Federal Railroad Administration, DOT

§ 230.25 Maximum allowable stress on stays and braces.

The maximum allowable stress per square inch of net cross sectional area or seriously injured, the place at which it occurred, and the location where the steam locomotive may be inspected. Confirmation of this report shall be immediately mailed to the Associate Administrator for Safety, Federal Railroad Administration, Washington, DC 20590, and contain a detailed report of the accident, including, to the extent known, the causes and a complete list of the casualties.

Subpart B—Boilers and Appurtenances

§ 230.23 Responsibility for general construction and safe working pressure.

The steam locomotive owner and operator are responsible for the general design and construction of the steam locomotive boilers under their control. The steam locomotive owner shall establish the safe working pressure for each steam locomotive boiler, after giving full consideration to the general design, workmanship, age, and overall condition of the complete boiler unit. The condition of the boiler unit shall be determined by, among other factors, the minimum thickness of the shell plates, the lowest tensile strength of the plates, the efficiency of the longitudinal joint, the inside diameter of the course, and the maximum allowable stress value allowed. The steam locomotive operator shall not place the steam locomotive in service before ensuring that the steam locomotive’s safe working pressure has been established.

ALLOWABLE STRESS

§ 230.24 Maximum allowable stress.

(a) Maximum allowable stress value.

The maximum allowable stress value on any component of a steam locomotive boiler shall not exceed ¼ of the ultimate tensile strength of its material.

(b) Safety factor. When it is necessary to use the code of original construction in boiler calculations, the safety factor value shall not be less than 4.

§ 230.25 Maximum allowable stress on stays and braces.

The maximum allowable stress per square inch of net cross sectional area