term.

No Board member may run for reelection for a period of 1 year.

ACerS staff ex-officio shall be a non-voting member of the Board.

VI. MEETINGS

Potters Council Board shall meet no less than twice annually.

The Board will meet in the spring of each year, preferrably in conjunction with the NCECA meeting.

The Board will meet in the fall of each year, preferrably at ACerS heaquarters in Westerville OH.

Full travel support shall be available to Board members for the Fall meeting.

Partial ($100) of support shall be available per Board member for the Spring meeting if it is held in conjunction with the NCECA meeting. Full support will be available if the meeting is held elsewhere.

Board meetings will be open to all Potters Council members.

The last hour of each Board meeting will be devoted to hearing concerns directly from members.

Attendance is expected of Board members at all Board meetings.

Other Board meetings will be scheduled as needed, and may be conducted via teleconference.

VII. OFFICERS

The President of the Potters Council shall serve for 1 year and will have the following responsibilities:

- chair Board meetings
- chair Executive Committee Meetings
- create agenda with ex-officio staff
- review annual budget with ACerS staff
- act as primary advocate for Potters Council

- monitor progress of strategic plan or directions
- keep Board informed of issues

The President-Elect of the Potters Council shall serve for 1 year and will shall have the following responsibilities:

- chair Board and Executive Committee meetings, in absence of President
- chair Membership Committee
- act as main point of contact for Health and Safety Committee
- other duties as requested by President

The immediate Immediate Past President of the Potters Council shall serve for 1 year and will have the following responsibilities:

- chair the Nominating Committee

VIII. NOMINATIONS AND ELECTIONS

Board members shall be inducted annually at the Spring Board meeting. Elections for Board members and President-Elect shall be held annually in January, by mail and/or web based ballots.

Nominations for President-Elect, at-large and appointed Board Members, Newsletter Editor, committee appointments and chairs shall be made by the Nominating Committee and approved by the Board at the Fall Board Meeting.

Membership may submit candidate names to the Potters Council Board or the Nominating Committee at any time, prior to the Fall Board Meeting.

A slate of 3 candidates for at-large Board members shall be put forth to the membership for election of 1 board member each year. Majority of votes wins.

Transition period—Initial process for the first election:

Founders group will serve as Nominating Committee, and will put forth the following slate of candidates in order to establish the first Potters Council Board:

- President
- President-Elect
- A slate of 6 candidates shall be put forth to membership for election of 2 at-large members
- 1 at-large member from the Founders Group to serve for 1 year
- 1 at-large member shall be elected from membership serve for for 2 years
- 1 at-large member shall be elected from membership and serve for 3 years
- 1 appointed member to serve a term of 2 years
- 1 Founder to serve as Immediate Past President

*See page 1.

IX. COMMITTEES

Executive Committee

The Executive Committee shall be comprised of the President (chair), President-Elect, Immediate Past President and ACerS ex officio representative.

The Executive Committee shall have such powers as are delegated to it by the Potters Council Board, which powers shall be exercised during periods between meetings of the Board.

The Executive Committee shall meet as needed, but no less than quarterly, by phone teleconference.

The Executive Committee shall provide a quarterly report to the Board on issues and activities of the Potters Council (e.g., growth/decline of membership, committee progress, etc.).

Nominating Committee

The Nominating Committee shall be a standing committee of the Potters Council.

The Nominating Committee shall be comprised of the Immediate Past President (chair), 2 Potters Council members with Board experience, one appointed each year, and 2 members without Board Experience, one appointed each year.

Term for a Nominating Committee appointment shall be for 2 years.

The Nominating Committee members shall be appointed by the Board on recommendation of the Nominating Committee.

The Nominating Committee shall put forth to the Board at its Fall meeting, a slate of candidates as follows:

- At least 1 nomination for President Elect
- At least 1 nomination for an appointed Board member (every other year)
- At least 3 nominations for at-large Board member
- Nominations for committee members and chairpersons

Nominating Committee members may not nominate themselves for any of the officer or Board positions.

Membership Committee

The Membership Committee shall be a standing committee of the Potters Council.

The Membership Committee shall be comprised of President-Elect (chair), 3 members who are not currently serving on the Board, 1 Board member, and one ACerS staff member (ex officio).

The Membership Committee members shall be appointed by the Board on recommendation of the Nominating Committee.

Term for a Membership Committee appointment shall be for 2 years.

The Membership Committee shall:

- Review and recommend to the Board appropriate categories of membership.
- Advise and recommend to the Board on all matters pertaining to membership services offered to

all types of Potters Council members and potential members.
- Ensure that all member constituencies are served by the Potters Council through the use of information gathering techniques.
- Work with constituency groups to promote active membership in the Potters Council.
- Accept additional assignments from the Board as needed.

Health and Safety Committee

The Health and Safety Committee shall be a standing committee of the Potters Council.

The Health and Saftey Safety Committee shall be comprised of 1 appointed Board member (chair), 5 members who have a demonstrated knowledge and experience on relevant materials and equipment issues of concern to the Potters Council membership, and 1 ACerS staff member (ex officio).

The Heath and Safety Committee members shall be appointed by the Board on recommendation of the Nominating Committee.

Term for a Health and Safety Committee appointment shall be for 2 years.

The Health and Safety Committee shall:
- Identify health, environmental, and workplace safety issues of importance and concern to potters.
- In conjuction with ACerS staff, produce information products that will address health, environmental and workplace safety issues.

X. AMMENDMENTS TO THE RULES

Any member may propose amendments to these rules by filing a written petition with the President who shall transmit it to each member of the Board for discussion at the next scheduled Board meeting.

A simple majority vote of the Board will deterimine if the amendment passes or fails.

Committees Formed

Congratulations and thank you to the following members who volunteered to serve on the Membership and Health and Safety Committees of the Potters Council.

You will notice that the committee rosters are larger than is stated in the Rules. This is a conscious decision by the Founders to capitalize on the willingness to serve and in recognition of the fact that there is much to be done still in the area of membership development and health and safety issues of importance to potters. The Board will determine the optimal size of any committee.

The Membership Committee

Joyce Lee, *President-Elect and Committee Chair*

Greg Lindsley, Cobb CO
Judy Shreve, Windermere, FL
Kelly Averill Savino, Toledo, OH
Carol-Ann Michaelson, Ontario Canada
Dwight M. Holland, NC
Toni Yoder, LA
Tim Fredrich, OH
Garry Moon, ACerS Membership Manager, ex-officio

Health & Safety Committee

Mel Jacobson, *Board Member and Committee Chair*

Scott Lykens, Laguna Clay, Cambridge OH
David Finkelnburg, Pocatella, ID
David Beumee, Lafayette, CO
Richard Hawkins, Milwaukee, WI
Jim Wunch, Larkin Furnace, Conyers, GA
ACerS staff, ex-officio

1st Annual Membership Meeting

The first annual Potters Council membership meeting will be held on Wednesday, March 13, 2002 at the NCECA meeting in Kansas City, MO, at the Hyatt Regency Crown Center, in the Empire Room, from 4:30 to 5:30 pm. The Potters Council President will introduce Board members, briefly discuss the inaugural year in review and give members an idea of what to expect from their organization in the coming year. There will also be open-mic time for members to express their view, opinions, concerns and ask questions of the Board. Light refreshments will be served.

Member News

Bonnie Staffel recently celebrated her 80th birthday. Bonnie has been a producing potter for 53 years, in addition to teaching in the US and abroad. About 90 potters and friends surprised her with a party and the establishment of the Bonnie Staffel Foundation of the Arts fund, as part of the Greater Charleviox County Foundation.

Bonnie also celebrated her birthday by taking a two-week sabbatical to the studio of long-time friend, Ed Gray, in Fennville, MI. Together they learned how to throw very large pots. Bonnie went home with eleven.

Happy Belated Birthday, Bonnie. Live long(er).

Since this newsletter is quarterly, notices of upcoming shows, workshops, etc. will not be timely and therefore will not be included.

Send News items to:
Christine Schnitzer
cschnitzer@acers.org
Fax: 614-794-5892
The American Ceramic Society
735 Ceramic Place
Westerville, OH 43081

In each newsletter, we will pull from the ACerS archives, an authoritative article on a topic of importance to potters. Our third article is "Effect of Design Factors on Thermal-Shock Resistance of Cooking Ware", by C.R. Amberg and Jane Hatsook. Originally published by The American Ceramic Society in 1946, in the November issue of the *Ceramic Bulletin*.

EFFECT OF DESIGN FACTORS ON THERMAL-SHOCK RESISTANCE OF COOKING WARE*

By C. R. Amberg and Jane Hartsook

Abstract

Ware designed to test the effects of radius of curvature, beaded lip, and raised foot was jiggered. Two bodies of different coefficients of expansion were used and two coatings, a glaze and a terra sigillata of nearly identical coefficients of expansion. It was found that large radii of curvature and a raised foot were desirable design features whereas the beaded lip was poor. Some advantages were gained by using a body of higher coefficient of expansion than the glaze and by using a glaze in preference to terra sigillata.

I. Introduction

The greater use of ceramic cooking ware during the recent war period has excited much interest in its manufacture and the technical problems involved. Fairly satisfactory bodies and glazes have been developed, but the factors of proper design have not received their due share of attention. In some previous work at the Research Department of the New York State College of Ceramics, by Burnham and Tuttle,[1] curiosity was aroused on the effects of design. Results indicated that bodies of relatively high coefficient of expansion were desirable in a ware to stand thermal abuse and that terra sigillata coatings were superior to glaze coatings. Insufficient data were available to make these latter conclusions certain.

Little information is available on the factor of design. Searle[2] states that the fewer the points of contact between a vessel and the hot support on which it rests, the better; and that sharp edges should be avoided. He also states that the lower the coefficient of expansion of the body, the better the resistance to thermal shock. Disagreement on the point of thermal expansion of the body and vague information on the effects of design and the nature of the best coating material made further study desirable.

II. Preliminary Studies

To compare their effects, it was desirable to develop a glaze and a terra sigillata of approximately the same coefficients of expansion. The effect of coefficient of expansion of the body could also be determined most satisfactorily in bodies whose properties were correlated with those of the coating materials. Preliminary experiments on a series of bodies in the form of 2- by 2- by 1/4-inch tile and on glazes and terra sigillata, both as applied to the tile and as fused in crucibles, led to the selection of the materials whose compositions and properties are given in Tables I, II, and III. The thermal expansions were determined with the interferometer.* Coated and bisque tile, fired at cone 5, were also subjected to an autoclave test at 150 pounds per square inch for one hour. Neither body showed a moisture expansion measurable with a micrometer dial accurate to 0.001 inch and neither the glaze nor the terra sigillata developed crazing on either body.

Table I

Body Compositions (%)

Body No.	C-1	C-2
Kentucky mixed ball clays	8.10	8.10
Kentucky No. 5 ball clay	6.30	6.30
C & C ball clay	13.50	13.50
Georgia kaolin	10.25	10.25
North Carolina kaolin	9.00	9.00
B & W 108 calcined kaolin		10.80
Potash feldspar	10.45	10.45
New York talc	10.00	10.00
Flint	32.40	21.60

Table II

Coating Compositions

Glaze Formula

$$\left.\begin{matrix}0.267\ PbO\\0.111\ K_2O\\0.072\ Na_2O\\0.549\ CaO\end{matrix}\right\}\ 0.243\ Al_2O_3\ \left\{\begin{matrix}2.913\ SiO_2\\0.223\ ZrO_2\\0.318\ B_2O_3\end{matrix}\right.$$

Terra sigillata

100% Alfred shale fines

* Presented at the Forty-Eighth Annual Meeting, The American Ceramic Society, Buffalo, N. Y., April 30, 1946 (White Wares Division, No. 1). Received April 30, 1946.

[1] Forrest Burnham and Milton A. Tuttle, "Influence of Variable Amounts of New York Talc, Flint, and Calcined Clay on Serviceability of Glazed Cooking-Ware Bodies," *Jour. Amer. Ceram. Soc.*, **28** [3] 72–75 (1945).

[2] A. B. Searle, Encyclopedia of the Ceramic Industries. E. Benn, Ltd., London, 1929; *Ceram. Abs.*, **10** [5] 397 (1931).

TABLE III

COEFFICIENTS OF LINEAR EXPANSION IN RANGE 20° TO 400°C. AFTER FIRING TO CONE 5

Body C-1	6.61×10^{-6}
Body C-2	5.79×10^{-6}
Glaze	5.75×10^{-6}
Terra sigillata	5.79×10^{-6}

III. Design and Manufacture of Test Dishes

The five designs tested are illustrated in Fig. 1. The basic design, D-1, was made with a 1/4-inch radius of curvature between the side wall and bottom; D-2 and D-3 differed from D-1 only in having radii of curvature of 1/2 and 1 inch, respectively; D-4 differed from D-1 only in possessing a beaded lip; and D-5 differed from D-1 only in the raised foot.

The dishes were formed by jiggering with the plaster mold forming the outside of the ware and the pulldown tool forming the inside. When in the leather-hard condition, the dishes were removed from the molds and finished with a damp sponge, after which they were dried (bone dry) before applying the coating by spraying.

For the glaze-coated ware, a dry foot was provided by sponging off any traces of glaze on the bottom of the dishes while the terra sigillata was applied to the whole surface of the ware, for it does not become sticky during firing.

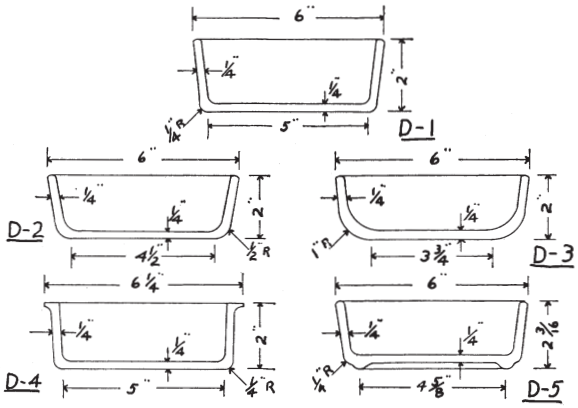


FIG. 1.—Five designs tested.

All ware was fired to cone 5 in a small commercial tunnel kiln.

IV. Simulative Service Tests

To simulate the thermal abuse encountered in the kitchen, a series of tests of progressively increasing severity was devised.

Test No. 1 consisted in placing the empty dishes in a hot oven operating at 260°C. (500°F.), where they were left for one hour. They were then removed, set on a piece of 1/4-inch boiler plate at room temperature, and cooled in the blast of an electric fan.

Test No. 2 involved filling the dishes with water and heating them on a gas-heated, iron-topped hot plate which had previously been brought to temperature. The water was allowed to come to a boil, and boiling was continued for 5 minutes. The dishes with the hot water still in them were then placed on the cold iron plate and allowed to cool to room temperature. The electric fan was not used in this or subsequent tests.

Test No. 3 was similar to Test No. 2 but, to develop greater thermal gradients, a vegetable cooking fat was substituted for the water and the dishes were left on the hot plate until the fat reached a temperature of 250°C. (480°F.).

Test No. 4 was similar to Test No. 2, except that the dishes were left on the hot plate until the water had boiled away and for 5 minutes after the last trace of water had evaporated.

Five specimens of each combination of design, body, and coating were started in test No. 1, which resulted in their being 20 specimens of each design, 50 of each body, and 50 of each type of coating. After passing 10 cycles of test No. 1, the specimens were given 20 cycles of test No. 2. The survivors which were either perfect or had developed only minor cracks that did not pass completely through the thickness of the body were then subjected to 10 cycles of test No. 3; those passing were given 10 cycles of test No. 4.

Because of the cumulative thermal fatigue, few specimens survived test No. 4 so a new set of dishes was subjected to 10 cycles of boiling dry to secure a better evaluation of the more severe test. This test was labeled No. 4A.

The survivors of test No. 4A were given one cycle of a boiling-dry test in which heat was applied directly to the bottom of the dish by an open gas flame. This test was labeled 4B.

To make identification easy in the tables and graphs specimens are designated by a symbol giving body number, type of coating, and design. Thus, C1GD1 indicates body C-1, coated with glaze and made in design 1, whereas C2TD5 indicates body C-2, terra sigillata coating, and design 5.

V. Results and Discussion

Rather unexpectedly, all dishes developed some degree of bulging of the bottom during drying which tended to raise the center of the dish out of contact with any flat surface on which it was set. To some extent this upward bulge reduced the contact with heating or cooling surfaces after the manner of a raised foot. With increasing radius of curvature, the bulge tended to become greater so that D-3 showed the greatest concavity.

Table IV shows the record of dishes of each designation for each test, the symbol P indicating the number of dishes that remained perfect, M the number developing minor cracks, and F the number which failed by breaking or developing cracks that passed through the thickness of the body and rendered the dish leaky. Figures 2, 3, and 4 show graphically the effects of design, type of coating, and

* Specimens for thermal expansion of glaze and terra sigillata obtained from samples fused in crucibles.

type of body. The percentage of specimens remaining perfect after any test is indicated by the crosshatched portion of the bargraph and the unshaded portion indicates the percentage that developed only minor cracks. Since no specimen survived one cycle, no bargraph is plotted for test No. 4B.

TABLE IV

NUMBER OF DISHES REMAINING PERFECT, DEVELOPING MINOR CRACKS, OR FAILING IN EACH TEST

Test No.	1			2			3			4			4A			4B		
No. cycles	10			20			10			10			10			1		
	P	M	F	P	M	F	P	M	F	P	M	F	P	M	F	P	M	F
C1GD1	4	1	0	4	0	1	0	2	2	0	0	2	3	0	2	0	0	3
C1TD1	5	0	0	4	0	1	0	0	4	0	0	0	0	0	5	0	0	0
C1GD2	1	4	0	1	2	2	0	0	3	0	0	0	0	0	5	0	0	0
C1TD2	3	2	0	3	0	2	0	1	2	0	0	1	0	0	5	0	0	0
C1GD3	5	0	0	5	0	0	0	3	2	0	0	3	5	0	0	0	0	5
C1TD3	2	3	0	2	0	3	0	0	2	0	0	0	2	0	0	0	0	2
C1GD4	2	3	0	1	0	4	0	0	1	0	0	0	0	0	5	0	0	0
C1TD4	0	5	0	0	0	5	0	0	0	0	0	0	0	0	5	0	0	0
C1GD5	5	0	0	5	0	0	0	2	3	0	0	2	5	0	0	0	0	5
C1TD5	5	0	0	5	0	0	0	0	5	0	0	0	5	0	0	0	0	5
C2GD1	1	4	0	1	0	4	0	0	1	0	0	0	0	0	5	0	0	0
C2TD1	0	5	0	0	0	5	0	0	0	0	0	0	0	0	5	0	0	0
C2GD2	1	4	0	1	2	2	0	1	2	0	0	1	0	0	5	0	0	0
C2TD2	0	5	0	0	1	4	0	0	1	0	0	0	0	0	5	0	0	0
C2GD3	4	1	0	4	0	1	1	2	1	0	2	1	5	0	0	0	0	0
C2TD3	5	0	0	5	0	0	0	2	3	0	0	2	3	0	2	0	0	3
C2GD4	2	3	0	2	0	3	0	0	2	0	0	0	2	0	3	0	0	2
C2TD4	3	2	0	2	0	3	0	0	2	0	0	0	0	0	5	0	0	0
C2GD5	5	0	0	5	0	0	0	1	4	0	0	1	5	0	0	0	0	5
C2TD5	5	0	0	5	0	0	0	2	5	0	0	2	5	0	0	0	0	5

C1 and C2 = body types.
G = glazed.
T = terra sigillata.
D1, D2, etc. = designs.
P = number perfect.
M = number with minor cracks.
F = number of failures.

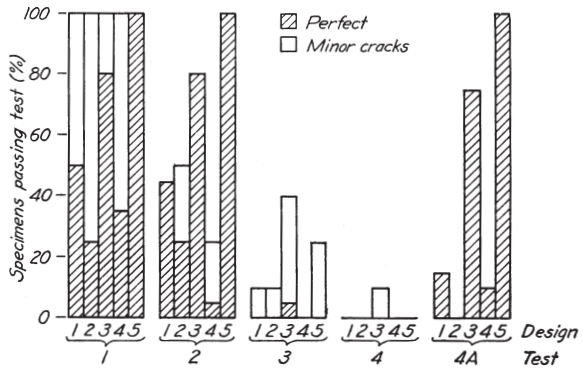


FIG. 2.—Comparison of designs.

Although no specimen failed in test No. 1 (see Fig. 2), the number that developed minor cracks varied greatly with design, the presence of the raised foot (D-5) yielding perfect resistance to 10 cycles. The value of large radius of curvature is evidenced by the excellent results obtained with D-3; D-2 with its intermediate radius of curvature, for some unexplained reason, showed a higher percentage of minor cracks than D-1. Poorest resistance to thermal shock is shown by the ware with the beaded lip (D-4).

The 20 cycles of test No. 2 indicate similar ratings for the five designs; D-2, however, shows a confused result. If the total number passing the test is taken as the criterion, D-2 falls between D-1 and D-3, as it logically should, but the number of perfect specimens is considerably lower than for D-1. The principal number of failures in test No. 2 came from the group that had developed minor cracks in test No. 1.

The cumulative fatigue from former tests and the greater severity of test No. 3 produced high casualties, but the principal change in rating is that the raised-foot design (D-5), although still excellent, does not have so good a record as D-3 with the large radius of curvature. The only specimens surviving test No. 4 were of design 3.

Test No. 4A is, however, a better indication of the relative merits of the five designs than test No. 4 since it eliminates the effect of cumulative fatigue. Boiling dry is a severe test. Again the value of the raised foot and the large radius of the curvature is demonstrated, as is the deleterious effect of the beaded lip. Strangely enough, all specimens with the intermediate radius of curvature (D-2) failed. The data from all tests indicate that a $^1/_2$-inch radius of curvature is more harmful than either higher or lower radii, but this seems improbable from a theoretical standpoint and more work should be carried out to establish or refute this.

The comparison of glaze and terra sigillata (see Fig. 3) indicates some advantage for the glaze coating as compared with the terra sigillata, which is contrary to the experience of Burnham and Tuttle. The slightly lower coefficient of expansion of the glaze and the greater reaction between glaze and body may be factors. The absence of glaze on the bottoms of glazed specimens and the presence of terra sigillata on the bottoms of the ware coated with this finish also may be responsible for the difference. The vitreous terra sigillata tends to have a higher Young's modulus of elasticity than the porous body. Under tensile stress the higher modulus material would be more brittle and tend to rupture with smaller deformations, thus starting cracks. The difference in treatment of the bottom surfaces may cause the difference in serviceability rather than an innate dissimilarity between materials so nearly alike in coefficient of expansion.

Figure 4 compares the effects of body C-1, which has a higher coefficient of expansion than the coatings, and body C-2, which is a good match for the coatings. Body C-1 should cause the coatings to be under compressive stress, which should improve the resistance to thermal shocks. Tests No. 1 and 2 indicate better resistance to thermal abuse for body C-1, but tests 3 and 4, which were more severe, show the reverse tendency. Test No. 4A resulted in no apparent superiority for either body. In any case, the difference between neutral and small compressive stresses in the coating has no great effect. A coating under tension theoretically may be harmful because of the tendency to craze. Crazing cracks should aid in starting failures in a manner analogous to the minor cracks developed in test No. 1 which increased the susceptibility to failure in test No. 2.

By far the greater number of failures occurred during the cooling cycles of the tests, test No. 4B being the only test in which more than an occasional piece failed in the heating cycle. Tensile stresses tangent to the circumfer-

ence seem to be the cause of failure, for the cracks formed are radial. During the heating portion of the cycle, the tensile stresses develop on the inside surface of the ware. During the cooling cycle they develop on the outside, particularly on the bottom where the dish is in contact with the cold iron; the thermal gradient and, therefore, the tensile stress is greater in the latter case. Another factor is the greater circumference of the outside surface which exaggerates the tensile stress on cooling.

The raised foot exerts its beneficial effect by reducing the amount of contact with the heating or cooling surface. It is more effective than increased radius of curvature in the less severe tests and less effective in the more severe tests.

It might be assumed that a sharp right angle between side wall and bottom would yield the poorest resistance because the tangential stresses would then be concentrated on a point. As the radius of curvature increases, the stresses spread along a line, thus decreasing the stress on any one point, the ultimate being a radius of curvature equal to the radius of the dish which would spread the stress over a line from the lip of the dish to the center of the base. The anomalous results from D-2 would not fit this picture, but some undetected variation in the manufacture may have produced the unexpected result. Further work should be done to determine whether or not the $^1/_2$-inch radius of curvature produces a minimum resistance to thermal abuse.

Heating in an open flame to dryness was obviously too severe a test for this type of ware. No failures, however, took place on the heating cycle until the last traces of water were evaporating; some of the specimens of designs 3 and 5 survived the heating cycle but broke on the cooling cycle.

VI. Summary

(1) The factor of design exerts a marked influence on the resistance of ceramic cooking ware to thermal abuse.

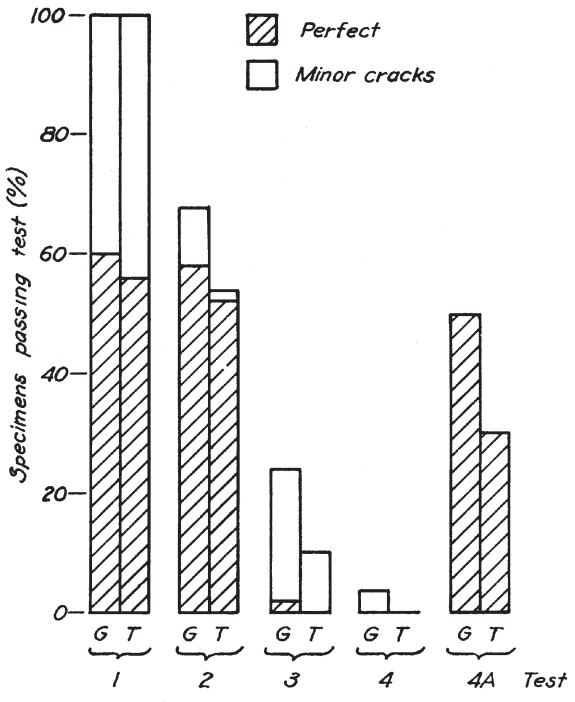


FIG. 3.—Comparison of glaze and terra sigillata.

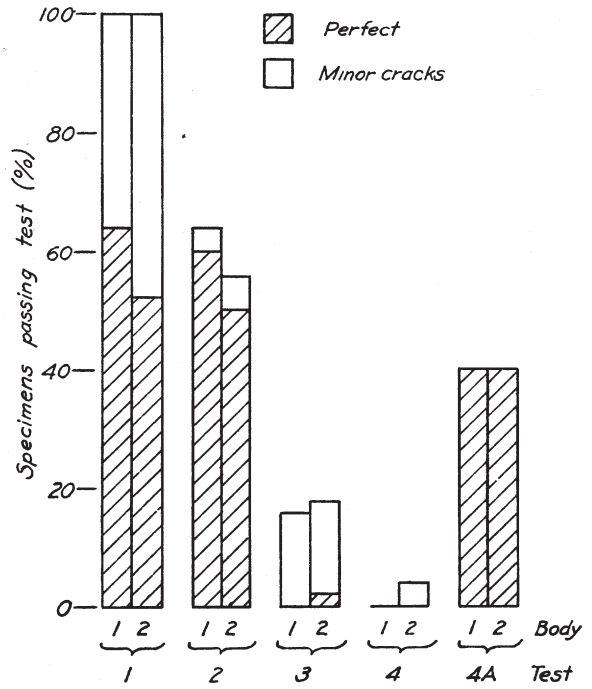


FIG. 4.—Comparison of body composition (C-1 and C-2).

(2) Ware should be designed with as large a radius of curvature as possible.

(3) The use of a raised foot is highly desirable.

(4) The use of a beaded lip is poor practice.

(5) Putting the glaze under compression by use of a body of higher coefficient of expansion is beneficial when the thermal abuse is not too severe.

(6) The relative merits of glaze and terra sigillata coatings have not been definitely settled, but the indications are that the glaze is slightly superior.

DEPARTMENT OF RESEARCH
NEW YORK STATE COLLEGE OF CERAMICS
ALFRED, NEW YORK

Creating an Effective Website

By Bob Nicholson

As more and more people rely on the internet for information, many potters are tempted to create a website. But the time and effort required to build one is wasted unless the site is effective. By effective, I mean simply that the site accomplishes its intended purpose. The first step in creating a website, therefore, is simply to identify the intended purpose, and understand the tradeoffs that will be required to accomplish that purpose.

Defining Your Goals

For most potters, a website will serve one or more functions:

Sharing photos of your work with friends and family. You'll need to be able to upload a reasonable number of photos (perhaps a couple of dozen) to the site. You probably won't have many visitors to your site, so a simple, free website will probably meet your needs. Free sites are available from many places on the web—use your favorite search engine to look for free websites or free homepages. The disadvantage of free sites is that your visitors will see advertisements displayed by the site hosting company. Also, your website may be shutdown at any time if the free service is discontinued.

Showing your work and background information with galleries. In addition to photos, you may have several pages of information, such as your background, awards, and recent shows. You'll want a little more professional appearance, and may want to register your own domain name (such as www.mudworks.com). You'll also want your e-mail address, phone number, or other contact information on your website.

Showing your work to your retail customers and providing information on your shows. In addition to photos and background, information about how you produce your work may make it more interesting and valuable to potential customers. Include a listing of upcoming shows and events. (It's important that this schedule be easy to update!) You should also provide a way for visitors to sign up for your mailing list. Most web hosting providers support simple online forms as part of your website.

Selling your work online. You'll probably need e-commerce, or "shopping cart" software from your web hosting company; there will be additional monthly charges for this service. The service should include a way for customers to place orders online, and payment processing. The software should provide a very easy way for you to add new pieces and update your online catalog. Before deciding to sell your work online, be sure you're prepared to handle incoming orders, packing, shipping, insurance, and even complaints and returns.

Sharing information with students. If you teach, you may want to provide resources and information for your students. You might also want to post class schedules and fees. Think carefully about how the information should be organized and how frequently it will need to be updated.

Creating Your Website

After you've clearly identified your own goals for your website, think about it from the standpoint of your site visitors. When someone comes to your site, are they looking for a particular style of pottery? Do they want to know where they can buy your work, or do they need directions to your studio? Perhaps they have questions about the glazes you use, or how to care for pottery they've purchased. Thinking about your site from the visitor's standpoint, make sure everything is easy to find. For most sites, this means providing a menu of the site contents. The menu can consist of simple links, or graphical buttons. It's important, however, that the menu be available on all of the site pages. Your site should not have dead-end pages where visitors can become confused and frustrated.

Another source of user frustration is long downloads. It's hard for artists to keep image files small. After all, we want to show the best possible pictures of our work! But studies have shown that after just a few seconds, many visitors give up and leave your site. A good rule of thumb is to keep each page, including all images, under 50,000 bytes. To reduce the size of your images while keeping quality acceptable, use a commercial image optimizing program such as Adobe ImageReady, or check the effect of different quality settings in your image editing program. To determine the overall size of a web page (including images), you can use a free online service such as http://websitegarage.netscape.com/. Some web designers may urge you to include flash animation or video, but unless you have an excellent reason, it's best to avoid these large, slow-loading files.

Once you've created your website, you need to list it with search engines to make sure people will find it. Search engines index the words they find on your website, so they can display a link to your site whenever someone searches for those words. You can include additional search words that don't actually appear on your pages, by putting those words in an html "keywords" meta tag. Include any synonyms and descriptive words that apply to your work.

There are companies that will submit your website to dozens or even

hundreds of search engines for fees up to $100. Bear in mind, however, that almost everyone uses just a handful of popular search programs, which will account for almost all your visitors. Each of the search engines has a page where you can submit your URL or website address. You can probably submit your site to five or six major search engines, including Yahoo, Alta Vista, Excite, Google, and Lycos, in less than an hour. Note that some search engines now charge a fee for better placement or faster indexing, but unless you're running a major commercial website this is not worth your money. Just expect it to take several weeks before the search engines get around to indexing your website.

Visitors can also find your site through links on other sites. Some pottery-oriented websites, such as claystation.com and clayzee.com, will provide free links to potters' websites. You may also arrange informal link exchanges with other potters or artists. In a link exchange, another site provides a link to your site, and in exchange, you include a link to their site. This means you'll need a link page on your website. If you intend to do many link exchanges, make sure it's easy to update your link page.

Having lots of sites link to your website has an added bonus: some search engines display results based on how many links they find going to your site. (This is one way for the search engine to gauge the popularity and importance of your website.) A disadvantage of a link page on your site is that visitors may leave to explore a link, and never return. It's a good idea to make sure links open in a new window, rather than replacing your site in the current window.

The best way to bring visitors to your website is to make it part of your overall marketing strategy. Make sure your URL (website address) is on your business cards and flyers, and displayed prominently at your shows and sales. Invite gallery owners to visit your site and see your latest work.

You can also use e-mail to bring visitors to your site. If you sell your work at craft fairs and art shows, you probably already have a mailing list for sending postcard announcements. Begin collecting e-mail addresses from your customers. A few weeks before a show, you can send e-mail announcements with the details. The e-mail should also include a link to your website, where you can show photos of your work and perhaps a map to the show. This is a great way to reach your customers at very little expense! One word of caution if you decide to do regular e-mail announcements: people are very sensitive to unwanted e-mail, or SPAM. Be sure you send e-mail only to people who've signed up for your announcements, and promptly remove addresses from your list upon request.

Once you've created your website, plan a schedule of regular maintenance. An out-of-date, unmaintained website can give your customers a bad impression of you and your work. Maintenance should include checking links, updating your show schedule, removing old work from the site and adding photos of your current work. (If you're selling your work through your website it's especially important to remove pieces that have been sold.) If you pay to have someone else build your website, be sure you know how to modify and maintain the site.

Periodically check to find out if your website is working for you. Ask your customers if they have seen your website. Better yet, ask them open-ended questions, such as "how did you find out about my work?" Your hosting provider should also have tools to tell you how many people are visiting your site, what pages they look at, and what search engine they use. It will take some time to become established, but eventually your website and e-mail list can become powerful and effective marketing tools.

Bob Nicholson manages the website for the Orchard Valley Ceramic Arts Guild (www.ovcag.org). His company provides technology for internet businesses.

Get your Charter Member pin at NCECA

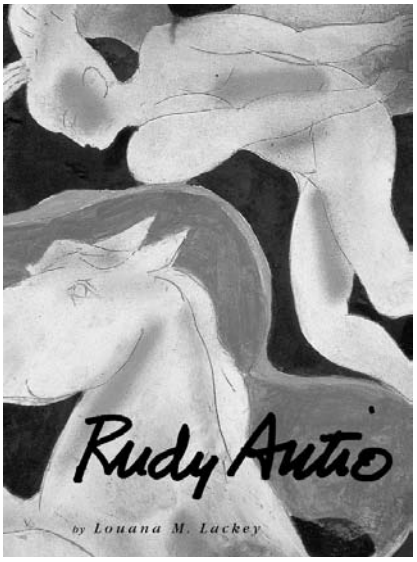
If you are going to the NCECA meeting in March in Kansas City, be sure to come to the Potters Council membership meeting to pick up your "Charter Member" button. See page 4 for complete details. If you miss that opportunity, Potters Council members can also stop by The American Ceramic Society booth to pick up their pins. Wear our colors proudly!

NEW! From The American Ceramic Society

A Legend in American Ceramics–

Rudy Autio

Rudy Autio
Louana M. Lackey, Ph.D.
With a Foreword by Peter Voulkos



Rudy Autio has been called one of the most important and influential ceramic artists working in the United States in the last fifty years. His involvement in the beginnings of the Archie Bray Foundation, along with Peter Voulkos, has supported and inspired generations of ceramic artists. His founding of the University of Montana's Ceramics Department and his dedicated teaching have influenced countless artists, and, as art historians will recount, his journey from the world of traditional ceramic craft to the realm of clay as art form and canvas revolutionized the concept of ceramic art.

This book offers a fresh balance between Rudy's personal story, his inspiration and techniques, and the historical development of his artwork and its impact on ceramics. It also explores the role ceramic artists play in contemporary American culture and why these artists do this work at all. Artists, art lovers, collectors, and historians will be inspired and engaged by the man and artist they meet in these pages.

Contents

- Becoming an Artist
- At the Archie Bray
- Teaching & Making Art in Missoula
- An Artist Abroad
- In the Studio
- More Time for Art
- Plates

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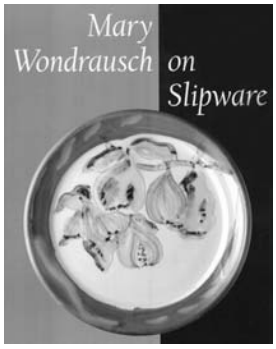
NEW EDITION!

Mary Wondrausch on Slipware

By Mary Wondrausch

Co-published by The American Ceramic Society, Westerville, Ohio, USA and A&C Black Publishers, Ltd, London



In this revised reprint of her classic book, Mary Wondrausch examines the history of slipware, narrating its development in many countries and discussing the techniques and practicalities involved.
This new edition features many more color images, as well as new pictures not previously included. The story has been brought up to the present, showing how the current generations of slipware artists are using this exciting medium. Slipware has a long tradition of being used for commemorative wares has played an important part in marking historical events both for individuals and nations. This extra role makes this book essential reading both for potters and for ceramic collectors and historians alike. *Mary Wondrausch on Slipware* is a valuable reference tool as well as a lively read.

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NEW!

Irma Starr Demonstrates the Lost Art of 17th Century English Slipware—A Video Presentation

"Excellent technical, historical and aesthetic overview of an important but often-ignored ceramic technique... A vibrant display of technical virtuosity... Bringing an historical technique into contemporary focus." —*The Studio Potter Magazine*

The Burnap collection of 17th century English slipware pottery at the Nelson Atkins Museum of Art in Kansas City is one of the finest in North America. Four objects were chosen by Irma Starr to demonstrate four lost techniques of slip trailing, combing, feathering and marbling.

Her research over the years, based initially on the writings of Shoji Hamada and Bernard Leach, has involved not only throwing the shapes of that period but also analyses of the claybody, the slip colors, and the decorative techniques themselves, especially fine combing. Starr demonstrates a technique taught to her by potter Warren Mackenzie, who was taught the skill from Leach at Cornwall, England. This video presents a rare look into a classic technique.

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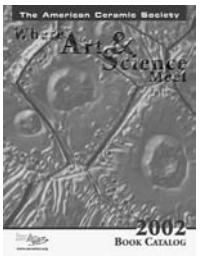

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POTTERS COUNCIL of The American Ceramic Society

POTTER'S PAGES

The official newsletter of Potters Council of The American Ceramic Society
Vol. 2 Issue 1 1st Quarter 2002

Mission–

The Potters Council of The American Ceramic Society is dedicated to meeting the needs of studio potters and ceramic artists by providing forums for knowledge exchange and professional enhancement.

Goals–

Support studio pottery as a profession and recreational activity by providing valuable programs and services.

Provide forums for discussion of issues and a means to address them.

Tap into The American Ceramic Society's wealth of technical knowledge in ceramics.

Organize and work with existing groups on a local, regional, national and international level. Allow you to share opportunities.

Promote public awareness of ceramics.