



Study of the Product Failure Modes and Effects Analysis (PFMEA) on Welding Process- A Review

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ABSTRACT: The success of any organization depends on the quality of product especially right product produced because of manufacturing defects or errors are always the key concerns of any manufacturing industry. One of the successful tools for finding the failure mode and its effect in manufacturing process is PFMEA (Product failure mode effect analysis). By PFMEA we can find out how critical the process is and we can take action to reduce the failure in product and improve the manufacturing process.

An attempt is made in the present paper to provide a brief review of the Product Failure Modes and Effects Analysis (PFMEA) of welding to improve product quality. After the complete study of the manufacturing process and production data – failure causes, failure rate, & other relevant data etc., FMEA discovered the weak processes in the form of higher risk priority number in the manufacturing of product, which required reducing by identifying and implementing mitigation actions and this will improve the process and product quality & productivity.

Keywords-- Quality improvement, FMEA, PFMEA

INTRODUCTION

Failure mode and effects analysis (FMEA)—also "failure modes," plural, in many publications—was one of the first highly structured, systematic techniques for failure analysis. It was developed by reliability engineers in the late 1950s to study problems that might arise from

malfunctions of military systems. An FMEA is often the first step of a system reliability study. It involves reviewing as

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ISSN : 2278-6848



9 772278 684800 03
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