



BOILER SAFETY INTERPRETATION/TECHNICAL LETTER
BSI12

MEMORANDUM

TO: All Authorized Inspectors

FROM: Fred P. Barton, Director/Chief Inspector
Boiler Safety Compliance Program

SUBJECT: "R" Endorsement

DATE: April 1, 1999

The first set of examinations for Inspectors to obtain an "R" Endorsement on their Virginia Work Cards has been completed. Twenty-one of twenty-five candidates passed with a success rate of 84%. There were a few questions on both exams which resulted in some mixed results. Consequently, I decided to share the intent of these questions with all Inspectors but especially those who will be involved with repairs.

Standard welding procedures are now allowed in the National Board Inspection Code. The repair company only has to take responsibility for them. However, all data in a Standard Welding Procedure is treated as an essential variable and, as such, any change means the Standard Welding Procedure must be requalified.

Repair companies now decide which final test (hydrostatic) or exam to perform and must obtain the Inspector's agreement and, in some cases, the jurisdiction's. In many cases the hydrostatic test is considered a "leak test" for a repair. Therefore, it is a tightness test under Virginia Rules. Consequently, a hydrostatic test pressure of "operating" or "working pressure" for a repair is suitable. In some cases in the judgment of the Inspector a repair may also be considered safety related and require a higher test pressure. Alterations by definition could involve a change in pressure and temperature and is in all cases safety related. When the hydrostatic test is chosen for an alteration it shall be 1.5 times the maximum allowable working pressure.

Next, a few words on flush patches in shells of "S" Stamped Section I boilers. All flush patches are considered to have a longitudinal seam and, per original construction Code requirements, are supposed to have a radiographic examination. Radiography is preferred but, when not practical, PT or MT on each weld pass is an acceptable alternative.

In addition, post weld treatment is required for all longitudinal (butt) joints. The NBIC allows alternative weld methods of which higher pre-heat temperature is required plus additional (MT or PT) NDE. Everyone is reminded of these important requirements for flush patches.

Finally, a reminder about R-1 (or R-2) Forms. The purpose of a R-1 Welded Repair form is to document and fully describe a repair (R-2 for alterations). Quite often it is the only permanent record of the repair or alteration. That is why such additional information as the WPS used, Welder's ID, NDE performed, pre-heat temperature, and specification number for material on the form is both informative and necessary.

I wanted to share the above with each of you to make sure that those who took the examination view it as a learning experience. Those who did not take the examination can feel envious of the training opportunity they missed.

I thank each of you for your continued interest in safety. Virginia is a great place to work and live.

FPB/fs