

## PROCEDURE FOR CALIBRATING EQUIPMENT

Revised 02/02, 7/14

### Equipment Checked:

RUBBER BALLOON DENSITY APPARATUS

D 2167, SD 106

PROCEDURE #68

### Purpose:

To provide instructions for calibrating the Rubber Balloon Density Apparatus.

### Inspection Equipment Required:

### Procedure:

1. Calibration Mold-Container that dimensionally simulates test hold that will be used in the field.

### Tolerance:

The tolerance can be found in the test methods listed above.

### Procedure:

1. Apparatus Calibration:
  - A. Place the apparatus with base (if applicable) on a smooth horizontal surface.
  - B. Apply an operating pressure and take an initial reading on the volume indicator.
  - C. Transfer the apparatus with base (if applicable) to a calibrated mold-container.
  - D. Apply the operating pressure as necessary until there is no change in the volume indicator. It will be necessary to apply a downward load to prevent uplift of the apparatus. NOTE: It may be necessary to provide an air escape to prevent erroneous results caused by the trapping of air by the membrane. One means of providing an air escape is to place a small diameter string over the edge of and down the inside, slightly beyond bottom center of the mold-container.
  - E. Record the Volume Indicator and Pressure Gauge reading. NOTE: The pressure gauge reading should be the lowest pressure possible at which the 1% volume accuracy can be achieved.
  - F. The difference between the initial and final readings is the indicated volume.
  - G. A satisfactory calibration check has been achieved when the difference between the indicated volume from the apparatus and the calibrated volume of the mold-container is 1% or less.
  - H. Select the optimum operating gauge pressure and record it for use with the apparatus during field testing operations.