

The Knowledge Bank at The Ohio State University

Ohio State Engineer

Title: Autoclave Tests

Issue Date: 1940-12

Publisher: Ohio State University, College of Engineering

Citation: Ohio State Engineer, vol. 24, no. 2 (December, 1940), 18.

URI: <http://hdl.handle.net/1811/35755>

AUTOCLAVE TESTS

Room 211, Engineering Experiment Station. Months speed by in the period of a few minutes and years pass in a few hours. Stanley Lull of the "Glazed Brick and Tile Institute" points out to the ceramics convention visitors just how time may be controlled and how tile ware may be aged years in a few hours.

The problem is something like this—if the glazing on structure ware or dinner ware is not applied just right, cracks, or crazing as it is called, will develop after a few years of service. The purpose of the "autoclave test" is to determine if the glazing has been put on "just right." Samples of tile ware are placed in a

round container resembling very much the kitchen pressure cooker. Live steam is forced into the container and the pressure gradually increased to 150 pounds gage over a period of 1½ hours. This pressure is held for one hour and then released in 20 minutes. The hot samples are removed and, while still hot, ordinary writing ink is added to the glazed surface. The ink will enter any craze lines that have developed and when the excess is wiped off the cracks will stand out in bright blue. Usually several samples are taken from each glazed lot leaving the baking oven. If these samples do not craze the lot is passed as satisfactory.