How to Fire Ceramic Pieces in a Kiln

A kiln is a furnace or oven that is used for burning, drying and sometimes baking. Using proper techniques when preparing to fire ceramic pieces is essential due to the high temperature and voltage potentials that exist within the kiln. It is crucial to follow all safety precautions because improper usage of the kiln can cause serious injuries and/or death. Making sure that all ceramic pieces are prepared properly prior to using the kiln is essential, because if the piece is not designed properly, it can become destroyed as it's fired in the kiln.

Steps

1. **Set up a safe workspace before operating the kiln.** Confirm that the area is dry, and positioned in an open space.

2. **Open the lid of the kiln.** Make sure that you empty all of the remaining materials from the previous firing out of the kiln.

3. **Arrange the layout of the shelves in order for them to fit your pieces.** If you are firing big pieces, separate the shelves more, and if you have smaller pieces you can reduce the distance between each shelf.

4. **Determine what the cone firing number is for your specific products.** The cone number used for firing clay, and the cone number for firing glaze is completely different.
   - Since the firing number varies for different types of ceramic pieces, make sure that if you are firing glazed pieces, only put glazed pieces in the kiln for that round of firing.

5. **Look inside of the kiln, and identify the 3 metal prongs.** Be very gentle, and lift the middle metal prong, and set the cone across the bottom 2 prongs.

6. **Confirm that any glaze pieces you may be using are completely covered in the glazed material.** If it is not completely covered, the piece may blow up in the kiln.

7. **Load the kiln.** Make sure that you separate each of the ceramic pieces at a safe distance from each other. If there were any air bubbles in a piece, it will blow up in the kiln, and if it is too close to another piece, then both pieces will become destroyed.

8. **Plug in the kiln.** Make sure that nothing else is plugged into the socket, since the kilns require high voltages. Do *not* use an extension cord.

9. **Increase the temperature slowly to prevent your pieces from cracking.** Keep the temperature on low for the first hour, medium for 2 hours, then turn it to high and wait for the cone to bend on its own, which will turn the kiln off.

10. **Allow the kiln to cool down for a few hours before opening it to prevent any temperature shocks for the pieces.** If you open the kiln too soon, it can crack the pieces.

Warnings

- If you do not fire the lay or glaze at the correct cone number, you could end up over or under firing your piece.
- Kilns operate at high temperatures as well as high voltages. If it is installed, maintained or used improperly, it can cause serious damages.
- When working with the kiln, follow the instructions carefully to prevent any electrical hazards such as a shock, ARC- Flash, and ARC- Blast.
- When plugging the kiln in, make sure you do not use an extension cord due to the high voltage potential of the kiln.
- Make sure the kiln is in a dry and protected space at all times to prevent electrocution hazards.

Sources and Citations

- http://hotkilns.com/cautions
- http://www.instructables.com/id/How-to-operate-a-kiln/step5/Start-the-kiln/