

ABSTRAK

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Judul Laporan Skripsi : Analisis pengendalian kualitas produk part handguard pada proses pressing menggunakan metode fault tree analysis (fta) dan failure modes and effects analysis (fmea) di PT. Metalindo Teratai Putra.

Pembimbing : Betrizta Hanum ST, MT.

PT. Metalindo Teratai Putra adalah perusahaan yang bergerak dibidang manufacture bahan dasar metal yang memproduksi produk tabung gas dan kompor. Permasalahan yang terjadi pada komponen produk tabung gas yaitu part handguard yang mengalami jumlah defect melebihi standar sebesar 11% serta standar yang ditetapkan oleh perusahaan sebesar 1%. Pada penelitian ini menggunakan metode FTA, dan FMEA, hasil pengolahan data diperoleh 4 jenis defect seperti defect roll pipa melebar, marking of center, potong pipa pendek, dan penyok forming. Defect yang diketahui berdasarkan diagram pareto yaitu defect roll pipa melebar sebesar 35%, potong pipa pendek 25%, penyok forming 22%, dan marking of center 17% dan faktor penyebab yang diketahui dengan menggunakan metode FTA terdapat 5 faktor penyebab seperti manusia, mesin, metode, dan material. Hasil identifikasi FMEA dan perhitungan RPN tertinggi, dapat diketahui bahwa tekanan angin berubah rubah sebesar 448, Kebocoran pada selang hidrolik 288, dan Material buri 282. Untuk usulan perbaikan yaitu melakukan pengecekan secara rutin pada mesin oleh pihak maintenace pada proses handguard dan melakukan pengecekan sebelum melakukan pekerjaan dan setelah pekerjaan, agar mengetahui informasi hasil produksi serta kendala yang di alami oleh operator saat proses roll pipa.

Kata kunci: Pengendalian Kualitas, Defect, FTA, FMEA

ABSTRACT

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Study Program : Industrial Engineering
Title Internship Report/Thesis/Dissertation : Analysis of product quality control of handguard parts in the pressing process using the fault tree analysis (fta) and failure modes and effects analysis (fmea) methods at PT. Metalindo Lotus Putra.
Counsellor : Betrizta Hanum ST, MT.

PT. Metalindo Teratai Putra is a company engaged in the manufacturing of metal base materials that produces gas cylinders and stoves. The problems that occur in the components of gas cylinder products are handguard parts that experience a number of defects that exceed the standard of 11% and the standard set by the company of 1%. In this study using the FTA and FMEA methods, the results of data processing obtained 4 types of defects such as wide pipe roll defects, marking of centers, short pipe cuts, and dent forming. The defects that often occur based on the Pareto diagram are pipe roll defects that are widened by 35%, cut short pipes by 25%, dent forming by 22%, and marking of center by 17% and the causal factors known using FTA are 5 causal factors such as humans, machines, methods, and materials. The results of the identification of FMEA and the calculation of the highest RPN, it can be seen that the wind pressure is too low at 329, the performance of employees who do not comply with the SOP is 249, and the material is eroded 280. For the proposed improvement, namely carrying out routine checks on the machine by the maintenance party in the handguard process and carrying out checking before doing work and after work, in order to find out information on production results and the constraints experienced by operators during the pipe roll process.

Keywords: Quality Control, Defect, FTA, FMEA