

**ASPHALT IN-HOUSE CALIBRATION PROCEDURE # 4
THIN-FILM OVEN**

EQUIPMENT CHECKED: THIN-FILM OVEN (AASHTO T 179 / ASTM D 1754)

1. SCOPE

- 1.1 This procedure gives instructions for checking the critical components of a thin-film oven.
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2. APPARATUS

Inspection Equipment Required:

1. Ruler, readable to 1/8 in.
2. Timer, readable to 0.1 sec.
3. Thermometer, readable to 0.5°C.

Tolerance:

Equipment shall meet the tolerances specified in the test methods T 179 and D 1754.

3. PROCEDURE

- 3.1 Open the oven door (caution should be used oven surfaces may be hot).
- 3.2 Measure and record the distance between the top of the rotating shelf and the bottom of the thermometer bulb.
- 3.3 Measure and record two distances along the shelf radius from the shelf's outer edge to the thermometer and from the thermometer to the shelf's center.
- 3.4 Perform the test according to T 179 or D 1754. After placing the samples in the oven, record the time needed for the oven to recover to test temperature.
- 3.5 Set the oven's shelf in motion and record the number of rotations in one minute.
- 3.6 Record the oven temperature at half-hour intervals until the test is completed.
- 3.7 Measure and record, to the nearest 0.1 inches, the diameter of the shelf.
- 3.8 Measure and record, to the nearest inch, the width, height, and depth of the ovens' interior.