



representative of the concrete in the structure from which they are removed.

2. Drill the cores with the axis normal to a surface of the structure, and the ends free from all conditions not typical of the surfaces of the structure.
3. Do not use any cores that show abnormal defects or that have been damaged appreciably in the drilling operation.
4. Make certain all extraneous material such as asphaltic curing seal and cement treated base is removed from the core before measuring. Use care in removing this material so as to not damage the concrete core sample.

#### D. PROCEDURE

1. Calibration
  - a. Before any measurements of the core length are made, calibrate the apparatus with suitable gages so that errors caused by mechanical imperfections in the apparatus are known or eliminated.
  - b. When these errors exceed 0.3 mm, recalibrate the apparatus.
2. Placing the Specimen
  - a. Place the specimen in the measuring apparatus with the smooth end of the core, (the end that represents the upper surface of a pavement slab or a formed surface in the case of other structures), placed down so as to bear against the three hardened steel supports.
  - b. Place the specimen on the supports so that the central measuring rod of the measuring apparatus is directly over the mid-point of the upper end of the specimen.
3. Measuring the Specimen
  - a. Make nine measurements of the length on each specimen; one at the central position and one each at eight additional positions spaced

at equal intervals along the circumference of the circle of measurement described in Section B-4.

- b. Read each of these nine measurements directly to the nearest 1 mm.

NOTE: If, in the course of the measuring operation, it is discovered that at one or more of the measuring points the surface of the specimen is not representative of the general plane of the core end because of a small projection or depression, the specimen shall be rotated slightly about its axis and a complete set of nine measurements made with the specimen in the new position.

#### E. REPORT

Record the individual observations to the nearest 1 mm and report the average of the nine measurements to the nearest 2.5 mm as the length of the concrete core.

#### F. NOTES

A drawing of an apparatus that satisfies the conditions of Section B (1-6) is available from the Transportation Laboratory.

#### G. SAFETY AND HEALTH

Prior to handling, testing or disposing of any waste materials, testers are required to read: Part A (Section 5.0), Part B (Sections: 5.0, 6.0, 10.0 and 12.0) and Part C (Section 1.0) of Caltrans Laboratory Safety Manual. These sections pertain to requirements for general safety principles, standard operating procedures, protective apparel and how to handle spills, accidents and emergencies, etc. Users of this method do so at their own risk.

#### REFERENCE

ASTM Designation: C174  
AASHTO Designation: T148

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