PG-77.4 When plate specification heat treatments are not performed by the mill, they shall be performed by or under the control of the fabricator, who shall then place the letter “T” following the letter “G” in the mill plate marking (see SA-20) to indicate that the material specification heat treatments have been performed. The fabricator shall also show by a supplement to the appropriate Mill Test Report that the specified heat treatment has been performed.

PG-77.5 For other than plate material, the maintenance of identification shall be at least to the type of material. This can be achieved through any suitable method found acceptable to the Inspector, such as color coding, abbreviated marking, written record, etc.

PG-78 REPAIRS OF DEFECTS IN MATERIALS

Defects in material may be repaired by the boiler Manufacturer provided acceptance by the Inspector is first obtained for the method and extent of repairs. Material that cannot be satisfactorily repaired shall be rejected.

PG-79 TUBE HOLES AND ENDS

Tube holes shall be drilled full size from the solid plate, or they may be punched at least 1/2 in. (13 mm) smaller in diameter than full size, and then drilled, reamed, or finished full size with a rotating cutter. The thermal- or plasma-arc cut holes, when made, shall be sufficiently smaller in diameter than full size, such that subsequent machining to full size shall completely remove all metal whose mechanical and metallurgical properties have been affected as a result of the cutting process.

d) Cut full size with a high pressure water jet, or cut smaller in diameter than full size, then drilled, reamed, or finished full size with a rotating cutter.

Tubes may be counterbored where the metal is thicker than that required to get a proper bearing by expanding, so as to form narrow seats into which the tube ends can be properly expanded, provided there is space available to permit a proper amount of flare of the tube end.

The sharp edges of tube holes shall be taken off on both sides of the component with a file or other tool.

PG-80 PERMISSIBLE OUT-OF-ROUNDNESS OF CYLINDRICAL SHELLS

PG-80.1 Internal Pressure. Finished cylindrical sections of headers, shells, drums, and similar components shall be circular at any section within a limit of 1% of the mean diameter, based on the differences between the maximum and minimum mean diameters at any section. To determine the difference in diameters, measurements may be made on the inside or the outside, and when the component is made of plates of unequal thicknesses, the measurements shall be corrected for the plate thicknesses as they may apply, to determine the diameters at the middle line of the plate thickness.

PG-82.2 Holes for welded stays shall be cut and prepared in accordance with PW-29.

INSPECTION AND TESTS

PG-90 GENERAL

PG-90.1 Each boiler, superheater, waterwall, or economizer shall be inspected during construction and after completion by an Authorized Inspector (AI). The AI may perform inspections at other stages of the work as he may designate (PW-46.2). Each Manufacturer or Assembler is required to arrange for the services of Authorized Inspectors (see Foreword and PG-91) to perform inspections on all of his work within the scope of this Section, whether performed in the shop or in the field. Duties of the AI are described elsewhere in this Section and include the following:

PG-90.1.1 Verifying that the Manufacturer or Assembler has a valid ASME Certificate of Authorization covering the scope of his Code activities (PG-104.2.1, PG-105.5).