

## Appendix C to Part 180—Eddy Current Examination With Visual Inspection for DOT 3AL Cylinders Manufactured of Aluminum Alloy 6351–T6

1. *Examination Procedure.* Each facility performing eddy current examination with visual inspection must develop, update, and maintain a written examination procedure applicable to the test equipment it uses to perform eddy current examinations.
2. *Visual examinations .* Visual examinations of the neck and shoulder area of the cylinder must be conducted in accordance with CGA pamphlet C–6.1 (IBR; see §171.7 of this subchapter).
3. *Eddy Current Equipment.* A reference ring and probe for each DOT–3AL cylinder manufactured of aluminum alloy 6351–T6 to be inspected must be available at the examination facility. Eddy current equipment must be capable of accurately detecting the notches on the standard reference ring.
4. *Eddy Current Reference Ring.* The reference ring must be produced to represent each cylinder to be tested. The reference ring must include artificial notches to simulate a neck crack. The size of the artificial notch (depth and length) must have a depth less than or equal to 1/3 of the wall thickness of the neck and a length greater than or equal to two threads. The standard reference must have a drawing that includes the diameter of the ring, and depth and length of each notch.
5. *Condemnation Criteria.* A cylinder must be condemned if the eddy current examination combined with visual examination reveals any crack in the neck or shoulder of 2 thread lengths or more.
6. *Examination equipment records.* Records of eddy current inspection equipment shall contain the following information:
  - (i) Equipment manufacturer, model number and serial number.
  - (ii) Probe description and unique identification ( e.g. , serial number, part number, etc.).
7. *Eddy current examination reporting and record retention requirements.* Daily records of eddy current examinations must be maintained by the person who performs the requalification until either the expiration of the requalification period or until the cylinder is again requalified, whichever occurs first. These records shall be made available for inspection by a representative of the Department on request. Eddy current examination records shall contain the following information:
  - (i) Specification of each standard reference ring used to perform the eddy current examination.
  - (ii) DOT specification or exemption number of the cylinder; manufacturer's name or symbol; owner's name or symbol, if present; serial number; and, date of manufacture.
  - (iii) Name of test operator performing the eddy current examination.
  - (iv) Date of eddy current examination.
  - (v) Acceptance/condemnation results ( e.g. pass or fail).
  - (vi) Retester identification number.
8. *Personnel Qualification Requirements.* Each person who performs eddy current and visual examinations, and evaluates and certifies retest results must be certified by the employer that he/she has been properly trained and tested in the eddy current and visual examination procedures.
9. *Training Records.* A record of current training must be maintained for each employee who performs eddy current and visual examinations in accordance with §172.704(d).