APPLICATION OF DMAI AND FMEA METHOD FOR QUALITY IMPROVEMENT OF CEMENT RETARDER (GYPSUM GRANULATED) AT UNIT III CEMENT RETARDER PLANT PT. PETROKIMIA GRESIK

Name : RANGGA ADHI PRADIPTA
NRP : 2506 100 088
Department : Industrial Engineering FTI-ITS
Supervisor : H. Hari Supriyanto Ir., MSIE

ABSTRACT

Cement retarder factory is one of non fertilizer plant at PT. Petrokimia Gresik, where the factory produce cement retarder (gypsum granulated) which is the raw material for cement. Management expects that cement retarder factory can produce optimally or even be able to operate above the rate of production of cement retarder. But in reality to get a big production of cement retarder have some common problems. Then the author tries to find solutions these problems by using the concept of Six Sigma to improve product quality cement retarder. The tools are used in this thesis is Big Picture Mapping. The function BPM is used to obtain a clear picture of the physical flow and information flow, while to find the root causes analyze is used RCA. To obtain the value of RPN and alternative solutions used FMEA and for the selection of the best alternative solutions used the concept of value management. The results from the Ppk and Pp value of the process capabilities with the most frequent content of off specifications on the unit 3 factories cement retarder is P2O5 water soluble content, total P2O5 and H2O crystals. Based on the RCA obtained the cause of the types of disturbance on the content of P2O5 water soluble, total P2O5 and H2O crystals. Based on the alternative and performance measurement also cost measurement value was found that a combination of improvement alternatives one and three is the best recommendation.

Keywords: Six sigma, DMAI, RCA, FMEA, Cement Retarder.
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