

Ceramics Bisque & Glaze Firing

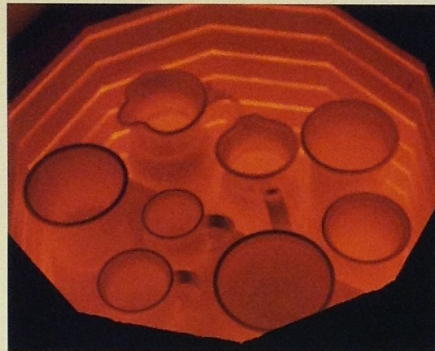
14



Rudy Arco, Missoula, MT. Stoneware



Amy Everett Groom, Wellington, KS. Cone 05



An electric kiln at approximately 1800° F. Never open a kiln until it is under 200° F.



A ware cart (left) with glaze ware — bisque-fired pieces with glaze applied. Bisque is clay that has been fired once and is unglazed. A ware cart (right) with greenware. Greenware (pieces are gray in color) is clay that has dried but has not been fired.



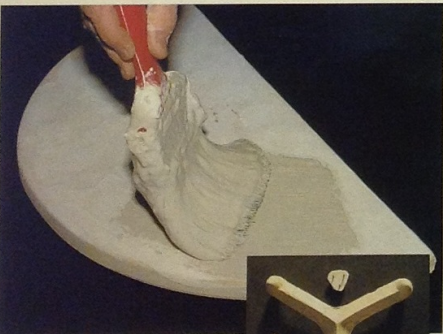
Start with the bottom shelf one inch above the base of the kiln for better heat circulation.



The second shelf has kiln posts ½ inch above the tallest pot. In a bisque firing, pots can be carefully stacked inside each other if space is tight.



Side view of a stacked bisque load ready for firing. For good support, posts should be placed at outside edges of the shelves.



For glaze firing, a kiln wash must be applied to the kiln shelves to prevent melting glaze from sticking to the shelves. Star stilts can be used underneath earthenware pots to help prevent glaze from sticking to the shelves.

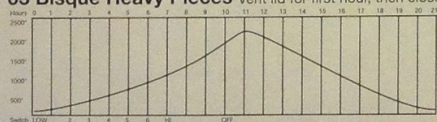


Newer kilns have Select Fire® (electronics) that can be programmed to fire your kiln. Always be present at the end of any firing even when a shut-off device is used.



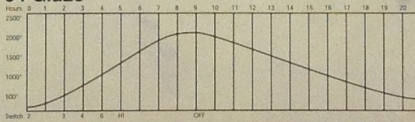
Standard or self-supporting pyrometric cones are accurate temperature indicators for all kilns, and should be visible through peepholes on each shelf for all firings. 1. Self-supporting cones. 2. Junior cones to be used in Kiln Sitter® only. 3. Pack of three cones: warning cone, cone of the temperature to which you are firing, and guard cone, one cone above the temperature to which you are firing.

03 Bisque Heavy Pieces



- Keep a record of your firings.
- Bisque firings should be 10-12 hours long with 10-12 hours for cool down.
- When firing earthenware (lowfire clay and glazes), fire one cone higher than the glaze firing would be. For example, bisque fire to cone 03 and glaze fire to cone 04. For stoneware and highfire clays, bisque at 05.

04 Glaze



- Lowfire glaze firings should be approximately 8-10 hours long with 12 hours for cool down.
- In stacking a glaze firing, pots should never touch. A minimum of a finger width should be between each pot. Bottoms should be free of any glaze.

Cone	°C	°F	Color of Fire	Clay Reaction	Ware & Glazes
15	1435	2615			
14	1400	2552		porcelain matures	porcelain
13	1350	2462			
12	1326	2419			
11	1315	2399			
10	1305	2381			
9	1280	2336	white	stoneware clays mature	china bodies stoneware salt glazes
8	1263	2305			
7	1240	2264			
6	1222	2232			
5	1196	2185			
4	1186	2167		red clays melt	china glazes
3	1168	2134			
2	1162	2124			semi-vitreous ware
1	1154	2109			
01	1137	2079	yellow		
02	1120	2048		buff clays mature	earthenware
03	1101	2014			
04	1060	1940			
05	1046	1915			
06	999	1830		red clays mature	low fire earthenware
07	984	1803			
08	955	1751			
09	923	1693	orange		
010	894	1641			low fire
011	894	1641			
012	884	1623	cherry red		
013	852	1566			lustre glazes
014	838	1540			
015	804	1479		organic matter in clay burns out	chrome red glazes
016	792	1458			
017	747	1377	dull red		
018	717	1323			overglazes colors enamels
019	683	1261			
020	635	1175			
021	614	1137			
022	600	1112			dehydration begins