ABSTRACT

ANALYSIS RADIOGRAPHY EXAMINATION ON THE LOWER DRUM IN BARATA INDONESIA INC

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Boiler is a device used to generate steam above atmospheric pressure. Boiler has a section called the lower drum. Lower drum is placed in the bottom of the boiler water tube boiler type under the upper drum. The specification of lower drum to be radiographic tested made of plate steel, SA 516 Gr 70, designed with a pressure of 33 kg/cm² and steam capacity of 35,000 kg/hr. Therefore it must be done full radiography in butt weld connections in accordance with the provisions of ASME Section VIII UW-11.

Exposure techniques used in this examination is SWSI (Single Wall and Single Image). SWSI technique type used is an internal source technique for the longitudinal weld and panoramic technique for circumferential weld. Film radiography examination results are evaluated based on the physical condition of the film (artifact) and the interpretation of indications on the welding area.

Test results indicate that the film density does not meet the criteria of ASME Section V so that the required re-shooting. Films that do not meet the criteria contained in the D-E segment CWL 3 joint. In addition, radiographic testing at lower drum found indications of defects in the segment I-J is located in CWL 4 joint. Indications of defects found is the cluster porosity to do repair because it does not meet the admission standards of ASME Section VIII.

Key words: lower drums, boilers, interpretation, artifacts, panoramic techniques, internal source technique