

First Author, et al.

## **Implementation Of Automatic Dust Detector On Dust Suppression System On Transfer Tower 0 In Paiton 9 Power Plants**

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The operation of dust suppressor and dust collector was operating semi-manually by pressing the power button on the local panel during the initial unloading of coal material from the barge or stockpile, where local operators manage several large areas. This research is carried out on the implementation of Automatic Dust Detector for Dust Suppression operational at Paiton Unit 9 power plants with the aim of increasing the efficiency of operator and equipment performance. We use House of Quality (HOQ) as a determinant of the priority scale for technical response to be implemented, namely the addition of an Automatic Dust Detector. The results obtained showed a decrease in the calculation of the dust suppression operating time, i.e. from 5 hour 54 minutes to 5 hour 6 minutes, from 1005,36L/barge to 869,04L/barge for water consumption, and 1L/barge to 0,86L/barge for chemical use. Furthermore, the implementation of the Automatic Dust Detector can significantly increase efficiency at least 15% from operating time difference.