

§ 230.60

during every 31 service day inspection. Their removal shall be noted on the FRA Form No. 1 or FRA Form No. 3. (See appendix B of this part.)

WASHING BOILERS

§ 230.60 Time of washing.

(a) *Frequency of washing.* All boilers shall thoroughly be washed as often as the water conditions require, but not less frequently than at each 31 service day inspection. The date of the boiler wash shall be noted on the FRA Form No. 1 or FRA Form No. 3. (See appendix B of this part.)

(b) *Plug removal.* All washout plugs, arch tube plugs, thermic siphon plugs, circulator plugs and water bar plugs must be removed whenever locomotive boilers are washed.

(c) *Plug maintenance.* All washout plugs, washout plug sleeves and threaded openings shall be maintained in a safe and suitable condition for service and shall be examined for defects each time the plugs are removed.

(d) *Fusible plugs cleaned.* Fusible plugs shall be cleaned in accordance with § 230.59.

§ 230.61 Arch tubes, water bar tubes, circulators and thermic siphons.

(a) *Frequency of cleaning.* Each time the boiler is washed, arch tubes and water bar tubes shall thoroughly be cleaned mechanically, washed, and inspected. Circulators and thermic siphons shall thoroughly be cleaned, washed and inspected.

(b) *Defects.* Arch tubes and water bar tubes found blistered, bulged, or otherwise defective shall be renewed. Circulators and thermic siphons found blistered, bulged or otherwise defective shall be either repaired or renewed.

(c) *Method of examination.* Arch tubes, water bar tubes and circulators shall be examined using an appropriate NDE method that accurately measures wall thickness at each annual inspection. All arch brick shall be removed for this inspection. If any are found with wall thickness reduced below that required to render them safe and suitable for the service intended at the MAWP specified on the boiler specification FRA Form No. 4, they must be replaced

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or repaired. (See appendix B of this part.)

STEAM PIPES

§ 230.62 Dry pipe.

Dry pipes subject to pressure shall be examined at each annual inspection to measure wall thickness. Dry pipes with wall thickness reduced below that required to render the pipe suitable for the service intended at the MAWP must be replaced or repaired.

§ 230.63 Smoke box, steam pipes and pressure parts.

The smoke box, steam pipes and pressure parts shall be inspected at each annual inspection, or any other time that conditions warrant. The individual conducting the inspection must enter the smoke box to conduct the inspection, looking for signs of leaks from any of the pressure parts therein and examining all draft appliances.

STEAM LEAKS

§ 230.64 Leaks under lagging.

The steam locomotive owner and/or operator shall take out of service at once any boiler that has developed a leak under the lagging due to a crack in the shell, or to any other condition which may reduce safety. Pursuant to § 230.29, the boiler must be repaired before being returned to service.

§ 230.65 Steam blocking view of engine crew.

The steam locomotive owner and/or operator shall keep the boiler, and its piping and appurtenances, in such repair that they do not emit steam in a manner that obscures the engine crew's vision.

Subpart C—Steam Locomotives and Tenders

§ 230.66 Design, construction, and maintenance.

The steam locomotive owner and operator are responsible for the general design, construction and maintenance of the steam locomotives and tenders under their control.