CONTENTS

Contemporary Making - Current Thinking:
The 1991 Conference
Working the Workshop Programme
1991 Conference: Exhibitions
Making for the Space:
The Architectural Glass Prize
Education - A Profile of Glass Studies
Request for Slides
Pâte de Verre & Cast Glass - Glass Artists' Gallery
Dante Marioni Glass Blowing Demo
Raffle
Chapel of the Holy Spirit, St. James by David Wright
Membership Form
GAS Conference 1991, USA
2nd Perth International Craft Triennial
Glass Sculpture Project by Terrence Plowright
Protect Yourself!
Lead: Safe Work Practices
18th Annual International Glass Invitational - The Habitat Galleries, Detroit, USA

Please note the address for Membership Enquiries:
Meza Rijsdijk, C/o Turkeyworks,
38-40 John Street, Leichhardt. N.S.W. 2040.
Phone: (02) 560 9136

FRONT COVER

The Chapel of the Holy Spirit, St. James, Sydney:
Windows by David Wright, Melbourne (see article page 15)
Photograph courtesy of Lance Feeney

Next Issue: September 1990

Responsibility cannot be accepted by AUSGLASS, its Executive Committee or the Editorial Committee for information in this magazine which may be ambiguous or incorrect. To the best of their knowledge, the information published is correct.
CONTEMPORARY MAKING - CURRENT THINKING

The 1991 AUSGLASS Conference - a Chance to Stop and Think

Art practitioners rarely get a chance to stop and reflect. The stresses and strains of surviving as a glass artist are no different to artists in other media. Survival in today's tight, fast-paced environment for arts practice leaves us breathless and with no time to spare - bills have to be paid, work has to be done.

The 1991 AUSGLASS Conference offers some "time out" from the "fast lane" to think about where we are now, what lead us there, and where we want to go in the future - as glass artists, educators, writers, critics and administrators. In recent years the glass industry has grown quickly, and so have the commitments of its practitioners. Recognition, not only here in Australia but, for some practitioners, overseas as well, has its costs. The costs are time, contact, debate, discussion. These are the things that fall off the list - those and holidays, family, friends, etc.

We need to take time out; to reflect and plan and re-charge our batteries - make decisions about where we are going in the context of where we have been.

The conference programme, developed over 12 months by the current Executive Committee of AUSGLASS, reflects a balance of introspection (Where the .... are we?), and a damned good opportunity to project what influences there will be on arts practice in the 90s. Looking in and looking out!

Whether we work in glass, ceramics, paint, sculpture, administration, galleries, etc., or we are wondering where our training will take us, we need to take advantage of the opportunities to stop and think.

The programme focuses on four areas:

* HISTORY - the importance of historical aspects of glass making on contemporary practice;
* CONTEMPORARY PRACTICE - how artists and designer/fabricators are surviving & developing their work;
* CRITICISM - its influence and effects; and
* THE COMMON GROUND - where all these things meet.

The conference - exhibition, workshop and public lecture programmes - being staged during January 1991, is an opportunity for Australian glass artists to focus on all these aspects of art practice and the Trade Fair will offer an immediate contact point with the materials of the trade. And there are other contacts to be made!

The aim of the exhibition and lecture programmes is to make solid links with the architectural and design industries - the clients of the future. A great deal of headway has been made into these two fields and you never know who you will meet in Sydney in January 1991.

The overseas and national speakers have been selected for their contributions to current debate in arts practice (more particularly glass art practice), to knowledge and to the Australian Glass Development. They too are contact points - for reflection and questioning.

The bi-annual conferences staged by AUSGLASS have been well recognised for their impact on the Australian glass industry. Two years is such a long time, so, even if you attended the last one, it's time to get some more INPUT. It will be well worth the effort to attend and, for those who have financial or geographical disadvantages, we hope to provide subsidies to encourage you to take up the opportunity.

---

* Sorry, I had some trouble deciphering the handwriting here - I think the word is "heck"!!!

3.
AND THEN THERE'S THE PARTIES!!!

It wouldn't be a worthwhile visit to Sydney unless we provided you with lots of entertainment. The opening barbecue will be staged at Victoria Park Swimming Pool - lots of music, dancing, performances, novelty races etc. etc., and the closing party will be an "open" arts party with the best of what Sydney has to offer party-wise - fireworks included! During the conference, SURPRISING events will take place. Be prepared, and bring your hang-over cures - we want you to remember this conference.

Conference posters will be sent out some time in July, and programme brochures in August. Register your interest now.

Victoria Keighery,
Susanne K. Frantz is Curator of 20th Century Glass, The Corning Museum of Glass, and will attend the 1991 Conference in Sydney, and has agreed to sit on the panels for two of our exhibitions.

Ms. Frantz was raised in Arizona where she received her B.F.A. in Ceramics from Arizona State University and a M.A. in Art History from the University of Arizona. She is the former Curator of Exhibitions at the Tucson Museum of Art. Among the many exhibitions she organised for that institution was the 1983 national survey of site-specific installations, "Sculptural Glass". In 1987 she curated "Thirty Years of New Glass" for The Corning Museum of Glass. Since 1985 Ms. Frantz has been responsible for the production of New Glass Review, Corning's annual publication of international work in glass.

Ms. Frantz is a member of the Board of Directors of the New York Experimental Glass Workshop and past President of the Glass Art Society, an organisation established to encourage excellence and advance the glass arts world-wide. She has travelled to Japan, Europe, and the Soviet Union to lecture and organise exhibitions of 20th-century glass. She is the author of Contemporary Glass: A World Survey from The Corning Museum of Glass, published by Harry N. Abrams, Inc., co-author of Masterpieces of American Glass, and on the editorial advisory board of Glass magazine.

Dana Zámečníková

Dana Zámečníková is one of Czechoslovakia's leading artists. She exhibits both in Europe and America, is represented in numerous international collections, and is one of Pilchuck's regular teachers.

Reading Czechoslovakia one might presume Dana's work is merely highly polished, maybe optical and of superb glass quality. But it's quite different! It is also GRAPHIC, DYNAMIC and INNOVATIVE.

Dana's best known work is of pictorial space filled with lightly spaced sheets of float glass, the size of the picture, and layered from front to back, i.e. when looking at the picture, one looks through all the sheets at once. Within this framework, Dana suspends her imagery, which is often of a THEATRICAL nature, by means of various graphic techniques. These techniques are not glass purist (i.e. paints are not fired on, etc.). She draws with pencils, crayons, charcoal, paints with oilpaints, acrylics and collages onto the glass. Sandblasting, engraving and other techniques are used to produce the right visual effect.

One of the most striking aspects of her work, aside from her very personal imagery, is her ability to create a sense of space within the picture, a space so ephemeral it's hard to grasp. It's created by graphic illusions and the use of the multi-layered glass.

Dana has a great deal to offer due to her inspiring imagery and approach to work, applicable to all areas of glasswork. We are looking forward to having Dana in Australia for the first time, and are sure her input will benefit a great many of us.
WORKING THE WORKSHOP PROGRAMME

We suspect the conference workshop programme has always posed problems for its organisers. This committee is no exception!

The problems stem from the fact that AUSGIASS has grown. It now embraces a membership working in every area and technique known to the glass artist. Compounding this problem, we have practitioners of different skill levels, ranging from the novice to members who have been working artists for 40 years.

WE ALL WANT TO LEARN - BUT HOW TO SATISFY EVERYONE! THIS IS THE PROBLEM.

In the past, more experienced members have assisted the less experienced in the format of a skill-based workshop situation. Members chose which particular workshop was most appropriate to their needs, and attempted, over a couple of days, to absorb as much information as possible.

This format has served us well in the past, however there have been areas which were difficult to address because of logistical problems.

These areas included:

* Movement between Workshops - We suspect that many people would prefer a workshop programme which is more flexible, i.e. to be able to wander into other workshops and talk to tutors and students without feeling embarrassed about becoming a distraction, and also without losing valuable working time in their own workshop.

* Viewing Skilled Craftspeople at Work - How often do any of us get the opportunity to watch other skilled makers at work. Particularly in other areas of glass making and working.

Professional artists work in relative isolation, and often can't or won't visit their peers to view work and discuss working procedures. The likelihood of artists getting together with artists in other fields is even more unlikely. This situation is exacerbated by the sheer distances which separate artists across Australia.

Even during the conference when people are physically close together, tutors and others with levels of high skill have little opportunity to demonstrate and view the activities of others unless this activity is organised and officially programmed. We feel that few would disagree that much can be learned by observation and pertinent questioning.

* Workshop & Discussion Groups for Established Artists - There have been suggestions that some members would like to be given the opportunity to discuss topics related to their particular areas of work, and also to work together. Discussion of ideas, skills and techniques is highly desirable, and much could be gained on a professional as well as a personal level.

We have pondered all these needs and have come up with a format which, we hope, addresses each area described above, while still meeting the needs answered by previous conferences. Proposed is a series of skill-based workshops to be held during the morning, which would cater for members of all skill levels, facilitated by a tutor or tutors and resembling the format of previous conference workshop programmes.

The afternoon would be given over to demonstrations by tutors and other skilled members, and if desired, participants of all workshops would be free to move around to different workshops viewing and questioning. Following this there would be a number of short discussion groups organised by a facilitator in conjunction with the demonstrating artists.

We feel this proposal is dynamic and flexible, and caters for as many members as possible. Any ideas or comments would be gratefully received. Please feel free to write or call me at any time.

The following DRAFT programme aims to wet your appetite. These are brief outlines only, with a lot of details still to be confirmed, but we feel it presents a broad and stimulating programme. We hope you agree.

(continued/...)

6.
WORKSHOPS (continued)

1. Dana Zámečniková, presenting her very individual techniques, skills and aesthetic ideas: further correspondence will reveal more detail as to the actual content of this workshop.

2. Glass Blowing for beginners with Ben Edols at Sydney College of the Arts.

3. Graal Technique with Brian Hirst and Deb Cocks (Rob Sheridan assisting), using Brian Hirst’s studio and the Turkeyworks studio.

4. Lampwork with Giselle Courtney, James Minson, John Schünmann and Richard Clements, located at Sydney College of the Arts.

5. Glass as Jewellery, with Elizabeth Paul, looking at methods of combining glass and metal and other materials, and introducing flameworked elements via Workshop (4), located at Sydney College of the Arts.

6. Cartooning for Architectural Glass, with Lance Feeney, covering scale renderings and methods of presentation: also covering classical and contemporary methods of drafting and detailing cartoons in charcoal and poster paints. Located at Turkeyworks Studio.

7. Glass Painting, with Paddy Robinson, offering a non-traditional approach, and possibly working in with Workshop (6).

8. Glass Engraving, with Annette Kalnins and Anne Dybka - those who took this workshop in Melbourne in 1989 may well wish to explore this medium in greater depth.

Other Workshops:

We have a few other schemes up our respective sleeves, so WATCH THIS SPACE!! If anyone has any brilliant suggestions for other workshops, now is the time to let us know. We cannot guarantee anything of course, but all suggestions are welcome.

The Executive Committee.
1991 CONFERENCE EXHIBITIONS

Plans for the three exhibitions to be held in association with the Conference are currently being finalised.

The Blaxland Gallery in Sydney will be the venue for the exhibition "Challenging the Medium". If you haven't already paid a visit to this Gallery recently, try to do so in the coming months - it is a world-class space, and all associated with the Gallery are most excited to be a part of this project.

The Glass Artists' Gallery in Glebe is the Venue for the exhibition "Glass - Appreciating the Medium". Most glass enthusiasts will be familiar with its long established record of commitment to Australian glass. Their expertise will ensure this exhibition will be outstanding.

"Making for the Space" is the design project for the Royal Alexandra Hospital for Children in Camperdown, Sydney. This is a challenge to all artists, using varying techniques and approaches, to improve and enhance these children's environment.

What we are undertaking will be a first for glass in this country. Three major exhibitions running simultaneously and covering virtually all aspects of the medium is, indeed, a most exciting concept. The participation of Glass Curators from within Australia and overseas, as well as prominent members of the Australian Fine Arts/Crafts Community, together with the production of a comprehensive colour catalogue, will ensure that these exhibitions will receive considerable attention from public collections world wide, art/craft historians, collectors, as well as the general public. It will afford a unique opportunity to the artists who have work selected for inclusion, as well as to the Australian Glass Community as a whole.

The success of these exhibitions will serve to highlight the fact that the quality of work currently being produced in this country can now stand proudly amongst the best in the world.

SO GET YOUR SLIDES IN, NOW!!
YOU'VE GOTTA BE IN IT TO WIN IT!!

BARBARA GATES,
Exhibitions Co-ordinator.

Barbara Gates has been working in the Fine Arts field in Australia for the past ten years. Her experience includes working with Christies Contemporary Art of London and Macquarie Galleries, prior to opening the Gates Gallery in Sydney in 1985. During this three year period her gallery concentrated on individual exhibitions, and these included works by prominent Australian glass artists.

After merging with the Painters Gallery in 1988, Ms. Gates left to work as a private dealer with a particular interest in, and commitment to, Australian Contemporary Glass.
MAKING FOR THE SPACE - THE ARCHITECTURAL GLASS PRIZE

By this stage I suspect many of you have been thinking about, or already begun preparing a submission for, the Making for the Space competition and exhibition.

At this stage I feel it is important to clarify some aspects of the competition which may not have been effectively explained in the previous magazine.

Firstly, this exercise was created to give artists interested in architectural commissioned work the opportunity to break away from what I call the 'sausage making' syndrome.

Many artists working in the commissioned arena are economic captives of their clients' tastes and desires. The opportunity to produce a piece of work without restrictions can be rare.

Secondly, THIS COMPETITION IS OPEN TO ALL TECHNIQUES! I can't stress this point too strongly. The only requirement being that glass is used as a primary component of the work.

N.B. Thirdly - due to limitations of exhibition space, the preferred design scale is now 1:5. Obviously, for those artists who have already commenced work at a scale of 1:2, these will still be quite acceptable. The selection process will be based upon slides of your entry design for this competition. Entrants should submit good quality 35mm slides of each design, along with three good quality 35mm slides of their best previous work.

After the 15 finalists have been chosen by the curator and judges, these finalists will be required to send the drawings, framed and suitable for exhibition, together with a sample glass panel. The winner will be chosen from the final works on exhibition.

The best examples of these finalists' work will be included in the exhibitions catalogue, which will be distributed both nationally and internationally. ONLY GOOD QUALITY 35MM OR LARGE FORMAT SLIDES WILL BE SUITABLE FOR PUBLICATION.

It is my intention to get as many architects and designers as possible along to this exhibition. So, if you are serious about your work, and you wish to be represented in this prestigious architectural exhibition, get those grey cells moving. TIME IS RUNNING OUT.

LANCE FEENEY,
VICE PRESIDENT.
EDUCATION - A PROFILE OF GLASS STUDIES BY LANCE FEENEY

In the last issue of the magazine I mentioned that I hoped to present information from the major glass institutions in Australia regarding their curricula and aims. Maureen Cahill, head of the Glass Department at Sydney College of the Arts, has been kind enough to submit their relevant details, and I hope other Colleges will follow in time for our next issue.

SYDNEY COLLEGE OF THE ARTS

Since its inception 15 years ago, Sydney College of the Arts has always been in a constant state of change culminating with its joining the University of Sydney as an Academic College on 1st January, 1990. The next two to three years will see the College move to the spacious grounds which house Kirkbride, the nineteenth century buildings at Rozelle which will be refurbished for its purpose.

Major reorganisation is taking place and this move to suitable accommodation will further enhance the major academic objectives which will firmly establish a coherent and multi-disciplinary approach to studio based teaching in the arts, reflecting more accurately the diversity of the inter-relation of processes and modes of thought in professional practice of the arts. It will also better identify specialist courses and improve the relationship between, and access to, the various discipline areas of the college.

Whilst more formal aspects of critical awareness are taught through a core of Art Theory studies for all students of the College, Studio Theory is specific to each of the studio disciplines, and features visiting lecturers and specialist lectures which develop historical and philosophical contexts of studio activity. Learning at the College is studio based. When not engaged in more formal modes of instruction, students are expected to carry out directed or individual research in the studio.

The Undergraduate Visual Arts Course is divided into three departments, the Department of Theoretical and Professional Studies which provides a core of Art Theory studies for all students of the College; the Image Production Department which encompasses Painting, Photography, Printmaking and Media Arts; and the Object Construction Department consisting of the Jewellery and Object Design, Ceramics, Sculpture and Glass Studio.

Glass was introduced as a course of study in 1978, and was designed to give students the opportunity to work with glass in all its variety and forms, singularly or in combination with other materials. Whilst historical and technical knowledge is a basis for the many extended uses of glass and the development of students' ideas, new technologies and materials continually broaden the parameters and open up exciting areas of development to challenge the imaginative student. Within this context, the range of study enables the student to select techniques and methods of approach which will be of most benefit to their individual interests and abilities. Many techniques require a broad knowledge of the material and specialist areas of concern always remain flexible.

Glass is a material with unique working disciplines and forming requirements. Whilst these peculiarities are a major focus of the course, principles are to be gained from working the materials that offer a potentially wider application, and the relationship between the glass area and other materials or fields of study is encouraged. The provision of substantial workshop facilities, equipment and tools make it possible to produce practically any form or degree of quality appropriate to concept or design.

(continued/...)

Photo: From the Exhibition "Fifteen Minutes of Fame" Work by Ben Edols & Philippa Playford
PROFILE ON SYDNEY COLLEGE OF THE ARTS (continued)

The SCA Glass Studio is significant for the diversity of work which has been produced by its students, who have emerged as practicing artists prominently working in the field today.

Amongst these artists are James Minson and Giselle Courtney - lampworked Glass Jewellery; Peter Crisp - Kiln-formed Glass Vessels; Deb Cocks, Mark Davoren and Ben Rufi - mixed media sculpture; Deb Murphy - Environmental Glass Installations; Sergio Redegalli - Architectural Commissions; Anthony Hoffman and Michael Mullen - Photographic Mixed Media; Adele Kernke - Cast Glass; and Philipa Playford and Ben Edols - Blown Applied and Decorative Constructions.

For any information regarding Winter Schools or Undergraduate or Post Graduate and Masters Courses, please contact:

Sydney College of the Arts Glass Studio
Phone: (02) 692 0266, extension 260

---

Works by Philipa Playford and Ben Edols are being shown at Glass Artists’ Gallery "Fifteen Minutes of Fame", 29th May to 24th June, 1990.

EDUCATION - REQUEST FOR SLIDES

As AUSGLASS is the only official representative of glass artists in Australia, members of the Executive Committee are frequently requested to conduct talks to students within the college system and other groups about the past and current work of Australian glass artists. These requests are becoming more frequent as the 1991 Conference draws nigh.

Particularly in the area of architectural glass, I am increasingly embarrassed at giving slide presentations composed nearly exclusively of work by international artists when an increasing number of people are asking me for Australian work. I know for a fact there are artists in Australia producing high quality architectural glass in both secular and ecclesiastical situations, and would ask you to forward to me slides of this work, together with suitable documentation for presentation at lectures.

I suggest these details could include site dimensions, theme of work, and any other details considered relevant. Slides taken of the exterior of the building would be of additional interest.

It is envisaged that these slides may also be useful during the conference, as one of the aims is to expand our knowledge of Australian glass work.

Please contact me by writing c/o Turkeyworks, 38-40 John Street, Leichhardt, N.S.W., 2040, or phone the studio on (02) 560 9136.

LANCE FEENEY,
VICE PRESIDENT.

---

Rosalina Mann, is a graduate of SCA in glass. She was profiled in AUSGLASS Magazine in Autumn 1988. Rosalina has been running a successful florist "Bouquets Flore" in Strathfield, Sydney.

Rosalina is keen to capitalise on the commercial potential of the location by establishing a small showcase of glass art within the florist. Her major work, a fountain in glass and metal, has been on display in the shop window for some months, attracting considerable interest from passers by.

If you are interested in displaying some of your work in this pleasant location, please contact Rosalina directly. Her address is:

1 The Boulevard,
Strathfield, N.S.W. 2135.
Phone: (02) 764 3980
During the course of my gallery studies last year, we were asked to make a proposal for an exhibition of our own choosing. It was our chance to play curator, and provided a generous licence to survey some form of creativity that was potentially able to be displayed and of interest to a culture-seeking public.

My choice was certain to involve some aspect of the glass arts in Australia. I had seen some works of pâte-de-verre while I was overseas, and was most curious about its Australian representation. I extended its definition to include works in cast glass, the general form of glass-making of which pâte-de-verre is only one exacting type. The exhibition shown at the Glass Artists' Gallery in Sydney was the realisation of that proposal.

The result was a group show of 12 artists, of which 9 interpreted the pâte-de-verre process and 3 produced cast glass. Only one of the artists was male: it has been mentioned that it takes a woman's patience to procure such work, but that is not to deter men from it. It is a rare and demanding technique producing a characteristically soft finish from a strong substance: perhaps a feminine expression.

Traditionally, pâte-de-verre involves placing a paste of ground glass in a refractory mould which is then heated in a kiln and carefully controlled to reach the point at which the granules just fuse into a coherent form. A group of French artists and technicians revived the ancient process with the benefit of "modern" kiln technology, and it is after their efforts that the term pâte-de-verre remains. They were most prolific in the late 1800s and enabled new sculptural effects during the Art Nouveau period.

Two artists in the exhibition adhered to the traditional French formula: Judith Bohm-Parr with her timeless soft coloured vessel forms, and Helen Aitken-Kuhnen with small angular, sculptural pendants. Gwen Ford and Velta Vilmanis incorporated larger granules of glass into their work, giving a crystalline effect to their moulded forms. Ian Mowbray, Kirstie Rea and Gabriella Ribeiro by-passed the mould and created flat works with granules or paste of glass. Etsuko Nishi "piped" a glass paste onto a temporary form that left a suspended lace decoration. Gillian Mann cast low relief forms using speckled glass paste to make her pre-Christian female icons.

Victoria Anderson, Kathy Elliott and Sallie Portnoy cast bowl shapes and achieved colour effects with a mosaic technique, whereby fragments of coloured glass were fused with clear glass within the mould.

In essence, all these artists apply the same principles but vary the specifications. It is pleasing to find that such an ancient method can still find modern expression. Within the relatively young glass movement in Australia, there are proponents of pâte-de-verre and those who have adapted it, and this exhibition aimed to introduce and expose them.

IRVANA JIRASEK,
Curator of the Exhibition,
Assistant, Glass Artists' Gallery.

---

BY THE BY!

It was nice to note that in the New Glass Review II, published in the latest issue of Neues Glas, that the following Aussie artists were included:

* Deb Cocks
* Giselle Courtney
* Jennifer Lyons
* Deb Murphy
* Etsuko Nishi

P.S. The editor quite liked the fact that they were all female!!
DANTE MARIONI GLASS BLOWING DEMO:  
HOT ITALIAN TECHNIQUE

Brian Hirst managed to detour Dante Marioni through Sydney on his way home from the New Zealand Conference, but with only a week's notice it was a mad scramble to spread the word.

While Brian batched glass and prepared his studio for the onslaught, we stuck, pasted, photocopied, posted and phoned.

Most of N.S.W. & the A.C.T. heard (our sincere apologies to anyone who didn't, or couldn't make it because of the short notice) and most of those who heard turned out to watch the American Master demonstrate his *Hot Italian Technique!!* (In fact, so many turned up we have decided to call the next State Meeting a Dante Demo, and try for the same response!)

Approximately seventy people enjoyed the day (a bus-load drove all the way from Canberra that morning) and it was worth every minute of any effort made. Marioni blows a MEAN piece of glass.

There's got to be something in the head wobble, with fine stemmed Martini glasses, goblets, vases and jugs exquisitely produced one after the other. Scott Chaseling did a fabulous job as chief assistant, but then he had lots of practise as Dante's T.A. in Pilchuck last year.

Unfortunately a one-day demo doesn't give you a chance to admire the work cold, and Dante took most of what he blew away with him -

*BUT ... WE HAVE ONE SPECIAL TREASURE TO RAFFLE*

Just send $10.00 and your name to:

Bridget Hancock,  
Turkeyworks,  
38-40 John Street,  
Leichhardt. N.S.W. 2040.

All entries will be put in a hat and drawn at the next N.S.W. State Meeting, to be held on 7th July, 1990. The winner will be sent the piece, and announced in the September issue of this magazine.

Second prize is a copy of the video Keith Rowe made of the *man-himself* in action, for those who wish to advance their own hot glass Italian technique.

*SO SEND YOUR MONEY TODAY*  
*AND BE PART OF THE DANTE DEMO DAY*

*Bridget Hancock,*  
*N.S.W. State Rep.*
Photograph at right is the beautiful goblet made by Dante during his visit to Sydney, and the prize you could win if you enter our Raffle.

Photograph courtesy of Greg Piper, 1st Floor, 42 Alberto St., Lilyfield, N.S.W. 2040.
Phone: (02) 555 7744

AUSGLASS would like to thank Greg for his continued support, and to point out that the reproduction of his photo on the cover of the Summer Edition of AUSGLASS did not give a good enough indication of the excellent quality of Greg's work.

Photo: Dante at work on the goblet which is to be raffled.
CHAPEL OF THE HOLY SPIRIT, ST. JAMES, SYDNEY

by David Wright, Melbourne

NOVEMBER 1987: There is a gear crashing moment in my head when I go from the anxious but neutral gear of design submission to the first gear of being told my design has been selected. Panic!! The clutch is missed, all the cogs start spinning and grinding on each other. My God! I've got to actually make the thing, it's a Bicentennial project, must be finished by November 1988, quick - labour and materials, materials and labour - quick.

For the 90 square metre project of the Chapel in St. James, this moment of excited terror is quickly tempered by the obstacles of approvals which must first be obtained before the project can proceed. Such a massive contemporary artwork in one of Australia's paramount heritage buildings, necessitating structural alteration, is bound to attract controversy. The congregation must be kept informed and feedback allowed.

DECEMBER 1987: I present my design to the congregation and response is wholly positive, and so, on to the next and major obstacle which will determine finally whether the project can proceed, the Heritage Council of New South Wales. At this stage the rough schedule is, presentation to the council and notification of result before the end of '87, structural investigation of the space early in '88, concurrent with full scaling up of design, frame sizes by, say, March '88, glasswork finished and installed by November '88.

However, presentation of argument to the Heritage Council proves complex to put together, involving other aspects of renovation of the building as well as the proposed artwork in the Chapel. Meanwhile I find myself in a bind as, to have any possibility of completing the work in '88 according to the Bicentennial guidelines, I will have to order glass from Europe, and Bob Bird arrives from Cairns to help me, yet the whole project may come to a sudden permanent stop. Tony Stafrace of Melbourne Glass proves extremely helpful at this stage and Bob helpfully suggests he keeps moving south to work in Tasmania whilst the process grinds on.

MARCH 1988: Fingers crossed, presentation of glass proposal to Heritage Council, who seem particularly un-reactive. Could be a long process. Arguments revolve around the fact that Greenway’s original intent was for the building to be a courthouse did not seem to include bricking in of portico columns, and that the Church involving contemporary worship must have contemporary symbols. Within 24 hours the Heritage Council has given its approval and no further impediment stands in the way of the project; except, that is, the monster of inertia that seems to lurk on the outskirts of large commissions.

So now, say a month to draw up to full scale, perhaps two months to get frame opening sizes, let's see - May '88, we can still make completion and installation by November '88 - phew!!

DECEMBER 1988: I hold in my hand the fax from the builder with opening sizes for the frame, at last. What has happened in the meantime? Bob returned in May so that we can start full production! - but without frame sizes we are severely limited in what we can do, even in completing the full scale working cartoon. We have done much hair-tearing. All our production, cataloguing, storage, etc. systems are worked out to the nth degree, waiting to start. Ironically, another large commission which I have designed to be entirely subcontracted, a silk screened glass wall for St. Stephens in A.C.T., has to be rescued from the sub-contractors who have failed to perform, and Bob and I are occupied in doing the whole project ourselves, an unusual case of two minor “disasters” cancelling each other out: we actually saved money!

JANUARY 1989: We are now in full production and manufacture of panels for St. James. Our systems of storage and checking of preparation and kiln loading is running smoothly. I think Bob feels he is trapped in a Southern time warp, he dreams of travelling north. By May we have set September as the target for installation.

JULY 1989: James Thompson becomes involved with the planning for installation. What a marvel he is. He designs and builds a crane to lift panels up 6 metres to the top of the scaffolding.

FRIDAY, 22ND SEPTEMBER: We pack for the trip to Sydney. System is simple, A-frames with about seven panels each side, interleaved with bubble wrap and held in place with tape. A-frames screwed to floor of truck. Surprisingly, insurance (which is for collision or overturning) only costs $200 for $200,000 worth of glass!

SATURDAY, 23RD SEPTEMBER: Arrive in Sydney and unload on-site. Not one crack. I suggest we take the day off and float around the harbour - James says we should try one panel. We install 10% of the job!
MONDAY, 25TH SEPTEMBER: Scaffolding does not arrive. Factory strike! Hassle, hassle, finally arrange an alternative. Beautiful choreography of installation team, Bob, me and James. Slow and steady. Film crew doing a documentary on the commission have trouble keeping up with us. The crane works beautifully.

THURSDAY, 28TH SEPTEMBER: Finish installation, disassemble scaffolding, A-frames etc. and pack for return to Melbourne. In packing, freight, unloading and installation, only one small piece of glass cracked (by me, of course). The time and detailed planning we have put into every stage of the process has really paid off. Out to dinner, exhaustion and euphoria. Bed at 3am.

FRIDAY, 29TH SEPTEMBER: Up early, pick up gear at Church and head back to Melbourne, the old EH towing about a ton of gear, Bob and myself both very tired but very happy, not believing that at last it is in.

In Summary
* These large commissions are very exciting and rewarding, but the time scale has a tendency to "blow out" to 2 or 3 times the original schedule.
* It is very hard to control such things as materials and cash flow in these circumstances.
* Try to be "pessimistic" when drawing up contracts, and make provisions for delays.
* Packing to take glass around the corner or interstate is really no different.
* Detailed forward planning of all stages really pays off.
* Established formal lines of communication between all parties is mandatory, and copies of all correspondence is essential.

Finally, I owe so much to the support of:
* Geoff Danks, architect, who usually received the brunt of my frustration;
* Moira Kerr, consultant to the project, who was a constant support;
* Peter Hughes, Rector of St. James, always positive and helpful;
* James Thompson, a dynamo; and
* Bob, a friend and island of calm.

---

Photo: Window by David Wright in the Chapel of the Holy Spirit, St. James
Photo courtesy of Lance Feeney

---
Photo: Above and Below: Window by David Wright in the Chapel of the Holy Spirit, St. James
Photo courtesy of Lance Feeney
ART GALLERY OF WESTERN AUSTRALIA
ANNOUNCEMENT

2nd Perth International Crafts Triennial
Art Gallery of Western Australia, Perth
15th August to 4th October, 1992

ATTENTION GLASS ARTISTS:

This major Triennial exhibition focuses on new developments in international contemporary crafts and applied arts. It will comprise four concurrent exhibitions at the Art Gallery of Western Australia in Perth. One of these exhibitions will be International Glass.

The Triennial selector and curator is Robert Bell, Curator of Craft and Design at the Art Gallery of Western Australia. He was the curator for the Gallery's exhibition International Directions in Glass Art which toured in Australia in 1982-83. Research towards the 1992 Triennial has been assisted by the Visual Arts/Craft Board of the Australia Council. Robert Bell would be pleased to hear from glass artists who would like to have their work considered for selection for the Triennial. Slides of recent work and resumes can be sent to him by 31st August, 1990.

The catalogue of the 1989 Perth International Crafts Triennial can be ordered from the Art Gallery of Western Australia Bookshop. Consisting of 156 pages and in full colour, it includes American ceramics, Japanese fibreworks, European Jewellery and Australian crafts by ninety-five artists. Price including packing and mailing: $45.00.

For further information, contact:
Robert Bell, Curator of Craft and Design,
Art Gallery of Western Australia,
Phone: (09) 328 7233 Fax: (09) 328 6353

GAS CONFERENCE 1991, USA

Next year's Glass Art Society Conference will be held in The Corning Museum of Glass, Corning, New York. For those not familiar with its location, Corning is in the State of New York, not the city, some 3 to 4 hours drive from each other. Dates for the conference are 9th to 12th May, 1991.

This year's conference attracted more than 650 participants. Many were overseas artists, and Australians attending included Robert Bell, W.A., Klaus Moje, A.C.T., and Steven Skillitzi, S.A.

One of our invited guests to the 1991 Conference is Susanne Frantz, Curator of 20th Century Glass, The Corning Museum of Glass. Many will recognise her as the person you address your slides to for inclusion in the annual Corning Glass Review.

One of our international guests at the Melbourne Conference in 1989 was Ginny Rufner, and Ginny is the new President of GAS, so all Australians should be more than welcome should they attend next year's conference. Any problems, just ask Susanne or Ginny.

For further information, contact:
Susanne K. Frantz, Curator of 20th Century Glass,
The Corning Museum of Glass,
One Museum Way, Corning. N.Y. 14830-2253, U.S.A.
GLASS SCULPTURE PROJECT

In March 1989, I was asked to produce a design for a sculptural work that would enhance a new shopping complex being built in Sydney. After much negotiation, model building and experimentation, we agreed on a start in April.

I spent the next 6 months building a full scale model (13 feet high by 10 feet wide) out of foam core board, heavy cardboard, steel rod and timber. When complete, I took on help to build the entire underbase (using the model as a template) out of sheet aluminium. I used 1,500 metres of welding wire and 6 medium size bottles of Argon gas to weld the whole base together.

The aluminium underbase was made up into 10 modules and transported to Sydney where a friend offered space and tools to cut and build the main base out of granite. Three of us worked 6 days a week for nearly 3 months to build the stone base, sometimes working late into the night. At the same time our glass, which came from Italy, was being sawn into 17 pieces. The clear 32mm thick drawn glass, originally made for telescope lenses, was cut into 9 feet by 1 foot (being the largest) lengths weighing near 150 lbs - this cutting was one of the many arduous tasks ahead.

We broke saw blades, cracked some of the pieces, and caused many difficulties for the firm involved. Then each piece was bevelled on each edge with a 5-sided bevel; this turned each pillar of glass into a huge glass prism.

After this, a mould was made out of steel with 2 radii. The mould was 11 feet long, 4 feet wide and 4 feet high. It was this next process of bending the glass that initially seemed most difficult. We struck quite a few problems that at one stage seemed insurmountable. After much experimentation through trial and error, we developed a process that worked. The most difficult problems that emerged were maintaining the sharpness of the bevelled edge while applying the heat, preventing any indentation in the glass because of the immense weight of each pillar, its own body weight on the mould and fixing the pillar on the mould (so as not to mark it) without it moving during the whole process.

Then 17 heavy steel sling-braces were made to hold the glass, and we were ready for installation.

This was the most difficult period of the whole project. Just as we were about to deliver the first of the stone modules, I received a phone call. It was what I thought at the time to be a major disaster. One of the glass pillars had blown up. Human error. Each pillar (after beveling) was worth on average $1,000, and the time loss was a major pressure.

Everyone rallied, and we had another prism ready for firing in 4 days. Then, during the final loading of stone modules, another phone call!! The last pillar had shattered when leaving the annealing chamber: so an embarrassed me got on the phone, and again everyone rallied around and 5 days later we were firing the last prism - again.

The whole installation took 6½ weeks - 7 days a week, and I did not get home before midnight once during that time. The installation was so cumbersome - the middle stone module took 8 strong men to lift, and the other modules between 2 and 3 men. I was very lucky to have help always available. The entire sculpture weighed close to 3½ tonnes on completion.

All in all, we spent $95,000 and 2,800 hours to create the piece. Over 12 people worked on the sculpture from time to time.

If you are interested in having a look, you will find it in the main food court at Neeta City, Fairfield, Sydney.

The concept behind the sculpture was:

* THE STONE represents the Earth. Granite is one of the most dense materials we have, so its vibratory force is very slow.

* THE CLEAR GLASS PILLARS represent purity.

* THE PRISM breaks the light up into a spectrum - reds through to violets, and one of the highest and fastest vibratory forces we know. This light represents the spirit.

The low vibratory movement of stone - solidness - the Earth - The clarity of the glass - purity - and the highest vibratory force of Light - Universal spirit - the glass rising up and outward from the Earth - representing inspiration - the spiritual passion of humanity.

I hope you enjoy it.

Terrence Plowright,
Sydney.
Photo: Glass Sculpture by Terence Plowright

Photo: Detail of the granite blocks in the sculpture by Terence Plowright
PROTECT YOURSELF!

Last year the Victorian Health Promotion Foundation made funds available for Project Staff for the Community Arts Network of Victoria and Redletter Community Workshop to produce a kit written by artists about health and safety in the Visual Arts. These kits contain 5 fold-out pamphlets on ceramics, printmaking, photography, sculpture and painting, as well as leaflets about ventilation, masks, gloves, goggles, hearing protection and environmentally safe chemical disposal. They also contain a Studio Checklist to help you identify hazards in your studio or school.

Unfortunately there is no pamphlet aimed specifically at the glass artist, but as you can imagine, a lot of the information is very pertinent to a lot of our members in their work. A seminar is also being run this year with 5 trained artists conducting workshops on health and safety issues for the 5 areas.

Further information on the seminar is available from the Community Arts Network and Redletter Community Workshop. The kits are available at a cost of $15 for individuals and $25 for organisations/institutions.

Community Arts Network
18 St. Andrews Place
East Melbourne. VIC. 3002.
Phone: (03) 650 9172/5432

Redletter Community Workshop
178 Victoria Street
Brunswick. VIC. 3056.
Phone: (03) 380 9444

These people have kindly allowed us to reproduce some of the information that we feel is pertinent to glass artists, but we strongly recommend anyone who feels they are not fully aware of the dangers involved in their work should purchase one of these kits. Each of the kits contains valuable information about the risks involved with many products that are common to glass workers.

INTRODUCTION
We won't stop making art but we can stop making ourselves sick! This kit was designed by artists to warn you of the dangers and give you some tips to improve your working conditions. Here's to a long, healthy working life!

WHAT ARE MY ART MATERIALS DOING TO ME!
All art materials contain chemicals, many can harm or even kill you if they get into your body. You can breathe them in, absorb them through skin contact or swallow them accidentally if you eat, drink or smoke in the studio.

INHALATION (YOU'RE BREATHING IT IN)
Art materials produce dusts, gases, fumes and vapours which can damage your lungs. From there they can enter the bloodstream, depositing toxins in your organs and fat tissue. Damage is not always immediately obvious, it can happen over a period of time. By the time symptoms appear, the damage may be permanent.

SKIN CONTACT (YOU'RE SOAKING IN IT)
Your skin absorbs some chemicals, particularly solvents, and carries them into the bloodstream. Unprotected cuts and sores are an open doorway for chemicals to enter your body. Solvents, acids, alkalis and bleaches destroy the protective barriers in your skin, which can cause eczema, dermatitis and allergies and allow other chemicals to enter your body.

INGESTION (YOU'RE SWALLOWING IT)
Would you eat your art materials if they were served to you on a plate? You may as well if you eat, drink or smoke in your studio! Gases, vapours and dust settle on everything including food and drink. Unwashed hands contaminate whatever they touch too. If you swallow chemicals they can damage your mouth, throat, stomach, nervous system, liver and kidneys. Chemicals can make you seriously ill.

OTHER FACTORS
The effect of chemicals on your body will be worse if you smoke, drink heavily, or suffer from allergies or chronic illness, eg asthma, epilepsy. You should take special care if you are pregnant. Bad work conditions and chemical exposure can contribute to stress-related illness and weaken your resistance to disease.

(continued/...
PROTECT YOURSELF! (continued)

SO WHERE'S THE PROOF?

Many artists are so used to feeling unwell that it makes it hard to identify the symptoms of chemical poisoning. Some of us don't register anything much until it's too late. You could be feeling the effects of chemical poisoning if you regularly suffer from:

1. headaches, tiredness, dizziness/faintness, extreme mood swings (generally after leaving the studio);
2. allergies;
3. skin irritations, rashes, spots;
4. aches and pains in joints and muscles;
5. breathing problems at night and during exercise (like walking up the stairs!).

Have you noticed that these symptoms are not as severe when you're away from the studio for more than a few days?

WHAT ABOUT MY ART EQUIPMENT?

Ergonomically speaking like they say, it ain't what you do but the way that you do it that counts. Dangerous work practices make it harder to function efficiently and can cause accidents. Backaches and muscle-strain injuries are often the result of working at benches and scaffolding that aren't adjusted to your height.

OVERDOING IT?

Working for long periods, particularly on repetitive tasks, can cause permanent injury to overused muscles and results in accidents.

WHAT'S THAT YOU SAY?

Working regularly in a noise environment, eg sculpturing with power tools, increases the risk of deafness, high blood pressure and stress.

WHAT CAN I DO ABOUT IT?

Right Away you can clean up your act and that includes your studio! Pull up carpeting and lay down cheap linoleum or another non-absorbent surface that can be wet-mopped or vacuumed (sweeping stirs up dust). Organise your studio so that everything has a place including separate storage for dangerous chemicals. Store your materials in suitable containers (refer to Material Safety Data Sheet on the product). Label your materials clearly.

Breathe Easy - you need air in your studio - if you can't afford exhaust ventilation, open a window or an outer door. A basic rule of thumb is that air should move from behind you, across your work and away from your face to the outside.

When you work with dangerous chemicals, protect yourself with overalls, correct gloves, masks and heavy boots. Remember, a mask is no substitute for ventilation. The mask must fit your face properly, making an air-tight seal. Make sure you have the correct cartridge for the chemical you are using and change the cartridges regularly.

SURVIVAL TIPS

Don't

• eat, drink or smoke in the work area
• use solvents to clean your hands - use a safe, non-toxic hand cleaner, eg baby oil
• expose yourself unnecessarily to dangerous chemicals
• work in your bedroom, kitchen or other living area
• work in a pile of garbage
• put solvents or other toxic chemicals in the sewer
• work with solvents if you are pregnant (foetal damage may result)
• expose children, pets or friends to solvents and other dangerous art materials
• store art materials in food containers or the domestic fridge
• use eating utensils to mix or store your materials, and don't prepare or use them in the kitchen
• overload your domestic power system or run a tangle of cords that can trip you up.

Do

• use safer chemicals where possible (non-toxic or less toxic art materials are available)
• work in a well ventilated area. If you can't afford local ventilation, open an outer door or window, or work outside
• wash hands before eating, drinking, smoking or going to the toilet
• use an appropriate mask, splash goggles and protective clothing when you handle solvents and other toxic chemicals
• keep lids on containers when not in immediate use
• check fittings and service equipment regularly
• label containers clearly and store all flammable chemicals in a fire-proof cabinet or container away from flames and heat
• tie back your hair, don't wear loose-fitting clothing and remove jewellery when you work with machinery.
• Learn operating and emergency stop procedures. Put guards on equipment, eg dough mixers, saws
• have a regular check-up (give your doctor a list of the chemicals you use and tasks you perform).

(continued/..)
PROTECT YOURSELF! (continued)

EDUCATE YOURSELF
- make sure you know what's in the materials you use
- keep a file of Material Safety Data Sheets (available from manufacturers and suppliers)

ORGANISE YOURSELF!
- make a place for everything and put it all away at the end of the day
- keep waste in metals bins with lids. Dispose of waste frequently
- adjust work benches and chairs to a safe working height
- maintain a first aid kit with burn cream, band-aids, eye wash (for chemical burns) and antiseptic cream
- keep a small chemical fire extinguisher on hand (BCF type for multipurpose use)
- wet-mop your work area regularly (sweeping stirs up dust). Mop up spills immediately (refer to Material Safety Data Sheet for correct procedure

SPOIL YOURSELF
- take frequent rest breaks when you perform repetitive tasks
- wash hands and exposed skin in soap and water immediately after work
- shower and change into uncontaminated clothing as soon as possible after work (or you and your friends will be soaking in chemicals all night)

ASSERT YOURSELF
- insist that manufacturers and suppliers provide thorough Material Safety Data Sheets; don't buy from people who won't
- lobby for public access studios with good health and safety provisions.

ACCIDENTS
If chemicals have been accidentally swallowed do not induce vomiting unless specified on the product label. Call an ambulance immediately.
Skin contact with chemicals - flush the area with cold, soapy water for at least 15 minutes.
Eye contact with chemicals - flush the eye with cold water for at least 15 minutes. Fit your tap with a short hose which can be used as an eyewash.
Seek medical attention for severe burns or exposure to fumes. You can call the Poisons Information Centre. Their number is listed in the phone book.

What you do effects everyone else; the people you live and work with, your friends and the general community. The chemicals you use go into the air we breathe and if you're careless they can end up in our water and food.

EXPOSING OTHERS TO RISK

THE ENVIRONMENT
There is no safe exposure to cancer-causing materials; substitute other products. Aerosols often contain toxic, flammable propellents that will harm you and the environment; use an atomiser instead but remember to use a suitable mask, goggles and gloves. Dispose of all your materials carefully. Almost everything you use can be recycled: check with your local council about pick-ups for paper and waste for recycling. Commercial recycling companies will sometimes pay for wastes. Don't mix your chemicals, store them in separate containers for disposal.

TEACHING
Maybe you don't care what happens to you but you shouldn't impose unsafe work practices on others - besides that, you could get sued for negligence! It's your responsibility as a teacher to be informed about the chemicals you are using and to ensure that your students use art materials safely. Make sure you know how to treat injuries and deal with accidents. Adults with chronic illnesses and all young children should not be exposed to solvents, solvent-based adhesives, oil paints, permanent market pens, aerosol sprays, acids, indian inks, non water-based paints and inks, dyes, clay dusts, glazes and oxides, epoxy resins and photo chemicals.

YOUR RIGHTS
The Occupational Health and Safety Act outlines rights and responsibilities for art schools, teachers, artists, suppliers and manufacturers.

Manufacturers and Suppliers - insist that manufacturers tell you what is in their products (ask for a Material Safety Data Sheet or MSDS). The MSDS lists the contents of the product, safety procedures for ventilation, protective clothing, fire and spillage, storage and first aid. If the supplier or manufacturer won't give you an MSDS, refuse to buy their product. Choose products that are well labelled. A product is not necessarily safe just because the label says non toxic.

(continued/...)
PROTECT YOURSELF! (continued)

Other Artists - don't let the people you work with inflict their bad habits on you. Discuss safe work procedures with your colleagues. You can use the Studio Checklist in the back of this kit to assess the safety of your studio.

Self-Employment - nobody else is going to take care of you. Budget for health and safety in your grant applications, when you take on commissions, or other employment as an artist. Build in a health and safety component when you price your artwork for sale. You can also declare your health and safety expenses, including fans, protective clothing and materials, on tax; keep all your receipts.

Art Schools and Public Access Studios - should provide a safe work environment but poor funding limits their ability to do this. You can help them to help you by lobbying for health and safety funding. One well-equipped, safe public access studio is worth more than all the converted bathrooms, bedrooms and kitchens. If there is no public access studio in your field, contact your associations and galleries and start lobbying for one.

It's important to know what's in the chemicals you're using. Many products used in sculpture are toxic in their dust, fume, liquid and gaseous form. A local ventilation system is a priority. Wear a particulate, gas or air-supplied mask, gloves, goggles and protective clothing as indicated. Wet mop chemical dust residue. Substitute safer products where possible. See section "Exposing others to risk" for disposal advice.

---

WORK WANTED

Ex-Swansea Stained Glass Student
Grad. July 1988
Exp. under Kuni Kajiwara, Japan
Can Design, Cartoon, Cut, Paint, Acid Etch, Sandblast, Lead and Cement
Some Restoration Experience
Needs Full Time Work on a temporary basis, up to 3 months.
Have Work Visa and Tax No.
Anything Considered - Willing to Travel
Contact (mail only please) Sally (Daisy) Evill, C/o 14 Karin Close, Brahma Lodge, Adelaide, S.A., 5109.

---

NEPEAN WINTER SCHOOL GLASS COURSE

During July, two 5-day workshops will be held at the University of Western Sydney, Nepean, 2nd Avenue, Kingswood, New South Wales.

The workshops will incorporate many aspects of glass work, including: glass cutting, leadlighting; surface decoration, kiln-firing and glass painting, mould making and various kiln techniques; sandblasting; lampworking; engraving. Students of all levels are welcome, and may choose the areas they wish to work in.

Students can choose to do one or both of the 5-day courses. The courses will run Monday to Friday from 9am to 3pm, the first course being 2nd to 6th July, and the second course 9th to 13th July. The cost of each 5-day course is $120, plus $30 for materials.

If interested, please contact:
Joan Squires (047) 36 0222 or
Shirley Gibson (02) 516 5928
LEAD: SAFE WORK PRACTICES FOR THE STAINED GLASS ARTIST

Reproduced from an article in STAINED GLASS QUARTERLY, Winter 1988 -
By Marilyn Browne, M.S.; William Burke, C.I.H.; Ron De Persis, B.S.; Robert R. Stone, Ph.D.

Lead has appealing characteristics for the stained glass artist; however, lead has some very undesirable properties when absorbed by the human body. In fact, lead is not known to serve any useful function in the body and its presence is associated with a variety of adverse health effects.

You may have a lead exposure problem if:

• you work with lead-containing materials, especially if you spend a fair amount of time soldering;
• the temperature of your soldering iron is not well controlled;
• you do not control lead dust during restoration work or when burnishing during the weatherproofing process;
• your work area does not have a ventilation system and personal protective equipment is not worn;
• you eat, drink or smoke in your work area;
• you wear work clothes home.

If any of these apply to you as an employee of a large commercial studio, a self-employed artist, or as a hobbyist, this article will have valuable information for you. Care in work techniques and personal hygiene, and a knowledge of sources of exposure can go a long way toward minimizing adverse health risks. Lead exposure can be controlled, often without substantial investment of time or money.

The Bureau of Occupational Health of the New York State Department of Health became concerned about the work environments and practices of stained glass artists following the evaluations of two commercial stained glass studios by our industrial hygienists. The studios were visited in response to reports of elevated blood lead levels in employees and workers’ concerns regarding lead exposure. The sources of exposure were similar in the two studios, and a description of these situations might be helpful to other stained glass artists.

This article will discuss how you can reduce or eliminate the lead exposures we observed. In addition, lead toxicity and means of monitoring lead exposures will be described along with other potential hazards of stained glass work. Your own self-assessment of work practices and work environment is the first step in reducing lead exposure.

Lead Poisoning

Lead may be absorbed into the body through the lungs and gastrointestinal tract. Very little can be absorbed through the skin. Lead is circulated by the blood stream and accumulates in body tissues, especially the bones. Once stored in the body, lead is excreted very slowly. Therefore, even exposure to low levels of lead over a long period of time can result in the accumulation of a large amount of lead in the body and can cause illness.

A blood lead test measures the amount of lead circulating in the blood. Although this test does not measure the total body lead accumulation, it does provide a good estimate of accumulation and whether a person has absorbed enough lead to become ill. Blood tests are an important part of monitoring exposure to lead and the effectiveness of any lead reduction program. All people who work with significant amounts of lead should be tested periodically; annual or semi-annual tests are recommended. A finding of an elevated blood lead value should trigger an evaluation of lead exposure sources.

Everyone has some accumulation of lead in their body. The average blood lead level of the United States population is approximately ten ug/dL. There are many sources of environmental lead exposure; including lead in air from leaded gasoline and other industrial sources, as well as lead in food and drinking water from lead-based solder, pipes and metal food containers. Generally, people living in urban areas have higher blood lead levels. The recent reduction in the use of leaded gasoline has resulted in a gradual lowering of environmental lead exposure.

Prolonged exposure to low levels of lead causes a gradual increase in the body’s accumulation of lead in blood lead levels. Measurable changes in blood enzyme levels and neurological changes are observed at blood lead values as low as 10-25 ug/dL. Many early symptoms associated with lead exposure are non-specific and easily attributed to other illness. These early symptoms include fatigue, headache, difficulty sleeping, memory loss, irritability, constipation, diarrhea, crampy abdominal

Lead levels are reported in micrograms per decilitre (ug/dL) of blood. A microgram is one millionth of a gram, one gram equals 0.035 ounce, and a decilitre equals 0.21 pint. Thus, a blood lead of 10 ug/dL equals less than one millionth of an ounce of lead per pint of blood. Although this represents a very small amount of lead, toxic effects are seen even at this relatively low level.
pain (colic) and muscle and joint aches. These symptoms may become noticeable at a blood lead level of about 35 ug/dL to 60 ug/dL. Not all individuals develop symptoms at the same blood lead level and not all individuals develop the same type of symptoms. These early health effects, in adults, are reversible if lead exposure is controlled, and they usually disappear over a long period of time as the body slowly excretes the accumulated lead. However, there is also evidence that long-term exposure to even low levels of lead can cause high blood pressure, which may not be reversible. Higher blood levels (over 60 ug/dL) can cause more serious symptoms including anaemia, nausea and vomiting, severe abdominal cramps (colic), dizziness, tingling and numbness in the extremities (peripheral neuropathy), and mental confusion. In severe cases of lead poisoning, these symptoms can progress to very serious damage to the nervous system, including convulsions and death. With these more serious health problems, a person can be treated with drugs which help remove lead from the body. However, some of these symptoms may not be reversible and the person can be left with permanent damage to the nervous system and kidneys.

Children are more vulnerable to lead poisoning than are adults. Impaired neurological development may occur in children with low exposure to lead. Sometimes the lead exposure for a child may occur during the mother's pregnancy, because some of the mother's accumulation of lead is passed to the child. For this reason, very stringent controls on lead exposure for children and pregnant women are maintained.

Reproductive problems occur in both men and women at high lead levels. Decreased fertility has been observed in men occupationally exposed to lead. Pre-term birth, low birthweight and reduced metal development in infants have been associated with relatively small elevations in blood lead levels. However, the blood lead level at which reproductive effects first occur is not known. Lead exposure should be avoided as much as possible during pregnancy.

Work Practices

Lead/tin solder and lead came are the main lead-containing materials used in stained glass production. Lead dust is produced while saw-cutting lead, as well as when burnishing lead during the waterproofing process. Lead fumes are created when solder is heated. These fumes can be inhaled or can settle as lead dust throughout the work area. If the soldering iron is just hot enough to cause the solder to melt, only a small amount of lead fumes will be given off. However, when the soldering iron is heated to a very high temperature, substantially more lead is vaporised. The copper foil technique can also produce a significant amount of lead fume since a high temperature is used in tinning copper foil.

Restoration work can also result in a significant lead exposure. Over time, the lead came oxidises and forms a film on the caming. As panels are handled, disassembled and cleaned, this film, and old lead-based cementing and glazing compounds can contaminate skin and clothing. The glazing compounds used years ago often contained lead, as did paints used on window frames.

Do not overheat the soldering iron. A dual iron unit allows for efficiency without superheating the iron. One iron reheats while the other iron is in use. A temperature regulator is important, especially if a high-powered iron is being used. Better temperature control may also improve the quality of your solder joints. [Editor's note: a portagas soldering iron allows for temperature to be controlled by regulation of the gas jet.]

Use lead-free materials wherever possible. New solders are available that are reported to flow and set like lead/tin solder, and may be satisfactory for many applications. Similarly, the use of zinc, copper or brass channel can eliminate another source of lead.

Avoid leaning directly over work while soldering. Heat and lead fumes tend to rise directly above the iron's tip.

Wet down the stained glass panels to be restored, before beginning work. Avoid creating dust. Depending on the age and type of paint, you may be able to immerse the whole panel in a shallow trough, or spray it with water or glass cleaner.

Workspace

Lead fumes and dust can be inhaled when generated, or they can be inhaled later, as dust is stirred up by movement. Inappropriate methods of cleaning the work area can also increase airborne lead dust. Lead pigments in paints and glass containing lead can provide additional sources of exposure.

Keep work area separate from eating or living areas. The studio should not have the same freedom of access as the living area. Avoid carrying lead from the studio into the home on contaminated clothing or materials.

(continued/...
**LEAD: SAFE WORK PRACTICES (continued)**

**Set up a ventilation system.** The goal of ventilation is to keep lead fumes out of the breathing zone and to remove it from the studio entirely. A good ventilation system is very important, especially when soldering.

**Use a wet sponge or mop for cleaning the studio.** Sweeping stirs up dust and lead dust particles that are small enough to pass through the filters of ordinary household and shop vacuums. Special high efficiency particulate air (HEPA) filtered vacuums may be used, but are expensive.

**Use a smooth, non-porous work surface.** If your table has a porous surface, it will be difficult to remove lead dust adhering to the surface. Polyurethane can be used to give a plain wood table a glossy finish that can be easily cleaned. It will be necessary to refinish the surface as it becomes worn. Nails used to position work will create holes that have to be filled. The studio floor should also have a non-porous surface.

**Locate kiln in a separate, ventilated area away from working and living areas.** Stay out of the kiln area as much as possible during firing. Indoor kilns may have to be separately vented.

**Personal Hygiene**

Lead dust settles on clothes, skin and hair and on surfaces throughout the workspace. Other household members are exposed when lead dust on clothes and hair is carried into the home. Small children are especially at risk when this happens.

**Wear a coverall or smock, and leave it in the studio.** Do not wear work clothes home, and launder them separately. You may want to use a commercial laundry or uniform service.

**Use Eye Protection.** A chemical face shield covers the entire face protecting both eyes and skin, and will not fog up as easily as goggles. This will protect against particulates when cutting and grinding, and against acid splashes.

**Shower to remove dust from hair and body.** Wash your hands thoroughly with soap and water before eating or smoking. Do not eat, smoke, or store food items in the work area. Lead can be ingested if food, drink or cigarettes are contaminated or if hands are not thoroughly cleaned before eating or smoking.

**Respirators can be useful in certain situations.** However, they have important limitations and drawbacks. A respirator is a device that fits over the mouth and nose to filter air before entering the body. In stained glass work, lead occurs as both fume and dust. Fumes easily penetrate dust filters, and dust quickly clogs a fume filter. The proper choice is a combination fume filter with a dust pre-filter. These are available as masks with replaceable cartridges and as one piece disposable units. In either case, you must be assured of a good fit. The respirator should be approved for the materials being used. If you choose to buy a respirator, go to a local safety supply house, explain what use the respirator is to have, and let them advise you on appropriate models and fit.

While this may seem, on the surface, to offer an ideal form of protection, respirators have many drawbacks that limit their use. They protect only the wearer; they do not prevent contamination of the studio. A comfortable respirator is very rare, and an uncomfortable one is seldom used. Respirators cannot be used by persons with beards or facial hair because air is allowed to enter around the edges. You must also know how to determine when the filters are saturated and no longer protective. Additional cartridges or units must be purchased for other hazards, such as vapours from paint strippers or acids. Fume filters also require considerably more breathing effort and may not be suitable for individuals with lung problems. Indeed, you may need a medical examination to see if you can wear a respirator at all.

All in all, a good ventilation system is a wiser long-term solution. Such systems function without employee intervention and do not require day-to-day attention. They also provide a greater degree of protection to the whole studio.

**Ventilation**

The object of a ventilation system is to reduce or eliminate lead fumes in the breathing zone of the person soldering, and to remove the fumes from the workplace. There are two types of ventilation you may wish to use. The first is dilution ventilation, in which the concentration of contaminants is diluted by mixing in fresh air. The entire workspace is treated as a unit, and no special attempt is made to target a specific source. As air is circulated by such a system, some of the contaminant is removed with the exhaust air and the overall concentration diluted by fresh replacement or "make-up" air.

The second type of ventilation, local exhaust ventilation, usually involves an exhaust hood that encloses the source of fumes or dust as much as possible. Fumes are removed directly at their source. Only a small volume of air is exhausted; therefore, less replacement air is required. For this reason, a local exhaust system is often a wise investment, since the higher installation expenses can be offset by the savings in heating and cooling of the replacement air brought in by dilution ventilation.

(continued/...)

29.
In both cases, you must make provisions for a source of clean replacement air. If exhausted air is not appropriately replaced, negative pressure can develop and interfere with other air handling systems, such as the furnace. Backdrafting a furnace can be very dangerous because combustion products, including carbon monoxide, can be drawn back into the work area (or living area if your studio is in your home). The air inlet(s) for the make-up air should, ideally, be opposite the fan outlet to assure that contaminated air will not be drawn back into the work area, and also, that no dead zones occur in the air circulation pattern.

The hobbyist should have some type of active ventilation system to move fumes out of the breathing zone, and out of the work area. For small jobs, a work table near a window fan may be sufficient. Do not rely on recirculating or central ventilation systems that may move contaminated air into other parts of the building. Air conditioners recirculate air even when set to "exhaust".

**Air Measurements**

A lead exposure prevention program would be incomplete without a survey of air-borne lead levels. This type of survey must be done by a professional consulting engineer and is relatively expensive. Many samples must be taken at several locations throughout the studio during the workday. However, you will learn whether your current ventilation system is adequate, the location of lead exposure sources and what each contributes to employee exposure.

**Other Hazards Associated with Stained Glass Work**

Hazards other than lead poisoning exist in the stained glass industry. You should make sure that you are knowledgeable about all the materials that you work with and apply the high standards of personal hygiene and safe work practices described above. Some of the well-known hazards associated with materials used in the stained glass industry are present below. This list is not comprehensive.

Two of the best sources for safety information are the product label and manufacturer's Material Safety Data Sheet (MSDS). These contain information on flammability, toxicity and health effects of hazardous substances, and some of the warning properties that can be used to determine when exposure is excessive. Federal law (the Hazard Communication Standard) now requires chemical manufacturers, importers and distributors to include hazard warnings on container labels, and provide MSDS's for all hazardous products. You should obtain MSDS's on all products you use. If the label or MSDS is not supplied with the product, write to the manufacturer or request one from your supplier. If you are an employer, you must ensure that incoming containers meet labelling requirements and that MSDS's are made available to employees. Training of employees in the use of MSDS's and safe handling of hazardous chemicals is also required by law.

The fumes from fluxes and patinas are irritating to the lungs. Acid fluxes are especially strong lung irritants. Inhalation of large amounts can cause swelling of lung tissues (pulmonary oedema) and repeated exposure to smaller amounts can result in chronic bronchitis or emphysema. In addition, acid fluxes can damage the skin. We suggest tallow as an ideal substitute.

**Pigments** used in painting glass often contain toxic heavy metals such as cadmium and chromium. Mixing powdered pigments and brushing off dried paints in stick lighting, dry matting or stencilling creates dust that contains these heavy metals. Also, heavy metal fumes may be produced when firing glass paints. For this reason, kiln ventilation is important.

Both methods of etching glass, acids and sandblasting, involve materials that can be hazardous to your health. Acid etching materials can burn the skin, and inhalation of vaporised acid can cause respiratory irritation. Pay close attention to the emergency and first aid procedures described in the MSDS for the acid you are using. Usually the first and most important step after contact with an acid is to wash the affected area with water for at least 15 minutes. Special care should be taken in handling hydrofluoric acid (HF) as skin burns are not immediately recognisable because the burning sensation is delayed for several hours. HF burns become extremely painful and can result in permanent damage or even death. Follow the instructions on the MSDS for the appropriate type of glove material.

Diluting acids generates heat which can be sufficient in itself to cause skin burns. When diluting any acid, always add acid to water. If water is added to acid, the heat produced may cause the water to boil and splatter the acid.

Sandblasting with silica sand gives rise to large amounts of dust that contain free silica and other abrasive particles. Continued exposure to silica dust can result in silicosis, a severe lung disease. Abrasives such as silicon carbide and aluminium oxide will not create free silica; however, the dusts can irritate the lungs. If the glass contains lead or toxic metal colorants, these may also be released from the glass when sandblasted.

(continued/...)
Chemical paint strippers and thinners used in restoration work contain several highly toxic solvents. Methylene chloride is a common paint stripper, and has the advantage of being non-flammable. However, it has several hazards of which you should be aware. When inhaled, the body converts methylene chloride into carbon monoxide. This prevents red blood cells from carrying oxygen and causes the heart to work harder. Smokers may be especially at risk as their blood already has a higher level of carbon monoxide. In addition, moderate amounts of heat convert methylene chloride into phosgene, a deadly gas once used in combat. Many cases are on record of death due to the use of paint strippers in poorly ventilated areas or in the presence of space heaters. In one case, a smoker was exposed to phosgene as he inhaled methylene chloride fumes through his lit cigarette!

Conclusion

Working with hazardous substances need not be a health hazard. As a stained glass artist, you can safely practice your craft if you are aware of the materials with which you work, and use care and common sense in handling those materials. Many of the techniques of stained glass work are centuries old; but exposure to lead and other hazardous materials is not part of the tradition that should be preserved.
18TH ANNUAL INTERNATIONAL GLASS INVITATIONAL -
The Habitat Galleries, Detroit, U.S.A.

Australian glass art is typical of the other craft-material-oriented art forms in respect of an intensifying thrust and presence in the international arena. After a two decade period of gradual studio glass maturation, Australia’s glass artists are today often "jet-setting" to their openings at overseas exhibitions or, in a few cases, lecturing/demonstrating their talents in foreign climes.

My latest series of lost wax kiln cast glass figurative sculptures was recently exhibited at the 18th Annual International Glass Invitational at the Habitat Galleries, Detroit. As the art critic of the Detroit Free Press described these five glass and nickel/copper electroformed works - "Stephen Skillitzi of Australia does cast-relief sculptures that juxtapose sizes and myths to tell parables". For me, the artist, the works explore ambiguities encountered in common behavioural experience; with the electroforming reflecting the theory of aura-derived Kirlian photographic depositions; and the classical allusions referencing a personal Greek heritage.

Let the director, F. Hampson, speak for himself via his 1990 exhibition prologue:

About the International

Since 1972, this Invitational Exhibition has served as a barometer which has measured the changing concepts that utilise glass as an art material. In the first four years objects displayed were worked in hot glass; moulded or blown on the end of a pipe. Most of these creations were actually recreations of past achievements with the material.

1976 marked the beginning of what has been an explosion of innovation in this medium. Experimentations with various processes evolved with rudimentary casting, mixing of materials and cold working techniques. By the end of the 70s there was much greater individualism among the makers and a growing self-confidence, which was apparent in the work itself.

During the early 80s, the vessel format that dominated the preceding decade began receding in influence as sculptors found glass a greater conduit for their ideas. Technological developments, such as highly sophisticated laminates, allowed for a greater variety of expression.

During this ten year period the average size of the work exhibited more than doubled. In 1989, glass worked on the end of a pipe accounted for less than 20% of the International Invitational Exhibit; in contrast to 80% at the beginning of the decade.

By the end of the 80s some of the noted craftsmen of the 70s became forgotten names, while others commanded attention as artists that used glass to create constantly brilliant work.

This year's International Invitational Exhibition begins a new decade of history and speculation. As the forms, images and scale of the works displayed has changed, so too has the exhibition. For 1990 the exhibit will be housed in two spaces with a combined 25,000 square feet of exhibition area. We will also host 25 solo exhibits which will provide a broader, and in-depth, visual and educational experience.

As in the past 17 years, we are committed to making the 18th Annual International Glass Invitational Exhibition a memorable experience for you and a barometer for artists using glass in this coming decade.

The Titles and their Implications

The five titles - Rivalry, Introspection, The Whisper, Say No!, Altered Ego - carry no unequivocal value judgements. However the imputations of these glass and electroformed metal sculptures oscillate between seemingly contradictory parameters that lie within common behavioural experience. Rivalry, (with its two entwined male figures and distanced heads) is a bridge between distrust and comradeship; Introspection, (with its retreating male figure and third-eyed mask submerged in thought) separates introversion from self-knowledge; The Whisper, (with its profiled female head communicating a projected message to the attentive male listener) could be imparting a conspiracy or honest instruction; Say No!, (with its beleaguered, eroded head sprouting cranial triangulation and three mischievous figures) attempts to reconcile self deprivation with the merit of self control; and Altered Ego, (with its Doric column, bronzed profile and masked and concealed head) explores the inner world of duplicity rising to personal transformation.

The didactic intentions (and hence the titles) of these five works in the ongoing 'Earth' series occupy a "balance-beam fulcrum" role which indicates stable ground in our ubiquitous "sea-saw" responses to life's challenges. Our unending quest to avoid societal and behavioural entropy can be analogous to the planet Earth itself which is locked into perpetual stability by the opposing yet perfectly negating forces of inwardly spiralling gravity and outwardly spiralling centrifugation. A similar cosmic metaphor for human aspirations to stability could be extracted from the theoretical physicists' hypothesis that "matter" requires "antimatter" of some quantity to maintain the universe as we know it.

(continued/...)

32.
Electroforming and the Kirlian Photography Theory

Copper and nickel metallic depositions via electroforming are not employed merely as decorative additions to these cast glass sculptures. These electroformed deposition surfaces accurately record the varying electrical current densities (or fields and polarities) occurring during the technical process. The aesthetic judgements determining placement of the metallic coverage could be similar to the "life-field" emanating from human subjects captured in photographic deposition form by Semyon and Valentina Kirlian in 1939 in the USSR.

Thus, the intended synergy between the human-inspired glass components of these 5 sculptures parallels the aura-derived life-fields that may well surround their real-life equivalents. Hence the crafting technique, the psychological intention and the possible psychic reality are in coalescence.

Classical Allusions

Greek or Classical Mediterranean cultural appropriations are in evidence by the bas-relief frieze format, often with Herculean male figures or Pantheon god-like heads or tomb death-masks, and Doric columns, Euclidean geometric or water symbols. These reference points form a link with the artist's personal Greek heritage but also recognise that human frailties and strengths therein depicted are as relevant to the "Bronze Age" as to the "Silica Chip Age". Understandably, the sculptures' main material focus is bronzed copper and fused silica (glass).

Compositional and Technical Factors

Egyptian tomb painting and Medieval devotional art employ a deliberate disregard for realistic perspective and correct scale. That is, painted image size is proportional to perceived importance not proximity to the viewer. That factor, plus the Surrealists' penchant for juxtaposing fragmentary, perhaps dream-derived, images provided the compositional platform. Technically, the spectacle lens glasses fritted via a furnace are remelted into a refractory mould created by the lost wax process. These individual, unique casts average about 35 pounds weight and about 15 inches dimension. Following the extensive kiln firing, the glass cast is acid polished and electroformed with nickel and/or copper.

**Photo:** One of Stephen's works, entitled *The Whisper*, 48 x 48 x 10 cms
Photographed by Grant Hancock, Ullley, S.A.

Stephen Skillitzi,
South Australian State Rep.