SASKATCHEWAN CRAFT COUNCIL

GLASS

CRITERIA

DEFINITION

The category should include any article made with glass as the primary material. This could include leaded stained glasswork, foiled and soldered stained glass, fused and/or slumped pieces, hand blown, etched, sandblasted work, neon. Their forms could be free standing, sculptural, functional, window hanging or wall hanging. Also included are functional hangings such as lamps and planters.

TECHNIQUES

Leaded Stained Glass

The oldest and most traditional treatment of stained glass dating back to the 12th century. This technique involves cutting pre-stained glass following a design and assembling a panel which interlocks the lead channel (cane) and the glass pieces. The cane can also be of zinc, brass, or copper. When the desired panel is firmly interlocked to the desired size, the metal joints are soldered. The panel is then puttied for strength and waterproofing. The purpose of this is to strengthen and waterproof the stained glass. It also prevents rattling of the glass and it adds a visual finish to the entire piece. The final step is appropriate reinforcement.

Foiled and Soldered Stained Glass

A relatively newer treatment of stained glass devised by Louis Tiffany near the turn of the century. This technique involves cutting the pre-stained glass to a pattern and wrapping all the edges of each piece in an adhesive backed copper foil. The pieces are then placed together into the desired shape of the panel and all the seams are then soldered to form a “bead” which appears like lead cane. The panel can then be framed in another metal or wood, or it can be beaded in the same manner as the panel. This method was designed to allow a finer detail to be used with a high strength and lighter weight. It is therefore valuable in lamp construction and in free standing pieces. All glass should be clean, free of residues without cracks, flaws or scratches. All electrical hardware must be CSA approved. Solder seams and cane must be of a consistent finish. Customers should be advised if special care needs to be taken with delicate articles.

Fused Glass

This is a layering of pre-stained glass which is then kiln fired to effectively “fuse” the surfaces together. The method involves choosing (and testing) glass which have compatible, co-efficient rates of expansions and contraction. The resulting range of colours can then be cut to desired shapes, layered and slowly heated to 1350 – 1700 (depending on the desired effect). After a

slow cool down (annealing), the glass is safely annealed. The results otherwise can be cracks or explosions at a later date.

Slumped Glass

Similar to fusing, the desired shape of glass (fused or non-fused) is placed in a kiln on a mold or other shaping form. The temperature then is raised slowly to 1200 – 1380 and it is again annealed to achieve a stable resulting glass.

Painting Glass

Paints applied to glass must be appropriate to insure permanence. Pieces may then be leaded into a panel or otherwise dealt with.

Panels/Lamps

No commercial designs (including stencils for sandblasting and acid etching). The craftsperson must be capable of original work. Exceptions are traditional lampshades (in which case the submission must be so specified). Panels and lamps should be reinforced if necessary.

Copper Foil

Copper foil is evenly adhered to glass, trimmed at overlaps.

Etchings

Etchings must not be from commercial stencils. Consistency in technique must be evident throughout.

Adhesives

Epoxy is useful for large flat surfaces. Silicone for smaller areas may be more appropriate.

Jewellery

Jewellery or wearable art should be constructed with lead free solder.

Neon

Neon tube consists of a vacuum tight glass tube, fitted at each end with electrodes. Inside the tube is a small amount of rare gas. Connected to the two electrodes is a source of high voltage electrical power when the current is turned on, the tube glows with a steady light.

Properly bent glass will be of consistent diameter and thickness the full length of the unit. Stretch marks and discolouration on bends indicate thin glass which may cause stress on the finished product. Tight or kinked bends cause stress and will shorten the life of the unit, which in turn creates more load for the transformer.

Blown Glass

Gathering of molten glass on a hollow steel pipe and blowing and shaping to form an object, vessel or sculpture. Must be annealed and may be etched or sandblasted.

STANDARDS

A combination of all the above processes may be utilized. The success of a given piece of glasswork is in the effective combination of colour, texture (lead), line, quality and finish. If a piece is leaded, the soldered joints should be of a smooth, rounded unobtrusive quality (unless otherwise treated for a desired effect).

1. The putty should create a subtle finish between the lead and the glass, and should not protrude beyond the lead line.
2. All glass should be clean, free of residues and without cracks, flaws or scratches.
3. Solder seams and cane must be of a consistent finish.
4. Customers should be advised if special care needs to be taken with delicate articles.
5. The lead should be of consistent patina.
6. The framing (if metal) should be cleanly finished with no jagged edges. If reinforced, the bar or rod would be integrated as much as possible with the design of the panel, so as to be unobtrusive.
7. Finally, if the panel is to be hung by the frame, the supporting hoops or wire must be properly placed and well attached. The weight of a panel will stretch a frame if the hoops are not placed near adjacent soldering joints or along a vertical perimeter.

If the foil and solder method is used, the soldered lines should be as smoothly rounded as possible.

1. The shape of the foil beneath should not be visible.
2. The finish should also be considered. Either an overall patina or considerations listed above should apply.
3. With three dimensional work, all supports, hinges and electrical additions should be well designed, sturdy and consistent with electrical codes.
4. When fused and/or slumped glass is being used, it is important that the glass be tested compatible and properly fused. If properly fired, the fused glass will have a high-gloss finish (unless a hazy surface is desired). A dull finish indicated “devitrification” and though not dangerous, is undesirable in a finished product.
5. If a slumped, free standing form is desired, the edges should be free from sharp edges and points sometimes resulting from the fusing process. The form should rest securely without wobbling. A bit of grinding can correct these problems.