

January 24, 2014

ASME Section XI Secretary
ASME Boiler and Pressure Vessel Committee
Two Park Avenue
New York, NY 10016-5990

Subject: Code Inquiry: ASME Code Case N-661-1, "Alternative Requirements for Wall Thickness Restoration of Class 2 and 3 Carbon Steel Piping for Raw Water Service, Section XI, Division 1"

The following is a request for interpretation of the American Society of Mechanical Engineers (ASME) Boiler & Pressure Vessel Code, Section XI, regarding the application of weld material to restore pipe wall thickness as specified using ASME Code Case N-661-1.

I thank you in advance for considering this inquiry. I plan on attending the next ASME Boiler & Pressure Vessel Code meeting in San Diego, and will plan to attend the Section XI inquiry session and the other related meetings to help explain the specifics of the inquiry. I look forward to these discussions.

Sincerely,

/RA/

Timothy R. Lupold
Branch Chief
Component Performance, NDE, and Testing Branch
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission

Enclosure:
Request for ASME Code Interpretation

cc: Ryan Crane

Purpose: Request for ASME Code Interpretation

Background:

ASME Code Cases N-661, N-661-1 and N-661-2 provide alternative requirements for the restoration of wall thickness for Class 2 and Class 3 carbon steel piping for raw water service. The requirements of the code case include provisions in section 5, "Installation" under paragraph (b) related to through wall repairs. The requirements provide for accomplishing the sealing of the through-wall defect with weld metal using a qualified weld procedure suitable for open-root welding.

From ASME Code Case N-661-1:

5 Installation

...

(b) If through-wall repairs are required [necessary in N-661-2] to satisfy the acceptance criteria, or result from application of the weld overlay (footnote 6 added in N-661-2), they shall be accomplished by sealing with weld metal using a qualified weld procedure suitable for open-root welding. This weld shall be examined in accordance with 5(a). In addition, the first layer of overlay over the repaired area shall be examined in accordance with 5(a).

...

⁶Testing has shown that piping with areas of wall thickness less than the diameter of the electrode may burn-through during application of a water-backed weld overlay.

Applicability: ASME Code Cases N-661, N-661-1, N-661-2

Proposed Inquiry:

Subject: ASME Code Case N-661-1, Through-wall Repairs.

Inquiry 1: Does ASME Code Case N-661-1 require accomplishing through-wall repairs by sealing only with weld metal when through-wall repairs are required to satisfy the acceptance criteria, or result from application of weld overlay?

Reply 1: Yes.

Inquiry 2: Does ASME Code Case N-661-1 permit repairing through wall leaks by installing a metal plug into the through-wall opening and incorporating the plug into the weld overlay?

Reply 2: No.

ENCLOSURE