Case 2986 - 1
Capacitor Discharge Welding of Thermocouples to Material Less Than 0.20 in. (5 mm) Minimum Wall Thickness
Section I

Inquiry: Under what conditions may capacitive discharge welding be used to attach bare wire thermocouples to the following materials:

(a) P-No. 5A, Group No. 1
(b) P-No. 5B, Group No. 1
(c) P-No. 15E, Group No. 1

with a minimum wall thickness of less than 0.20 in. (5.0 mm) without requiring postweld heat treatment in accordance with PW-39?

Reply: It is the opinion of the Committee that capacitive discharge welding may be used to attach bare wire thermocouples to the materials described in the Inquiry with a minimum wall thickness of less than 0.20 in. (5.0 mm) without requiring postweld heat treatment in accordance with PW-39, provided the following requirements are met:

(a) The requirements for PW-39.8 are met.
(b) The maximum carbon content of the base material is restricted to 0.15%.
(c) Prior to using the welding procedure, the Manufacturer shall demonstrate that the heat-affected zone does not encroach upon the minimum wall thickness.
(d) This Case number shall be shown on the Manufacturer’s Data Report or Manufacturer’s Partial Data Report for the welded component.

"A"
(a) P-No. 1 Group No. 1, 2, 3
(b) P-No. 4 Group No. 1, 2
(c) P-No. 5A, Group No. 1
(d) P-No. 5B, Group No. 1
(e) P-No. 15E, Group No. 1

The Committee’s function is to establish rules of safety, relating only to pressure integrity, governing the construction of boilers, pressure vessels, transport tanks and nuclear components, and inservice inspection for pressure integrity of nuclear components and transport tanks, and to interpret these rules when questions arise regarding their intent. This Code does not address other safety issues relating to the construction of boilers, pressure vessels, transport tanks and nuclear components, and the inservice inspection of nuclear components and transport tanks. The user of the Code should refer to other pertinent codes, standards, laws, regulations or other relevant documents.