



ENCLOSURE

REQUEST FOR RELIEF ISI-1

Components: 1) Various piping systems and 2) uncladded vessel welds in ferritic material less than 2-1/2 inches in thickness.

Class: 1 and 2

Inspection Requirement: Ultrasonic examination of welds, paragraph T-530 of ASME Section V, Article 5, 1974 Edition, Summer 1975 Addenda as referenced in paragraph IWA-2232 of ASME Section XI 1974 Edition Summer 1975 Addenda.

Basis For Relief: Paragraph T-533.2(a) of Article 5 of ASME Section V requires that the basic calibration block include a basic calibration hole drilled parallel to the contact surface. However, paragraph T-533.2(b) permits the use of other calibration reflectors provided equivalent responses to that from the basic calibration hole are demonstrated.

TVA currently uses 5% notches in lieu of side drilled holes. Although the use of the 5% notch cannot be shown to be equivalent in all cases to the applicable side-drilled holes, TVA considers that examinations performed to date are technically acceptable based on the calibration requirements of paragraph III-3430 of Appendix III and Supplement 7 to the 1977 Edition, Summer 1978 Addenda of ASME Section XI. This later code edition requires the use of 10% notches located on the I.D. and O.D. surface for examination of austenitic steel and dissimilar metal welds. The calibration notches for ferritic material are 10%t when t is less than .312" and .104t-.009"t for material .312"-6" thick. TVA's use of 5% notches is considerably more conservative than the latest approved code requirements.

Paragraph T-537 of ASME Section V 1974 Edition Summer 1975 Addenda requires evaluation of all indications in excess of 20% of the reference level (distance-amplitude-correction curve). The inherent difficulties in fulfilling these requirements have been recognized and changes incorporated into the Summer 1978 Addenda to ASME.

Section XI, Appendix III-4500 and IWA-2232, which require recording of all indications greater than 50% DAC with an evaluation required of those indications greater than 100% DAC.

Alternate Inspection:

TVA proposes to continue the use of notches located on the I.D. and O.D. surfaces at a nominal depth of 5%t as reference reflectors. However, TVA at its discretion may use notches at a nominal depth up to 10%t as permitted by the Summer 1978 Addenda of Section XI. Further, TVA proposes to continue the detailed evaluation of all reflectors which exceed the 100% DAC and the recording of all other indications greater than 50% DAC. TVA considers the use of strip chart recorders as an acceptable recording method for the latter requirement.