

ABSTRAK

Proses produksi mekanik PT Rekindo Global Jasa meliputi Laser cutting, Bending, Welding, Grinding, dan Finishing pengecatan yang masih bergantung pada aktivitas manual, sehingga rentan terhadap human error. Penelitian ini bertujuan untuk mengetahui kategori dari *human error* yang terjadi pada proses produksi menggunakan *Systematic Human error Reduction and Prediction Approach* (SHERPA), untuk mengukur probabilitas terjadinya *human error* dengan menggunakan *Human error Assessment and Reduction Technique* (HEART), kemudian menggunakan diagram pareto untuk menentukan peringkat risiko, serta menyusun usulan perbaikan melalui pendekatan Root Cause Analysis (RCA). Hasil penelitian menunjukkan potensi *human error* pada seluruh tahapan proses produksi mekanik terdapat kategori *action error*, *checking error*, *retrieval error*, dan *selection error*. Nilai HEP tertinggi sebesar 0,749 pada proses Grinding, dengan diikuti 12 *task* lainnya yang menjadi *task* prioritas berdasarkan diagram pareto. Usulan perbaikan dilakukan dengan merancang persiapan kerja operator pada tahap sebelum, saat dan setelah pekerjaan. Penelitian ini juga mendukung penerapan SDG nomor 8 yaitu *Decent Work and Economic Growth*.

Kata kunci: *human error*, SHERPA, HEART, proses produksi mekanik, *Decent Work and Economic Growth*.

ABSTRACT

The mechanical production process at PT Rekindo Global Jasa consists of laser cutting, bending, welding, grinding, and painting finishing operations, which still rely heavily on manual activities and are therefore vulnerable to human error. This study aims to identify the categories of *human error* occurring in the production process using the Systematic *Human error* Reduction and Prediction Approach (SHERPA), assess the probability of *human error* using the *Human error* Assessment and Reduction Technique (HEART), determine risk priorities through Pareto analysis, and develop improvement proposals using the Root Cause Analysis (RCA) approach. The results indicate that potential human errors across all stages of the mechanical production process fall into the categories of action errors, checking errors, retrieval errors, and selection errors. The highest *Human error* Probability (HEP) value was 0.749 in the grinding process, followed by 12 other tasks identified as priority tasks based on the Pareto diagram. Improvement proposals were developed by designing operator work-preparation procedures covering activities before, during, and after work. This study also supports the implementation of Sustainable Development Goal (SDG) No. 8, namely Decent Work and Economic Growth.

Keywords: human error, SHERPA, HEART, mechanical production process, Decent Work and Economic Growth.