

# Rules and Processes for Kiln Operations

Okay. You have finished fabricating your masterpiece and it is ready for its first firing. Remember the cardinal rule of pottery – Never allow yourself to fall in love with any piece until it is completely finished and safely sitting in your bookshelf at home.

## Submitting pieces for firing

### Member in good standing?

First, to fire your piece (bisque or glaze) you must be a member of the club in good standing. Good standing is defined as having paid your dues and having sufficient member service hours.

Does your name show up in yellow or red when you swipe your card at the front desk? If it does, you are not in good standing and not eligible to have your pieces fired. A “Not in good standing” report is prepared each month.

### Is your piece ready for firing?

How do you get to having your finished piece at home? You start by bisque firing the dry greenware. In order to be bisque fired, a piece must be completely dry. Does your piece feel cold when you press it against your cheek? If so, it is not completely dry. Allow more drying time until the piece no longer feels cold.

If your piece is an enclosed design, it must have one or more vent holes to prevent gas pressure from building inside your piece. Otherwise, your piece may explode and destroy itself and possibly damage other pieces in the kiln with it.

Rule of thumb: if the clay is one inch thick or thicker, it needs one or more vent holes.

### Glaze firing greenware is not allowed

Greenware must be bisque fired first. Putting glaze on greenware and firing it to glaze temperature is not permitted. There are two basic risks that necessitate this prohibition. First, greenware is brittle and can be easily broken if you attempt to glaze the unfired piece. This can contaminate the glaze in the bucket. Second, bisque firing identifies risky pieces at minimal risk to other pieces. If a piece explodes or disintegrates in bisque firing, all the debris is comparatively harmless to the kiln and to other pieces in the kiln. If a piece that exploded or

disintegrated was covered in glaze, this could destroy nearby pieces in the kiln and/or could seriously damage the kiln itself.

### Firing sheets and stickers

To get any piece(s) fired, you must properly fill out a color-coded firing sheet.

- For bisque firing, this is a green firing sheet.
- For glaze firing, this is a white firing sheet.
- For Raku and other alternate firing, this is a yellow firing sheet.

All relevant information on the firing sheet must be filled in (legibly) especially including the full telephone number with area code of the owner of the piece(s).

If you are making multiple identical items, you may submit one firing sheet for all such items with the item description stating, for example, "Four rectangular trays." Submitting one firing sheet for multiple items does not affect the number and type of firing stickers required. In this example, the total number of firing stickers would be four times whatever one tray would require.

The owner of any submitted pieces can stack them for bisque firing. Never stack glaze fire submissions. The kiln team will never stack pieces that were submitted unstacked. The kiln team member may unstack what the submitting member stacked. Also, never stack pieces more than three deep.

The number of firing stickers for a stacked group of pieces is based on the length, width and height of the stacked group.

A large quantity of small pieces can be submitted for bisque firing in a previously fired, unglazed tray. An example of this would be the multiple beads used in stringing a totem.

For glaze firing, multiple small items can be submitted on a single kiln tile. If the items are subject to rolling off the tile, another method must be used to submit them for firing. If they are beads or bead like with holes through each, they can be fired on a wire trapeze that will prevent them from rolling around.

The number of stickers for any item, stack of items, tray or trapeze is based on the length, width AND height as measured in the sizing box. Diagonal measurements may only be used for length and width.

All pieces must have firing sheets, and almost all pieces (see exceptions below) must have firing stickers. Glaze stickers are required ALSO for almost all glaze firing submissions with the same exceptions unless the submitter has used their own glaze.

### Exceptions

Exceptions to sticker requirements: 1. Items prepared for Plates of Plenty (POP) do not require firing or glaze stickers but must have a firing sheet that is clearly labeled as a POP submission. 2. Beginning clay class students are given a limited number of firing sheets for use on items prepared as part of the beginning clay class. These firing sheets are stamped with "Paid" by the class instructor.

### Where do you submit and where do you retrieve your pieces?

Items are submitted for bisque firing by placing them (with their firing sheets) on the shelves next to the kiln room door. If you are facing the kiln room door, it is the shelving unit to the right of the door.

Items are submitted for glaze firing by placing them (with their firing sheets) on the shelves across the aisle from the kiln room door (the shelving unit facing the sink).

After being fired, bisque items will be placed on the bisque output shelves. These shelves are the one and a half shelving units directly across the aisle from the kiln room door.

After being fired, glazed items will be placed on the glaze output shelves. This is the shelving unit between the kiln room door and the rear studio door.

Pieces that have been fired should be retrieved by the submitting member as soon as is reasonable. Items that are not claimed in a timely manner (orphans) will be relocated to the graveyard (On top of the glaze output shelves). After a while, these pieces will be donated to the Plates of Plenty group or simply put out on a table in the club with a sign stating that anyone can claim these pieces.

### Rejected items

Sometimes, items that are submitted for firing cannot be fired. These pieces will be rejected by the kiln team member on duty and will be placed on the Unable to Fire shelf for the owner to correct the discrepancy. The Unable to Fire shelf is the left side of the lowest shelf in the shelving unit that is otherwise used for bisque firing input.

Each rejected item will be accompanied by a yellow rejection sheet. This sheet will describe why the piece has been rejected.

### Mis-firing and re-firing bisque fire items

Unfortunately, the kilns are not perfect, and the kiln team members aren't perfect either.

If a kiln misfires (fails to reach the appropriate temperature) when doing a bisque fire load, the kiln team member on duty will either determine that the temperature reached was sufficient that the pieces can be glazed, reload the pieces into a different kiln and refire them, or re-fire them in the same kiln once kiln repairs have been effected. None of these cases require any action or additional firing sheets or stickers from the owners of the pieces. The refiring will delay the successful completion of the bisque firing.

If a bisque firing load is inadvertently fired to the glaze firing temperature, the clay will become vitrified, and this may make it more difficult to get the glaze to adhere to the piece for glaze firing. There is no way to unvitrify the clay. Whether any piece is ruined or not is up to the owner of the pieces to decide. Free re-firing or replacements for such pieces can be provided upon request.

### Mis-firing and re-firing glaze fire items

If a kiln misfires (fails to reach the appropriate temperature) when doing a glaze fire load, the kiln team member on duty will determine if the items came close to the target glaze temperature or not. If the glaze fire load missed the target temperature by a wide margin, the items will be re-fired in a different kiln. In this case, no action or additional firing sheets or stickers are required from the owners of the pieces. The refiring will delay the successful completion of the bisque firing.

If a glaze fire load missed the target temperature by only a small amount, the kiln team member will provide the affected pieces to the owner(s) to decide if they were fired sufficiently or not. If not, those pieces will be re-fired with only a firing sheet (no stickers) to identify the piece that requires re-firing.

### Related items, issues and subjects

#### Stilt firing

If you want to put glaze on the bottom of your piece, it must be glaze fired on stilts. Stilts come in three basic forms: 1. Rectangular or wedge-shaped pieces with dozens of pieces of high

temperature wire embedded vertically all over the top surface; 2. Triangular pieces (either triangular or three pointed arms) with a single spike at each tip of the piece; and 3. Flat pieces (any shape) with used kiln coil segments embedded in the top of the piece.

Firing pieces on stilts is not a panacea. There will be multiple pinpricks in the bottom of the fired piece with type one or two stilts. Type three stilts can leave rows of narrow trench marks on the bottom of the piece.

You can use the club's stilts or make / buy your own (they are not cheap). If you buy or make your own stilts, make sure they are clearly labeled with your name using a dark stain.

The club's stilts are kept in baskets on the shelves in the kiln room. Ask any member of the kiln team to assist you in getting the stilts you need.

Be sure that your piece is stable on the stilt or stilts. Teeter-Totter is a fun game on the elementary school playground but has no place in submitting glaze fire pieces on stilts. If you are unsure of how to submit a piece for glaze firing on stilts, please consult with a kiln team member.

Firing on stilts is not a cure or workaround for excess glaze. If your glaze runs down onto/into the stilts, the stilt can be ruined. Ensure you follow proper glazing techniques to avoid running glaze.

Making your own stilts is not hard. Simply form a base by creating a small (2' to 3" length/width or diameter) piece using B-Mix. While the clay is still soft (leather hard), press rows of **high temperature** wire into the clay. When cutting the pieces of wire, make the cut on a diagonal so that there is a sharp point. The clay should be about 3/8" thick and each prong should fully penetrate the clay and stick up about 3/8". Make sure all the prongs stick up the same amount.

Alternatively, on the same kind of base, press two rows or a circle of re-cycled kiln coils into the clay. Make sure that the coil pieces lay completely flat.

Before using your home-made stilts, have them fired at glaze temperature to set the clay and the actual stilt parts.

#### Maximum size and weight for pieces

- The maximum height for any piece is 24". Anything taller won't fit in the kilns.

- The maximum diameter or length/width for any piece is 19". The pieces must fit on the shelves in the kiln.
- The maximum weight (Dry) is approximately 15 pounds.

Any piece must be able to be loaded into the kiln. If you max out any of the dimensions, your piece may not be able to be fired. Please consult with a kiln team member before creating a mega-piece.

If you have created a large, delicate, heavy piece and you don't trust someone else to load/unload your piece, you may (under the direct supervision of a kiln team member) load/unload your own piece. Coordinate this in advance with the kiln team chair or the kiln team member on duty before you attempt this. A kiln team member may request your assistance in loading your piece (at their discretion).

### Your glaze ran – now what?

The glaze on your piece ran and your piece is now firmly attached to one or more tiles. How do you separate the two without damaging or destroying your piece?

Unfortunately, there are no guaranteed methods for separating pieces that are glazed onto some tiles. The first question is who will do the separating. The owner of the piece is responsible for separating their own piece. If assistance from a kiln team member is desired, help will be provided but, again, there are no guaranteed methods. If you ask a kiln team member to assist you, the responsibility is still completely with the owner of the piece.

If gentle tugging won't get the piece and tile apart, there are two primary methods to pursue. One is to slide a putty knife (in stock in the kiln room or in the toolbox in the glaze room) into any crack between the piece and the tile. Then gently tap the handle of the putty knife to drive it into the crack. If this doesn't work or isn't desired as method number one, the alternative is to place the piece/tile into your freezer at home. The different contraction rates of the pieces will often cause them to separate.

Once separated, touch up of any rough or sharp edges can be done with a hand grinder. Grinding will leave a flat finish on any areas that are ground. The gloss finish can be restored in small areas with clear nail polish.

When working with fired glaze, remember that broken edges can be razor sharp. Proper care must be exercised to avoid cutting yourself.

### Handling of your pieces by other club members

As a rule, the only people who should touch your pieces are you and the kiln team members. The only exception to this is the handling by the club members who arrange the sale shelves and actually sell and wrap pieces.

If you have a question or issue about how a fellow club member has handled your piece, you need to address this directly with that fellow member. The members of the kiln team will not referee issues such as this.

### Information on kiln room door

Besides the temporary notes intended for the kiln team members, the primary item of interest is the kiln firing status whiteboard. All six kilns are represented. For each kiln that has been loaded and is firing, the date and time that firing was initiated is presented. The type of firing is shown (bisque, glaze or etc.). The predicted unloading date and time is also shown. This is an estimate and can't be guaranteed.

The name and contact information for the current kiln team member on duty is also provided.

### Keeping the kiln room door closed

The jury is still out on whether the kiln room door is actually a fire door. For now, assume that it is a fire door. When the kiln room door is open, this can cause conflicts between the two air conditioning systems for the kiln room and the air conditioning for the rest of the club.

Bottom line – keep the kiln room door closed at all times when kilns are not actively being loaded and/or unloaded.

### Who is allowed in the kiln room?

This is simple - Kiln team members, escorted guests and CAM maintenance personnel are the only people allowed in the kiln room at any time.

### Encroachment on the kiln output shelves

When you are looking for an empty shelf for your piece to dry, the left portion of the bisque output shelves can look very tempting. Do not place your drying pieces on this set of shelves. It takes four to six shelves to place an entire kiln worth of bisque firing output. If your piece is drying on one of the bisque output shelves, it will be relocated to whatever legitimate drying space may be available (anywhere in the entire club). If you can't find your piece, consider this

an object lesson. Kiln team personnel are under no obligation to remember where they relocated a piece(s) to.

### Congestion in the aisle outside the kiln room door

When a kiln team member is trying to load and/or unload kilns, please do not congregate in the aisle between the input shelves, the output shelves and the kiln room door. If you want your pieces fired, let the kiln team do their job.

### Kiln rental

Club members in good standing can rent an entire kiln for a dedicated firing of their items. The price to rent an entire kiln is equal to the price of one entire sheet of firing stickers. Arrangements can be made with the kiln team, and the rent can be paid on the square in the front storage room. (Same square that is used for purchasing supplies, pieces that are for sale in the lobby, etc.)

Renting a kiln is only allowed when it will not interfere with the normal operations of the kiln room. This may mean that a kiln may not be able to be rented during peak load times.

The rented kiln is to be loaded and unloaded by the kiln team unless the renting member has experience loading/unloading kilns and has been approved by the kiln team coordinator.

### **Items for Kiln Team Members**

#### Loading multiple items submitted on a single firing sheet

If two or more identical items are submitted on one firing sheet but only part of the group of items can be fired in a particular kiln load, leave the firing sheet with the item(s) that remain on the glaze firing input shelves.

The number of stickers (fire and glaze) should cover all the items addressed on the firing sheet as if they were submitted separately.

#### Helping out

Before succumbing to the temptation to help out, remember that “help” is defined by the recipient. In this case, the recipient is the person with kiln duty for the week. Unsolicited help is often not appreciated.



If you feel that you must help, call the kiln team member on duty to discuss your offer of help.

### “Chain of command” for kiln room

The chain of command for the kiln room is the person with kiln duty for the week, the kiln team, and then the club president. Any problems or issues should be pursued up this chain of command.

### Propping kiln lids

The lid of a kiln that is done firing can be propped open to accelerate cooling. Only use small kiln brick blocks to prop open the lid. Using other items (for example – posts) can damage the underside of the lid and/or the top row of fire bricks in the kiln wall.

Never prop open a kiln that is above 300 degrees (F). Doing this can cause pieces to crack when they cool down too rapidly.

If you are not the kiln team member on duty, see “helping out” above.

### Kiln loading

Posts on each shelf must be placed directly above/below the posts on other shelves. There should be three posts per shelf (both half and whole shelves). Three posts form a natural triangle which is the most stable arrangement.

### Old firing sheets

Old firing sheets are retained in the kiln room for about a month or until the container for them overflows. They are then discarded.