THE EFFECTIVENESS OF A FAILURE MODE AND EFFECTS ANALYSIS ON A COGENERATION PLANT

A Major Qualifying Project Report

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by

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This MQP contains information deemed confidential to the business interest of the industrial sponsor. Please contact Stephen Kmiotek at sjkmiotek@wpi.edu for additional information.

Abstract

A Failure Modes and Effects Analysis (FMEA) is an organized procedure used to determine where an industrial process requiring improvement. An FMEA identifies the components or pieces of equipment in a process that are most likely to fail as well as the components that will have the greatest impact on the process if failure occurs. This project illustrates how to utilize an FMEA on an industrial process to identify and rank problem areas. An FMEA was conducted on a sample plant and the results were used to identify the effectiveness, advantages and disadvantages of using an FMEA as a process safety tool.