ABSTRACT

Design Pokayoke System On Process Installation Bolt Module airbag, (case study) in PT. Suzuki Indomobil Motor

A review of failures in the process and the main cause of defects, then design, and choosing the right system to meet the needs of the process fitting bolt module airbag on shower test station section Final Inspection PT. Suzuki Indomobil Motor. By observation, literature study and interview the employee, the engineer, and supervisor of the company. Analysis by the method of P-FMEA (Failure Mode Effect Analyze-Process) to measure the value of RPN (Risk Priority Number) of the process, then predict the main cause of failure with Fishbone Diagram analysis, and analysis 5Why. From these measures, the conclusion that the flow of current production process, can still cause failures (defects), and allows the product under the standard accepted by contomers. Researches deems it necessary to do the design of making an error detection system (pokayoke) which can be used in the Fitting and tightening bolt airbag module, which is able to meet the desired criteria that is, a product defect should not be up to consumers, if the problem occurs the production line must stop, inform, and the system show / tell you that there is a problem. Using the 7 steps pokayoke design development, researchers made two alternative pokayoke system. And of two alternative systems designed pokayoke, then the alternative pokayoke-1 system is more appropriate to be applied, because the alternative-1 has the ability to stop the line when a miss tightening bolt. By using a system of alternative pokayoke-1, predicted to reduce the RPN of the previous 160 to 10.

Keywords: (Process) Failure Mode Effect Analyze, Fishbone Diagram, 5Why, 7 Steps Pokayoke development.

ABSTRAK

Perancangan System Pokayoke Pada Proses Pemasangan Bolt Modul Airbag, Studi kasus di PT. Suzuki Indomobil Motor

Peninjauan kegagalan pada proses dan penyebab utama defect, kemudian merancang, dan memilih sistem yang tepat untuk menjawab kebutuhan pada proses fitting bolt modul airbag stasiun shower test section Final Inspection PT. Suzuki Indomobil Motor. Dengan observasi, studi literatur dan interview kepada karyawan, pihak engineering, dan pembimbing dari pihak perusahaan. Analisa dengan metode P-FMEA (Failure Mode Effect Analyze-Process) untuk mengukur nilai RPN (Risk Priority Number) dari proses, kemudian memprediksi penyebab kegagalan utama dengan analisa Fishbone Diagram, dan Analisa 5Why. Dari langkah tersebut, diperoleh kesimpulan bahwa alur proses produksi saat ini, masih dapat menimbulkan kegagalan(defect), dan memungkinkan produk dibawah standard diterima oleh konsumen.Peneliti memandang perlu dilakukan perancangan pembuatan sistem pendeteksi kesalahan (pokayoke) yang dapat digunakan pada proses Fitting dan Tightening bolt modul Airbag, yang mampu memenuhi kriteria yang diinginkan yaitu, produk defect tidak boleh sampai ketangan konsumen, saat terjadi masalah line produksi harus stop, memberitahu, dan sistem menampilkan / memberitahu bahwa terjadi masalah. Menggunakan 7 langkah perancangan pengembangan pokayoke, peneliti membuat 2 alternatif sistem pokayoke. Dan dari 2 alternatif sistem pokayoke yang dirancang, maka sistem pokayoke alternatif-1 yang lebih tepat diterapkan, karena alternatif-1 mempunyai kemampuan untuk menghentikan proses line ketika terjadi miss tightening bolt. Dengan menggunakan sistem pokayoke alternatif-1, diprediksi mampu menurunkan nilai RPN dari sebelumnya 160 menjadi 10.

Kata kunci : (Process) Failure Mode Effect Analyze, Fishbone Diagram 5Why, 7 Langkah pengembangan Pokayoke.