

STUDYING OF BOILER CORROSION AT KUWAIT OIL AND GAS COMPANIES

Nader S Th O S Alazemi & Mohd Radzi Haji Che Daud

*Research Scholar, Department of Manufacturing and Materials Engineering, International Islamic University Malaysia,
Kuala Lumpur, Malaysia*

ABSTRACT

Kuwait is one of the major producers and exporter of crude oil around the world, which is used as fuel for energy during the steam generation in the industrial boilers. However, due to presence of the various chemical substances, in boiler surface it creates corrosion problem. The corrosion problem has led to billions of dollars' worth of loss every year in various organizations. Many researchers and practitioners have put a lot of effort to find out efficient solutions. Every industry has different responsibilities and structure, so it is difficult to apply one solution for every industry. To fill this research gap and build up a new prevention system, this research work was carried out. Systematic literature reviews formed the preliminary research work in the context of corrosion, all the factor and source of corrosion have been found out and the prevention system is presented. After finding out the list of all element and anomalies of previous work, created a five-point Likert scale boiler corrosion survey and to get empirical validation, convenience sampling survey conducted at various oil and gas industry of Kuwait. We used SPSS 2.0 to find the skewness and the set of main factors for the problem. With the help of design science approach, a new corrosion prevention management framework that can be applicable at each industry has beendeveloped.

KEYWORDS: *Boiler Corrosion, Kuwait, Boiler, Prevention Management*

Article History

Received: 19 Feb 2020 | Revised: 25 Feb 2020 | Accepted: 03 Mar 2020
