

XMAS

# Ausglass

MAGAZINE



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*Haleem*

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Magazine**  
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Edition '95**

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## Front Cover

*Nedscape* by Henry Halem, 1995.

This drawing is one of a series of works on paper and in glass inspired by Sidney Nolan and the whole Kelly legend.

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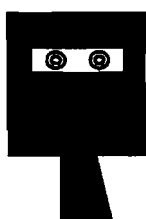
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# EDITORIAL

Graham Stone

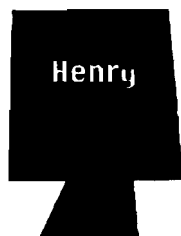
This issue of Ausglass Magazine contains more technical information than recent ones. This does not represent any change of policy, but the practical is as relevant to us as the aesthetic. So if you have a contribution to make in this area, don't hesitate. It is one of the many factors to balance in running a journal of this nature.



Mark Brabham's article on gas burners is a long one, but is useful data for anyone contemplating establishing gas furnaces or kilns.

Let me know if you would like some further backup information on this topic. If you have other technical questions or problems to solve, drop us a line and we will endeavour to find answers.

The excerpt from Henry Halem's Glass Notes has been included for similar reasons and deserves consideration by those involved in making their own glass. Also in this issue a brief review of Glass Notes for those of you not familiar with its contents. This year, Henry received the Ohio Arts Council Governor's Award for services to Kent State University and to glass. Henry's front cover drawing stems from his visit to Australia earlier in the year, when he became enamoured of Sidney Nolan's paintings and the Ned Kelly saga. The experience also alerted him to aspects of the Australian landscape, with its profound influence on our culture.



It's unfortunate that Linda Fraser has had to resign as President of Ausglass. (Her letter to you appears in this issue.) Nevertheless, the National Executive is proceeding with preparations for the Sydney conference and administering the Association. The Executive is confident that progress of the organisation will continue and Linda envisages that she will still be able to help at committee level, albeit in a reduced capacity. Contact with the Executive can still be made via the address on the contents page of this magazine.

Gerie Hermans' piece on European Glass '97 indicates that year will be an exciting time in Holland. She may attend some of the events and has promised to keep us informed.

Thanks for the positive feedback regarding the new look magazine, it has been remarkable. Without the help of Chris Bohan and Tactix Design, it would not have been possible. Ausglass Magazine now has an ISSN (International Standard Serial Number) and can be traced internationally via the National Library of Australia.

If you have any queries regarding articles or images in the magazine, fax me at:  
Cold Glass Access Workshop,  
(613) or (03) 9329 2272.

Happy Christmas everyone, see you in 1996.



# HOT **Glass** Burners and Controls

Mark Brabham

## Atmospheric (Venturi) Burners

These are burners that operate on gas only. The velocity of the gas stream flowing through an orifice entrains atmospheric air for combustion from a venturi throat. The resultant mixture burns at a specially designed tip, of which there is a wide variety, known as a flame retention head. For glory hole, tank and pot furnaces, atmospheric burners generally use LP gas at high pressure as the pressure of reticulated natural gas is usually too low to inspire enough air to generate a hot, short flame with any forward velocity. Atmospheric natural gas burners may be used on lower temperature ovens or furnaces.

There is a definite ratio between the burner port area and the venturi throat. Typically, depending on the furnace back pressure, gas pressure and burner head design, the venturi throat area is approximately 40 to 50 per cent of the total port area. Mismatching will result in a decrease in mixture velocity resulting in inadequate burning or, at worst, *flash back*. This can also be caused by constricting the flow; use a preheat pilot if a lower rate is required.

***In some cases better results have been attained by using several smaller burners.***

This method of firing is the cheapest in terms of equipment costs but is also the least economical. Special attention must be paid to obtaining as neutral (correct mixture of atmospheric air and gas) a flame as possible as either oxidising (more air than gas) or reducing (less air) flames or atmospheres are not only costly in fuel usage but can have detrimental effects on the glass production. Although some secondary air (air entrained around the burner tip) is necessary for complete combustion, try to keep it to a minimum by correctly sized burner ports and flue outlets. It is possible to check the furnace conditions by restricting the flue exit and checking for slight reduction. This will indicate the settings are close to perfect.

It is difficult to achieve sufficient temperature in glory holes and higher temperature furnaces with these burners. The greatest limitation, due to the low mixture pressure produced, is the volume of combustion products that can be introduced to the furnace combustion area. Simply increasing the combustion space size will not achieve results as losses will increase proportionally. Obviously there is a fine balance. In some cases better results have been attained by using several smaller burners rather than a single, large burner. Smaller burners with smaller gas orifices and higher gas pressure would develop higher mixture pressures allowing more combustion products into the space.

Flame safety systems for these burners are usually the thermoelectric type that can be used with or without a separate pilot burner. The pilot burner can serve as a low-fire setting or as a slow heat rise in the initial drying out stages. Mount the pilot and/or safety probe well away from the furnace back heat. It is always better and safer to purchase the burners assembled and pre-tested with the appropriate controls.

Automatic ignition and quick lockout safety systems are readily available as an option for these burners.

## Pre-mix Open and Sealed Burners

These are burners using a machined mixing set and forced air from a blower or compressor. Open burners use a suitable flame retention tip and the sealed type utilise an RI castable tunnel or MP tip mounted into the furnace wall. Natural gas or LP gas may be used at low pressure as the forced air induces the gas and produces a blast-type flame. These burners are more efficient than atmospheric burners as greater control is available over the air and gas mix, a hotter flame is produced and the sealed burner requires no wasteful secondary air. The open burner will only need secondary air for cooling purposes to prolong the tip's life. Some operators have traded tip life for lower noise by sealing the tip in the furnace port with fibre.

*Continued over...*

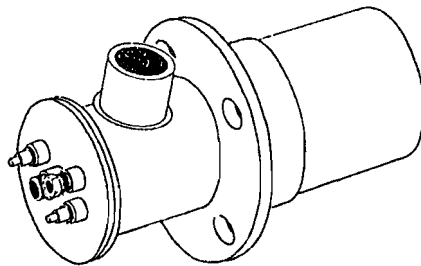
The higher mixture pressures developed by this burner style enables greater combustion volumes into the available furnace combustion space. Some careful preheating of the combustion air is possible, although not recommended, as there is a risk of flashback or damage to the controls through heat conduction.

Pre-mix burners generally have a shorter flame length than comparable nozzle mix burners, the air/gas ratio is easier to control and the burner overall generally easier to set up. Special flow regulators can be fitted to simplify adjustment enabling alteration of air flow only to raise or lower the temperature. This lends itself to simple, accurate temperature control. Again, care must be taken to correctly size the mixer as a definite ratio exists between the size of the mixer chambers and the burner orifice for proper operation. It is possible to construct a simple mixer from pipe pieces but extra care should be taken to ensure it is not possible for the air to flow into the gas line if the burner or feed pipe is blocked. As a minimum, a light flap safety check valve should be fitted to the gas line. If accurate mixing and turn down are required, use the correct mixer.

State gas regulations concerning forced draft (pre-mix and nozzle-mix) burners tend to differ, with some States demanding full sequence electronic flame failure while others may allow glory hole burners without safety if the burner is constantly supervised. All enclosed pot or tank furnaces should have quick lock out safety as these burners can produce large amounts of unignited mixture in a short period of time.

## Nozzle-mix (NM) Burners

These types of burners accomplish the mixing of the air and gas after they leave the burner port. Up to the burner head the air and gas are kept separate, lower gas and air pressures may be used and there is no chance of flash back. They generally have greater turn down than other burner types but the main advantage in glassworking is recuperation. As the preheated combustion air is kept separate there is no chance of over-heating the gas controls.



### **Nozzle mix burner**

*Industrial grade burners used for larger furnaces or where recuperation for up to 30 per cent fuel savings are desired. These are only used with forced air systems.*

Basic cast nozzle-mix burners can handle low preheat temperatures providing some fuel savings but deterioration may result if these burners are exposed to high temperatures for a period of time. Nozzle-mix burners that will provide high preheat temperatures and maximum fuel savings are constructed from stainless steel internals or in some special cases, ceramic materials. Various types of flame shapes and capacities can be designed to suit individual requirements. Air and gas controls and safety equipment are similar to pre-mix burners.

## Special Burner Types

In recent years many specialised burners used in large industrial applications have become available for glass working.

### **Multiport Refractory Burners**

Although used in industry as radiant type burners for many years, this multiport variation for glory holes was developed by the Swedish company Essemce in conjunction with Orrefors Glassworks with several advantages in mind. The burner had to have a low noise level, be fuel efficient and reliable. ACS has developed a similar burner. So far, however, there are only four working installations (Essemce and ACS) and there has not been widespread acceptance due to the heat distribution and cost. These burners are virtually unknown in the States where the more common MP Ceramic Burner tips tend to be used.

Usually sited in the glory hole roof, the burner has an intense short flame that relies mainly on radiant heat when operating temperatures are reached. This is a pre-mix type and must therefore have an independent air supply to operate correctly.

## Multiport (MP) Ceramic Burner Tips

The flame retention design of these burners allows for faster light-ups and provides ultra quiet operation without the high pitch whine or loud roaring rumble of some burner heads. They are generally used with an air blower with low gas pressures or with venturi mixers on high gas pressures. Using a separate air supply would give more flexibility over the heat range. Several options are available to enable the tip to be used with a permanent pilot, fully automatic lightup and full safety to satisfy local gas regulations. MP Ceramic Burner tips can be used on forced air or atmospheric controls.

## Nozzle-Mix Flat Flame Burners

This type of burner has a specially designed burner tip and refractory quarl to produce a spinning flat flame that spreads at 90 degrees to the mixture outlet. They have been used in industry where little forward flame travel is desirable and efficient radiant heat is best. They are situated in the roof section, in some cases the whole roof, and the flame radiance and refractory re-radiation enables a smaller combustion volume to be used and rapid melting possible. This is the theory, but generally the high expense is a draw back. As there has only been one installation to date, there is insufficient data to enable a definitive opinion.

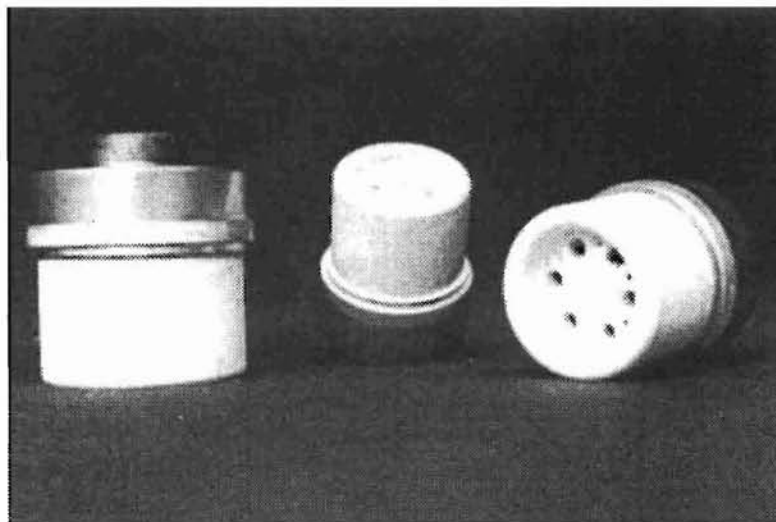
## Crack-Off and Flame Polishing Burners

Several types of standard ACS burner tips and controls have been used for this application with varying degrees of success. The conventional gas/oxy hand torch is simple and effective method but is quite labour intensive if volume production is anticipated. Several units have been designed by glassworkers to speed the process. A three-stage set up seems to be most effective with a diamond tip for scoring and burner jets for crack-off and edge polishing.

Gas and compressed air is quite satisfactory provided the appropriate tip is used with a row of fine jets. Separate burner tips on a common manifold can be used for crack-off and larger brush-type flames for polishing. Positioning of the fine, crack-off tips is critical for an even cut and some experimentation may be necessary before maximum output is achieved.

### **Multiport Ceramic Burner Tips**

*These burner tips have the advantage of long life and low noise. (CN burners are a further package configuration that includes the train and blower. They are used to fire larger lehrs evenly, using a down draft flue arrangement.)*



One idea has all three stages attached to a common adjustable slide for accurate positioning and rotating tables for the flaming section.

## Recuperation

Recuperation is the process of preheating the combustion air by utilising the waste flue products. Although recuperation has been used in industry in various forms for many years, its use in small glass tank or pot furnaces has only recently become viable due to high fuel costs. Fuel savings of up to 40 per cent can be achieved through properly designed and implemented systems. A simple and effective recuperator uses a stainless steel tube on the flue outlet

with a larger tube sited around it. The area between the inner and outer tubes must be sufficient to allow for free circulation of the cold combustion air but restricted enough to enable the heat conducted through the inner tube to heat the air to the desired preheat temperature by the time the air exits the recuperator and flows to the burner head.

The passage of the hot combustion products flowing through the inner tube must similarly be restricted to allow sufficient heat penetration. Baffles may be added to the inner tube or the single inner tube exchanged for multiple tubes to increase the available surface area. Experience has shown that over a period of time a coating of products produced by the glass making process tend to accumulate on the inner tube surface. Provision must be made for periodic cleaning of the inside tube and it is a good idea to have a small reservoir underneath the flue outlet to gather these products rather than allow them to block the furnace outlet. Air piping from the recuperator to the burner head should have a large enough cross sectional area to cope with the expansion of the cold air as it is heated. This can be up to 40 per cent at typical temperatures.

*Continued over...*

## Annealing Ovens

There are many functional annealing ovens in use including some with well-designed features such as adjustable combustion spaces for varied throughputs and automatic doors for hands free loading. An annealing oven must have several capabilities to operate efficiently. It must have even heat distribution, the ability to maintain a set temperature and fire down over a period of time at an accurate rate. Gas annealing ovens work best using a down draft design (the flue outlet near the base of the oven) and burners that have a short, clean flame with good turndown characteristics (high flame to low flame). The burners usually fire through the base, on either side of the stacking area, however higher gas pressure burners can fire horizontally along a base channel. Better ovens have been constructed using high pressure burners firing around the top of the space, creating a circular swirl, for even temperature gradients.

Insulation materials are a matter for personal preference with many people maintaining that RI brick ovens can virtually cool down (with all openings closed) at the required rate without any added heat input. Against this it must be remembered that it takes extra energy to heat a brick oven than a light-weight fibre type.

Low gas pressure burners suitable for these ovens are atmospheric and can be pipe-type burners with either a row of drilled holes, slots or newer designs that incorporate a mixer with many fine slots in the burner casing (tube type). The newer types are generally cheaper, more efficient and have a better turndown. Safety controls are usually thermoelectric.

As temperature control is such an important consideration, programmable units are available to accurately maintain and control the temperature gradient. Accurate electronic digital units are available up to 12 stages and control the burners using solenoid valves according to demand. Electric kilns are easily controlled with programmers, the contactor coil or relay substituted for the solenoid valve.

## Slumping and Fusing Ovens

These furnaces fire to a higher temperature than annealers but can employ similar burners. Downdraft designs are effective for general work but it is also possible to fire high pressure smaller burners across large, flat glass sheets. This method relies not only on convection heat input but also, to a degree, on radiation from the flame.

It is important if using this method that sufficient draw is available from the flueing system particularly in the early stages of a firing. It may be

necessary to preheat the flue, but in any case, pressure drops across the flue pipe and exit port must be minimised. Sealed burner tips are better. Larger, more industrial kilns should use higher pressure

forced draft burners firing across the load. These use an air fan/blower with the appropriate mixing mechanism to deliver sufficient velocity for even heat distribution.

Automatic temperature programmers are important and can be effectively connected with any gas burner system. Multiple tips commonly utilise a ladder type pilot arrangement on either side, modulating the main burners to relight from the pilot for accurate temperature control. Flame safety is simply fitted to the ladder pilot with manual or automatic spark ignition an option.

## Safety Controls

Safety controls for gas appliances vary from over temperature controls to sophisticated automatic start-up and flame failure controllers. Flame safety controls are recommended for all types of burners where there is the risk of a build-up of unignited gas should the flame be extinguished.

## Thermoelectric Safety

This is the simplest form of flame safety and is permitted on atmospheric burners with a capacity under 500 MJ per hour. These operate on an electromagnetic principle and require no power. A small current is generated when the tip of a thermocouple probe is heated by the flame. This current excites an electro-magnet located in a safety valve and attracts a plate allowing gas to flow. Shut off time should the probe cool can be up to 20 seconds.

## Electronic Quick-Lockout

These units require power and are usually fitted to forced-draft burners or safer atmospheric burners. They shut down in approximately one second by closing a solenoid valve fitted into the gas line.

Two main types are available; the flame rectification type and the ultra-violet type. Flame rectification relies on the ability of ionised gases in the flame to rectify on AC current from the control unit. A flame sensing rod made from special high temperature material is used and must be situated near the edge of the main flame. A micro-amp meter may be used in the line to site the rod where the current produced is strongest to minimise nuisance shutdowns. The wire must be sturdy enough to resist drooping or deterioration at high temperatures and the porcelain insulators must be kept clean or replaced if cracks develop. For reliable operation the earthing point on the burner must have at least four times the area of the rod in the flame.

UV monitors are sensitive to the ultra-violet radiation produced by flames. They also sense the arc of a spark so must be sited away from any automatic spark igniters fitted to the burner. Their main advantage in high temperature situations compared to flame rods is that they can be mounted away from the heat zone. They are protected and see through a protective cover such as ultra-violet transmitting fused quartz glass. In some situations cooling air should be blown across the UV cell face to remove dust and protect from excessive back-heat.

Flame rectification and UV units are required on all forced-draft burners and gas will not be connected unless they are fitted. The regulations covering natural gas in Australia are, at present, more stringent and more strictly adhered to than LP gas as natural gas is usually supplied by one company only. Laws are being structured at the moment to require users of LP gas, in situations where an explosion or unsafe situation may occur, to follow the recommended natural gas safety regulations.

In some instances the authorities may also insist on over temperature protection or explosion relief.

Explosion relief is simply a panel fitted to the furnace of the correct dimensions of a material with less resistance to an explosion than the furnace itself. Non-return check valves may also be required to be fitted into the gas main to prevent air flowing back to the meter. A regulator is always required on either natural gas or LP gas installations to monitor the gas flow and provide the correct pressure outlet. All valves and fittings must be approved and pipe fittings particularly must be suitable for gas. Safety valves should be listed in the gas association bulletin.

***Explosion relief is simply a panel fitted to the furnace of the correct dimensions of a material with less resistance to an explosion than the furnace itself.***

***Mark Brabham is a principal of Australian Combustion Services and a long term supporter of the studio glass movement.***



THE

# Connection

## Ivana Jirisek

### Background

There is a large contingent of Australian glass artists working today whose origins can be directly or indirectly linked to events in Gippsland in the mid 1970s. The advent of the small glass furnace, devised in America in the 1960s, enabled artists to work independently of a factory system and explore the potential of blown glass as a material of expression.

In 1974, American glass artist Richard Marquis was invited to Australia with assistance from the Australia Council to help stimulate a blown glass presence in this country. On his tour he visited the Gippsland College of Advanced Education (GCAE) where he inspired student Nick Mount. Nick subsequently travelled to the United States and Europe, returning to Gippsland in 1977 to establish *One Off*. It was the first privately owned, full-time hot glass studio in Victoria. In 1979 it was relocated to nearby Budgerie, renamed Budgerie Glass and functioned until 1984 before moving to Adelaide.

During their five year span in Gippsland, Nick Mount's glass studios provided a rare opportunity for artists, students and apprentices to develop skills that lead to the creation of their own production and exhibition work.

### The Artists

The Australian artists whose orientation with glass was significantly affected by contact with GCAE and/or Budgerie Glass in Gippsland are:

Artist	Current Base
Michael D'Aquino	Melbourne, Vic
Anne Hand	Melbourne, Vic
Tony Hanning	Yinnar South, Vic
Brian Hirst	Sydney, NSW
Michael Hook	Melbourne, Vic
Warren Langley	Sydney, NSW
Nick Mount	Adelaide, SA
Keith Rowe	Blackheath, NSW
Robert Wynne	Sydney, NSW

These artists are pioneers of Australian hot glass, with 15 to 20 years experience. Some have established a significant presence on the international exhibition and teaching scene. All remain active locally.

*Latrobe Regional Gallery in Morwell, Victoria has invited Ivana Jirisek to curate an exhibition on the development of studio glass in the Gippsland area. With funding yet to be secured, it is intended to tour nationally and reveal an important part of the Australian studio glass movement.*



Warren Langley, *Samarkand Warrior*, 1993

The exhibition will identify the original Gippsland connection that influenced the individual paths of these highly regarded artists and make visible their social and aesthetic links. It will highlight the following:

- Nine pioneer Australian glass artists who were at the Gippsland College of Advanced Education or worked with Nick Mount between 1974 and 1984.
- Trace the aesthetic line of each of the nine artists and display examples of early and current work.
- Consider the contribution made by the Gippsland experience to each artist's aesthetic direction.
- Identify their individual and collective achievements.
- Demonstrate the importance of production work in studio glass practice and its relationship to exhibition work (craft feeds art).
- Present the significance of Budgerie Glass as an example of Australian professional craft practice.
- Demonstrate the commitment, co-operation and vitality of the Australian glass community.
- The American contribution to the development of Australian studio glass.

It is an interesting and important story to tell. You will be kept informed of its progress.

*Ivana Jirisek, best known for her curatorial work with Glass Artists Gallery, Earth Exchange Mining Museum and Wagga Wagga City Art Gallery, has been a key player in many aspects of Australian studio glass. She is currently a member of the national Executive of Ausglass.*

Henry Halem

## Glass Testing

This text was distilled from notes I took while with Nick Labino at his studio outside of Toledo, Ohio, on 10 April, 1976, and from a transcribed talk Nick gave to the Glass Art Society in Toledo in 1976, but was never printed. Nick was always willing to share technical information if he felt you had been *doing your homework*. If he felt you were only fooling around he wouldn't give you the time of day. I fell into both categories.

The following tests are for soda-lime glasses and are done to evaluate the resistance of glass containers to chemical attack. Nick recommended they should first be done to a known durable glass such as window glass or bottle glass in order to establish a known standard of durability. If your test sample does not pass the chemical durability test as it compares to the window or bottle glass control, it does not necessarily mean that the sample you are testing is not durable, although that might be the case. It only means that your glass is not durable in relation to the standard you are using. It is important to establish a parameter of durability. According to Nick, window glass was not all that durable anyway but it was a standard. Since windows were always being cleaned, usually with an ammonia based cleaner, any signs of surface de-vitrification were washed away by "the woman of the house". I guess Nick didn't do windows.

*Nick was always willing to share technical information if he felt you had been 'doing your homework'. If he felt you were only fooling around he wouldn't give you the time of day. I fell into both categories.*

If you are using factory cullet and not altering it in any way, then it's probably not necessary to test for durability. If you are batching, it is important to establish a standard of durability. It's not fun if that really sweet glass you've been blowing all week suddenly dissolves when you pour beer into it.

### AC Conductivity Bridge Test

1. In a stainless steel mortar pulverise about 10 grams of test glass.
2. Sift the pulverised sample through a 200 mesh screen onto a 270 mesh screen that has a catcher on the bottom. (+200 -270).
3. Keep what's on the 270 mesh screen. Wash sample three times with acetone to dissolve any super fines.  
Note: According to Fritz, washing with acetone was eventually discarded by Nick in 1986.
4. Throw out what is on the catcher.
5. Keep five grams of sample.
6. Put 300 ml of double distilled water in a 600 ml old pyrex beaker. Using a new pyrex beaker can skew the results as some of the alkali can leach from the new glass.
7. Put the five grams of your sample in the distilled water and boil for one hour. Make sure you have a watch glass on the beaker before boiling.
8. After water has cooled, measure the resistance of the solution using an AC Conductivity Bridge.\* (AC Conductivity Bridge reads in ohms.) Boost the bridge from 60 cycles to 10000 cycles. This overcomes polarisation of the electrodes. Note the resistance of the glass being tested and compare it to the resistance of a known durable glass such as window or bottle glass. If the resistance is greater than the known glass you may assume you glass is durable. Window glass has a resistance of about 3,000 ohms.

## Titration Method

If you do not have a conductivity cell you may use a simple titration method to establish durability. This method is cheaper and the equipment is available from any chemistry supply house, college or university chemistry department. If you work at a university check out the chemistry department to see if it has a lamp worker. If so, make friends, lamp workers know more than just making swans.

1. In a stainless steel mortar or stainless steel ball mill\* grind up 20 grams or more of your sample to go through a 40 mesh screen and not a 50 mesh screen. Take the sample on the 50 mesh screen and pass a good strong magnet through it to remove any iron scale contamination. Wash the sample with acetone three times to dissolve the glass dust. The sample is now ready for use. Use ten grams of the cleaned glass sample.
2. Take slightly more than 100cc of distilled water, referred to as filtrate, and boil half of it to rid it of the CO<sub>2</sub>. Mix the water back together.
3. Put the 10 gram sample of glass in 100cc of filtrate and boil the solution for four hours. Make sure you boil the solution in a beaker covered with a watch glass.
4. After boiling, cool down the filtrate to room temperature and add five drops of methyl red indicator which will make the solution slightly yellow.
5. With a fiftieth normal sulfuric acid solution in a titration column add, drop by drop, the acid solution to the filtrate glass solution. Keep the solution stirred while adding the acid. When the solution turns pink the solution is neutralised. Let the solution stand for an hour or two to see if it remains pink. If the solution turns yellowish again, it means the alkali is still going into solution, and more acid needs to be added to completely neutralise the solution.

6. Count the millilitres needed to neutralise the solution and compare the amount against your window or bottle glass control. You should only need about two to three millilitres to neutralise the solution. If you have used more acid to neutralise the solution than it took to neutralise the window or bottle glass then your sample is not durable. If you used the same or less you're home free.

*Note:* Nick Labino used window glass as his standard. You can use any glass that you think is durable as a standard. The reason window or bottle glass is used is that it is a known durable glass. His durability test varies a great deal from the ASTM approved test but is fine for the studio glass artist.

The ASTM test is quite rigorous and should be used by anyone making containers that hold fluids. For complete information about soda-lime durability testing write or call:  
American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA. 19103.  
Ph. (215) 299 5400.  
Ask for abstract C225-90.  
The cost of this abstract is US\$12.00.

*\*Stainless steel mills are available from Norton Co., 120 Front Street, Worcester, MA 01608 USA.*

*\*AC Conductivity Bridge is available from any good electronic testing equipment company. It is expensive.*

*This article is an edited excerpt from Henry Halem's Glass Notes. (See also Graham Stone's review in this issue.) Henry Halem has worked with glass since 1968 and is Director of Glass Studies at Kent State University. He was the first President of GAS.*

# Review

Gerie Hermans'

## 'Worshipping the Stone'

Craft Victoria 24th August - 9th September

Rob Knottenbelt

*Gerie Hermans has really begun to work. Power to her arm, and success in the long journey ahead.*

I missed the opening, - the usual stuff with a small three and a bit year old, they nearly always get some kind of bug when you want to go somewhere. But then again I didn't really mind as you never get to see anything amongst all the chatter, the thrusting arms and waving bodies. Apparently this was a very cheerful affair indeed with lots of enthusiastic folks packing the place out. So, I went later, alone, to quietly have a good look at Gerie Hermans' second one person show; the first being in 1991 - her 'Emigration' installations at the Blackwood Street Gallery, North Melbourne. This exhibition of her recent work was held at Craft Victoria's Gallery space at 114 Gertrude Street, Fitzroy.

For the non Melburnians, to give you a quick geographical fix in case you're ever passing through and want to check it out - it's in the inner suburbs, close to the CBD, just off the top end of a very trendy part of town passing its use by date, Brunswick Street, Fitzroy. There aren't too many other bits in Oz quite like this stretch of town.

A great place for good food, coffee, flowers, books new and used, the odd pub, the inevitable yart and graft, and a generally amiable place for inner urban animals. Very schleppable. King Street in Newtown is about as close as you might get to it in any other burg.

The Craft Council's space is small and intimate, without a great deal of natural light.

Its semi cave like atmosphere was somehow a very appropriate setting for this almost crystalline body of work. Gerie Hermans has now been around the Oz glass scene for a while with time spent at the Jam Factory, South Australia as a trainee, working as an assistant for Melbourne hot glass artists Pauline Delaney and Richard Morrell, working in the Cold Glass Workshop with Graham Stone and recently completing her MA in glass at Monash University.

Of the various pieces shown at 114 Gertrude Street, numbers one to ten constitute her new works. Essentially these were a simple, unfussy, contrapuntal discussion between two materials: pieces of textured clear cast glass and stone.

The individual geometric shape and texture of each stone predetermining to a very large degree the resultant shapes and use of the accompanying cast glass. As a group of pieces they have their genesis in explorations begun during Hermans' thesis year and from my perspective are still very much beginning works, clearly representing her very first step in that long journey to finding and developing a distinctive personal vocabulary.

The apposition of two materials, stone and one other, is a point of departure already explored by many in other mediums, so to do the same in glass is no better or worse. What does matter is that there is enough core strength within this exhibition to see

that Gerie has definitely found a valid beginning.

The larger works - *The Stranger*, *The Watcher* and *The Critic* - are beginning to explore real relationships of volume, mass, and textures. They already imply the capacity to develop a personal language. Attention to clarity of ideas and detail comes only with time and experience. In summary, Gerie Hermans has really begun to work. Power to her arm, and success in the long journey ahead.

### Coda

One comment about a pernicious perennial disease is worth making at the end of this short review. (This incidentally is not directed at Gerie.) Appropriateness of accompanying text and titles to any exhibition is always a veritable minefield, requiring thought, consideration, always needing to be negotiated carefully by artists and curators alike.

Text for some has almost acquired divine status; tablets delivered on high to educate and elucidate the mindless unwashed. Regrettably, tablets so dispensed are frequently only notable for their gibberish.

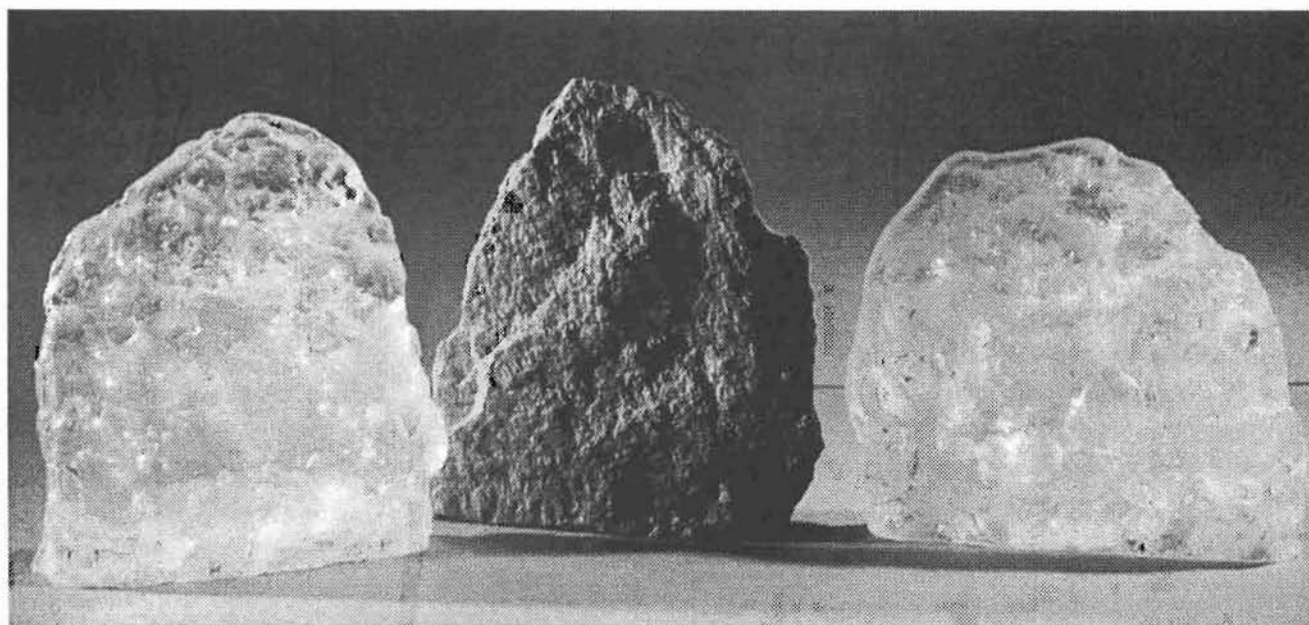
Peter Dormer's recent amusing and pertinent dissection in Melbourne at the National Conference of the yawning pitfalls for unwary players is definitely worth taking on board. Titles are keys, or leading indicators to give the viewer a doorway to begin to travel towards, into, and through a work. It is useful when it says something concisely, if not, why bother?

There are few glittering prizes handed out for verbal obscurity and in object making. I am firmly of the opinion not everything automatically needs a label.

Genuinely effective works often tell their own story, becoming different things to different minds without needing any extra linguistic baggage. *Naming and Explaining* can become an

unattractive characteristic of those insisting everything must have a label to help legitimate its existence. In the end, like so many things, it becomes a matter of personal choice. But, I suggest, it should be approached with rather more caution than is currently the fashion.

***Robert Knottenbelt is one of the pioneers of Australian studio glass. He operates a studio at Wesburn, outside Melbourne.***



# Shabbat

## David Wright's Window

The Temple Beth Israel

David Wright has completed the first of a number of windows commissioned for the Temple Beth Israel synagogue in Melbourne. It is predominantly deep blue, white and gold and is in honour of Caren Lee Topol, 1971-1994.

The Shabbat window, representing the seventh day of creation, the day of rest and sanctification, is centred around the family, symbolised by the meal. Hands shield the light as the blessing is said. Salt falls like tears upon the bread, for within the love that binds us are the seeds of loss and grief. Flowing from the top and bottom of the work, and symbolised by the Shabbat fish, is the blessing, "may your children multiply like stars in the sky and the sand in the sea."

For Jews, the exodus from Egypt marks the founding of the Jewish nation, and is remembered by the parting of the seas. God's blessing draws forth the bread (wheat) from the earth and God's covenant, the rainbow, arches over all.



"A series of journeys is revealed... the journey of all humankind in the Creation story, the journey of the creation of the nation of Israel and the journey of the individual, wherein the nation of Israel is seen as a single immortal individual." (David Wright).

**David Wright is a thirty year veteran of the studio glass scene. His many commissions include Parliament House, Canberra; St James Church, Sydney and Cabrini Hospital Chapel, Melbourne.**



to  
of  
to

# Members



Linda Fraser

Linda R. Fraser  
2 Day Street  
Leichhardt NSW 2040  
Australia

13 October, 1995

To: The Executive Board & Membership of AUSGLASS

I, Linda R. Fraser, regretfully tender my resignation from the position of President on the national Ausglass Executive Board.

Due to current professional and personal obligations I am sorry that I no longer have the luxury of time to volunteer to such a demanding position. I will be available to assist in Conference sub-committees.

I truly believe that Ausglass is on the threshold to greater development and expansion if the parties involved acknowledge, accept and carry out certain changes. This would require checking personality conflicts, egos, and personal agendas at the door. For example, the present constitution does not reflect the future needs of Ausglass. There is also conflict and animosity within and between the various state bodies that is undermining the co-operative spirit needed for an effective national body.

There are a lot of talented and technically skilled individuals involved in Ausglass; these strengths should be pooled, on a national level, to gain the international quality reputation everyone has worked so hard to achieve to date.

These statements reflect my personal opinions and I do wish Ausglass and its members much success in their future endeavours.

Sincerely,

Linda R. Fraser



# Correspondence

## Letters... Faxes...

Dear Editor,

As a recent graduate of Canberra School of Art I felt Noris Ioannou's article, 'The Cutting Edge: 1994 Glass Triennial' of last year, could not pass without comment. I refer in particular to the suggestion that recent graduates of Canberra and "other noteworthy tertiary glass courses about the country" believe "Wagga is a regional gallery and therefore not important."

This is not my opinion, nor that of other recent graduates to whom I have spoken. Each artist had individual reasons for not participating in the Wagga Wagga Glass Triennial and I believe the motivations attributed to my contemporaries and myself are unjustified.

Robyn Campbell  
Canberra

Dear Editor,

I would like to thank all those whose efforts went into the Heart of Glass conference in Adelaide. It was the first I have been to and a great experience.

I was, however, surprised at the high proportion of smokers among glassworkers (who are otherwise very aware of occupational toxicology) and, though it is a personal choice, due to the circumstance of venue I found the conference difficult to deal with as I have an allergy to smoke. Perhaps the law is different in S.A. but it was a shock to see people smoking in the Jam Factory studios, both in the Gallery and on the floor. Other conference attendees were also concerned.

I won't dwell on such a boring topic but ask organisers for the next conference to consider a smoke free option for all official (paid) conference events including catering and demonstration areas, or to at least specify which events are smoke free.

I would be reluctant to attend otherwise.

Yours sincerely,  
Alan Prowd  
Northbridge, NSW

### Errata

*In the last Ausglass Magazine issue, Spring '95, we misspelt Robert Knottenbelt's name. (His drawing was featured on the cover.) This time, we got it right. Apologies for the typo.*

*The address of Finn's Stained Glass was also incorrect. The supplier's current address is:  
129 Boundary Road, Peakhurst  
New South Wales, Australia 2210.  
Ph. (02) 533 4333 Fax (02) 533 3066.*

# Postcards

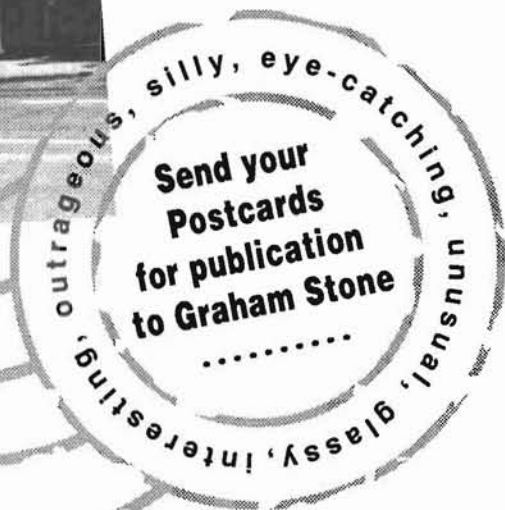
From...



▲  
*Maureen Williams.  
Scene from the 'Blowout in  
Blackheath' at Keith Rowe's  
Blue Mountains studio.*



▲  
*Chuck Simpson.  
The Eumundi Brewery Complex,  
Site of the Queensland Glass  
Artists Association's glass access  
workshop on the Sunshine Coast.*



# Glass News

## Craft Australia

Craft Australia is expanding its membership constituency to include not-for-profit organisations with compatible aims. Subscriptions for this category of membership are \$200 per year. Among other things, they entitle members to nominate and vote for directors. If you wish to receive more information or an application form, contact Craft Australia on (02) 211 1445.

Craft Australia will be working with the department of Foreign Affairs and Trade to prepare an exhibition to travel to India in late 1996. It is tipped to focus on Australian glass, ceramics and textiles.

## Australia Council

Next year, three of the Council's five Boards will be replaced by Funds of the same name: the Literature Fund, the Visual Arts/Crafts Fund and the Performing Arts Fund. Each Fund will comprise seven members including a Chair who is a member of the Council. Accompanying the changes will be a simplified grant assessment structure. The three new funding categories for direct benefit to artists are:

- Fellowships
- Partnerships
- Commissions

Congratulations to glass artist Gerhard Emmerichs who has been awarded one of the 1995 Fellowships.

In what is now called the partnerships category, Sally Musset will spend 12 months in the Canberra studio of Helen Aitken-Kuhnen. Blanche Tilden, meanwhile, will be training with Susan Cohn.

By now, many of you would be aware that the idea of a National Craft Centre has been dropped by the Australia Council. Planning for the Centre had been going on for the last couple of years and at one stage looked certain to go ahead in Melbourne. A battle between Melbourne and Sydney ensued and the battle itself may well have contributed to the dropping of the *hot potato*, though the cited reason was "cost-prohibitive" long term funding.

While interstate rivalries can generate productive competition, there are times when they're downright destructive. It's hard not to speculate whether this is one of those occasions. A petition and open letter was circulated via Craft Australia late in October in an attempt to re-interest the Australia Council in a National Craft Centre. It was signed by many noted artists, including Maureen Cahill, but it's doubtful whether a strong response could have been realised, given that so little notification time was able to be scheduled.

## Stained Glass Restoration Workshop

Conducted by Bronwyn Hughes. The practical requirements of stained glass restoration under the guiding principles of the Burra Charter. For details, contact Carolyn Byrne (03) 9349 4554.

## Restoration 95

San Francisco, December 10-12, 1995.  
Baltimore, March 17-19, 1996.  
Ph. 617 933 9699, Fax 617 933 8744.

## Glass Paints

Glass paints supplier CDS is now Ceramaglass Decor. Contact Lynn or Yvonne at their new address: 61 Waterview Court Croydon Hills Vic 3136 Ph. (03) 9725 3037, Fax (03) 9722 9855.

## Billy Cans

Earlier this year, the Australian Tourist Commission invited craftspeople on the Craft Australia slide index to decorate an Australian billy can, a competition that formed part of an international promotion. Glass finalists were Jan Blum and Gaylene Allan-Richardson. The winner was Cheryl Bridgart.

## Mornington Peninsula Craft Event

Winner of this year's Glass section was Amanda Robbins, a post-graduate student at Monash University. Also highly commended was the work of Suzannah Quirk.

## Catalogues

Catalogues from the Glass in Australia 1995 exhibition are available from the Meat Market Craft Centre office, 42 Courtney Street, North Melbourne 3051. Cost is \$5 plus \$2 postage and handling. Outside Australia is A\$5 plus A\$5 postage and handling.

## Deb on a Roll

Back in 1993, Deborah Cocks won the ACI Glass Award organised by Ausglass in Melbourne. Since then she has appeared on the cover of Ausglass Magazine, among other accolades, and participated in the Ausglass in Adelaide 1995 show at BGM Art Gallery. This year alone she's conducted a workshop at the Adelaide conference, mounted a solo show at Distelfink, and contributed to the Vichealth National Craft Award at the National Gallery of Victoria. Now she has received the prestigious RFC Prize in Sydney. Congratulations Deb.

A review of the RFC Prize at Glass Artists Gallery will appear in a forthcoming edition of Ausglass Magazine. Meanwhile, the show has moved to the Craft Victoria gallery in Melbourne. (See Exhibitions.)

## Dorothy L. Maddy Scholarship

The Stained Glass Association of America has announced that applications are available for the annual Dorothy L. Maddy Scholarship. Up to US\$1500 in scholarships will be given for the year 1996/1997. Applicants need to be currently enrolled in an academic program and have previous stained glass experience.

Application forms are available from The Stained Glass Association of America, PO Box 22642, Kansas City, MO 64113, USA or the Cold Glass Access Workshop. Deadline for applications is 15 May, 1996.

## Stop Press

Noted Melbourne glassblower, Anne Hand, took her own life on November 13, 1995. At present, a state of shock best describes the Australian glass community, who turned up en masse for Annie's funeral.

As this issue went to press, the impact had not fully sunk in, but our sympathy to all those whose lives she touched, especially her family and close friend Pauline Delaney. The Hot Glass Access Workshop at the Meat Market, and glass scene generally, will not be the same again, but Anne Hand will not be forgotten.

On a happier note, Gerry Riley and Margot have a new baby daughter, as do Alex Wyatt and Sue. Congratulations folks. In the case of Gerry and Margot, their baby is called Annie and was born on 13 November.

# Exhibitions

**Bonny Prince Charlie.** An historical campaign commemorated in glass. Until 31 December at the National Gallery of Victoria. A talk on the show will be given by Geoffrey Edwards, the Curator, at 11am on 21 November. A further lecture on Jacobite glass, by Robert Wilson, will take place at 1pm on 6 December.

**Mixed Media Exhibition.** Includes glass by Emily Sidell, Emma Camden and Kelly McGlynn. Dowse Art Gallery (Lower Hutt) New Zealand until 15 December.

**Klaus Moje Retrospective.** Canberra School of Art Gallery until 24 November. Curated by Geoffrey Edwards. (Review in previous Ausglass Magazine issue, Spring '95.)

**Three Fires.** Annual Student Exhibition of Monash University clay, glass and metal from both Frankston and Caulfield campuses. Includes a small selection of works by Honours students. Meat Market Craft Centre until 3 December.

**The Toppo Collection.** Archeological ceramics and glass. Museo Archeologico at Castello Salita, Udine, Italy. Until 31 December.

**Mosaic Exhibition.** The Artists Garden, Fitzroy, Melbourne until 26 November.

**Louise Bourgeois Sculpture.** Not a glass show as such but well worth a look. National Gallery of Victoria until 27 November, then Museum of Contemporary Art Sydney, 21 December to 14 April.

**The RFC Prize.** This Glass Artists Gallery exhibition has travelled to the Craft Victoria Gallery, 114 Gertrude St Fitzroy in Melbourne. 6-21 December.

**Handle like Eggs.** Graduating exhibition from Canberra School of Art's Glass Workshop. Beaver Galleries in Canberra, 81 Denison St Deakin ACT. 3-17 December.

**Glass: One-of-a-Kind/One-of-Many.** Society of Arts and Crafts, Boston, USA until 7 January.

**Undergraduate Exhibition.** Elbourne, Fogel, Lewry, Maberley, Odell. 24 November - 1 December.

**Postgraduate Exhibition.** Murray, Tow. 8-14 December. Both shows at Sydney College of the Arts, 24 Mansfield St Balmain NSW.

**Bertil Vallien.** The Ken Done Gallery, 1 Hickson Rd, The Rocks, Sydney. 16-28 December, 1996.

**SOFA Miami Exposition.** Includes glasswork by Chris Pantano, Kathy Elliott and Ben Edols.

Coconut Grove Convention Centre, Miami Florida 14-17 March, 1996.

**Christmas Show.** Includes Maureen Williams, Linda Fraser, Geoffrey Mason. Glass Artists Gallery, Sydney 21 November - 24 December.

# European

## Glass '97

Gerie Hermans

**Gerie Hermans is a Dutch born glass artist whose recent solo show at Craft Victoria is reviewed by Rob Knottenbelt in this edition of Ausglass Magazine.**

Leerdam, the Netherlands glass city, is organising an event in 1997 called European Glass '97. The city council of Leerdam has set aside 100,000 guilders for this ambitious project. The National Glass Museum, The Glass Foundation and the Association of Friends of Contemporary Glass will co-operate.

European Glass '97 will lean strongly on Glass '86 which was an initiative of the Foundation Fort Asperen and the glass studio De Oude Horn. This was the occasion during which Leerdam became conscious of the value and possibilities of its glass city image. Artists such as Dale Chihuly, Mieke Groot, Richard Meitner, Bert van Loo and Willem Heesen showed the possibilities of glass art. Technical input was delivered by the glass makers of De Oude Horn and by the foreign masters: William Morris, Petr Novotny and Lino Tagliapietra. Glass '86 developed into an unique exhibition in Fort Asperen.

With European Glass '97, Leerdam expects to attract a minimum of 50,000 visitors to the glass city. There are plans for a symposium for European glass artists, designers and architects and their work will again be exhibited in Fort Asperen. The Co-operation of Glass Factories are reacting positively to the plans and finding ways to bring in their ovens and expertise.

After initially playing a waiting game, De Oude Horn has signalled a strong criticism. Willem Heesen objects to the event being too *touristy* in character. According to him, the emphasis should be more on the possibilities of glass for the artist.

Meanwhile, a program is being developed and a committee formed. The Committee includes the Mayor of Leerdam, the Chairpersons of the Glass Foundation and the Foundation Fort Asperen and the Conservator of the National Glass Museum.

# BOOK Review

Graham Stone

## *Glass Notes (Second Edition) by Henry Halem*

For years, we have all benefited from Henry Halem's copious note taking. Henry's handouts, originally intended for his students and collectively known as *Glass Notes*, have circulated around the globe (yes, Henry, even as far as Australia).

*Glass Notes* was published by Halem in book form and subtitled *A Reference for the Glass Artist* in 1993. The second, expanded edition was completed in 1994.

A timely manual, it contains a wealth of information for both blowers and kiln workers. Topics covered include glass calculation (raw materials and the properties they impart), annealing, mould making, lustres, furnace and lehr building, glory holes, electric elements and considerably more. It does not include drawings like the one featured on this issue's front cover.

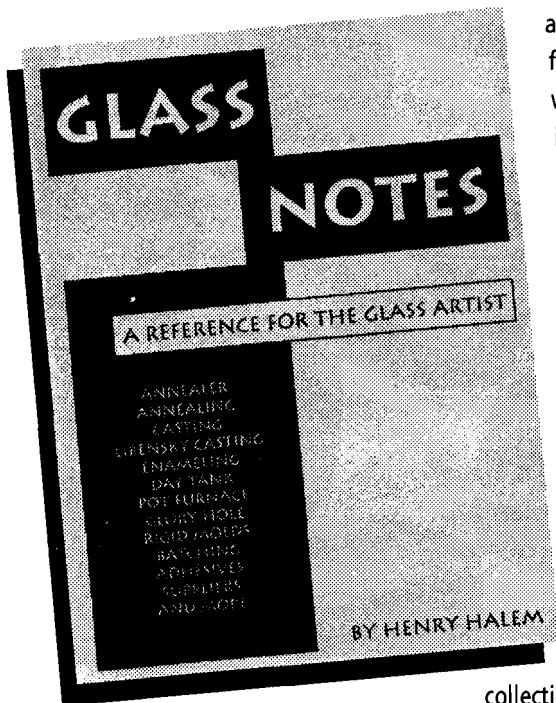
The book is aptly named because it is essentially a

collection of technical notes assembled over many years. Much of the information is highly specialised but covers such a wide range of glass related data that most glass artists would find useful information in it.

The excerpt from *Glass Notes* on glass durability testing included in this issue of *Ausglass Magazine* is a good example. It is unrelated to other items in the book that include decal information, glass adhesives and using anti-freeze as a painting medium instead of as a wine additive.

*Glass Notes* also includes Libensky / Brychtova casting principles and a number of methods for calculating firing schedules. Some of these contain anomalies and are surprisingly slow for thin glass firings (say, under one inch or 25 millimetres). Nevertheless, I have tested some of the thicker ones and so far they have worked extremely well, especially those that Henry attributes to Jim Harmon.

An inconvenience for readers on our side of the globe is that temperatures are, for the most part, quoted in Fahrenheit only. Nevertheless, this publication is a welcome and affordable addition to the small number of technical reference texts specifically for studio glass people. In Australia it is available from Artisan Books, (03) 9329 6042. Oh, and whoever borrowed my copy, please return it!



# HOT

## GLASSBLOWING BEGINNERS WEEKEND

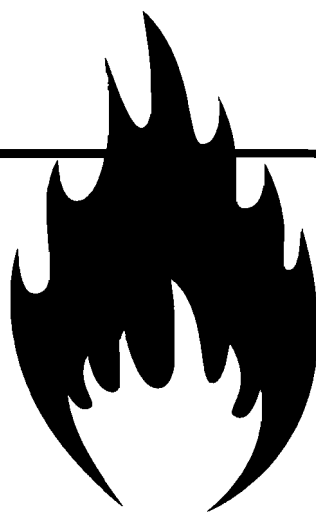
Contact: Pauline Delaney  
Hot Glass Access Workshop,  
Meat Market Craft Centre  
42 Courtney Street  
North Melbourne Vic 3051  
Ph. (03) 9329 9966

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## MEMBERSHIP FORM 1995

Ausglass Subscriptions fall due on January 1 of each year.

Name in full \_\_\_\_\_

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Mailing Address \_\_\_\_\_

\_\_\_\_\_

Postcode \_\_\_\_\_

Business phone ( \_\_\_\_\_ ) A/H phone ( \_\_\_\_\_ )

Please indicate the major area of glass work in which you are interested:

- Hot                       Stained / painting                       Engraving / Carving  
 Cold                       Collector                       Flame  
 Leadlight                       Kiln  
 Other (please specify) \_\_\_\_\_

Please indicate which category of membership is requested:

- Full Membership**                       **New Member** OR  **Renewal**  
Open to any interested person.  
Fee \$90 for 2 years
- Affiliated Membership**                       **New Member** OR  **Renewal**  
Open to interested organisations, institutions, companies, libraries etc.  
Fee \$90 for 2 years
- Student / Concession Membership**                       **New Member** OR  **Renewal**  
Available to persons approved by the Executive Committee.  
Supportive documentation must be submitted with application.  
Fee \$50 for 2 years

*Please note: Membership fee is for two years, and is renewable in January of the year of the Ausglass Conference.*

It would be appreciated if you would indicate below which category would best describe your involvement with glass.

- Full time occupational**                       **Part time occupational**                       **Recreational**

RETURN YOUR APPLICATION TO:

**Maggie Stuart Ph. AH (042) 84 7844 B (02) 211 2741**

**1 Charlotte Harrison Drive, Woonoona NSW 2517**

OR YOUR STATE REPRESENTATIVE

*Office Use Only*

Date of Payment: \_\_\_\_\_

Cash / Cheque: \_\_\_\_\_

Bank details: \_\_\_\_\_

AUSGLASS receives many requests for information about members from galleries, collectors and arts organisations. We can assist your career as you wish.

I give Ausglass permission to publish, promote my name:  YES  NO