



SUBJECT:

CLEANING OF CERAMIC MOUNT PART
Process Specification

SUPERSEDES

MAY 1955

This specification applies to the cleaning of ceramic mount parts by use of nitric acid.

SCHEDULE NO. 1

(Initially used for I600F)

(Marion Only)

1. EQUIPMENT:
 - a. Stainless steel beakers to be used for boiling the ceramics.
 - b. A perforated stainless steel beaker to serve as a container for the ceramics in the washing baths.
 - c. A hot plate for boiling the acid and water.
 - d. A drying oven for temperatures to 450° C.
 - e. A basket for holding the ceramics in the oven.
2. MATERIALS:
 - A22 Nitric Acid
 - S31 Caustic Soda
 - Methyl Red Indicator



NITRIC ACID SAFETY PRECAUTIONS
CAUSTIC SODA SAFETY PRECAUTIONS

See 33-2-7C
See 33-2-8A

3. PROCEDURE:

- a. Washing Ceramics
 1. Prepare a 10% nitric acid solution by adding one part of concentrated nitric acid to nine parts of demineralized water.
 2. The ceramics to be washed will be placed in a perforated stainless steel beaker. This container of ceramics is to be placed in a larger stainless steel beaker containing a sufficient amount of 10% nitric acid to bring the level of acid one to two inches above the surface of the ceramics.
 3. Heat the acid to boiling and allow to boil for ten minutes.
 4. Remove the container of ceramics from the acid, allowing excess acid to drain from the container. Neutralize the acid. (See procedure for neutralization below.)
 5. Place the container of ceramics in demineralized water and boil for ten minutes. Perform this rinsing operation four times, discarding the water after each rinse. Save a sample of the final rinse water for analysis of residual acid content.
 6. After draining the water from the ceramics, place the ceramics in an oven at 250° C for one hour.
 7. Bake at 450° C for 10 - 15 hours.
- b. Acid Neutralization
 1. Dilute the acid with water until the beaker is filled to approximately three inches from the top.
 2. Add a few drops of acid-base indicator (methyl red).
 3. Add caustic soda to the acid until the indicator assumes the alkaline color (methyl red will turn from red to yellow). Approximately 70 - 80 grams of caustic soda will be needed for neutralizing the amount of acid normally used in the washing operations.
 4. Discard the neutralized solution and thoroughly rinse the beaker.

End of Schedule #1

SCALE—

DIMENSIONS IN

UNLESS OTHERWISE SHOWN.

DIMENSIONS SHOWN WITHOUT TOLERANCES ARE DESIGN CENTERS

3-546-17-80 PCM64-802EG

* CHANGE
** ADDITION
*** DELETION

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