Risk-based Approach and its Applications in Waste Heat Boiler

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ABSTRACT

Risk-based approach is gaining acceptance in the power sector as a means of managing plant assets. It involves the determination of the likelihood of failure for a particular component and assessing the safety and financial consequences that may result from the failure. Risk ranking of components can then be developed and used as input to inspection and maintenance planning. Obvious benefits can be derived from such approach as it allows resources to be utilized in a more cost-effective manner.

From regulatory point of view, a well established risk-based inspection programme is a demonstration of good industry practice. With the prevailing trend where the granting of approval for continued operation of pressure vessel is linked to good maintenance and inspection practice, power plant owners stand to benefit significantly through longer intervals between inspection.

This paper examines some of the issues related to the implementation and establishment of risked-based programme in power plants and highlights the benefits that may be accrued.