

INTISARI

Penelitian ini berjudul "Sistem Pendukung Keputusan Penentuan Prioritas Pengerjaan Order Produksi Karoseri Menggunakan Metode ELECTRE Berbasis *Web*". Tujuan penelitian ini adalah merancang dan mengembangkan Sistem Pendukung Keputusan (SPK) berbasis *web* untuk menentukan prioritas pengerjaan order produksi karoseri di PT Trijaya Union guna mengurangi risiko keterlambatan. Variabel kriteria yang digunakan meliputi lama order sejak Surat Perintah Kerja (SPK) diterbitkan, kesiapan material, Progres Aktual, Kesiapan alat dan mesin, dan Kesiapan metode kerja. Metode analisis yang diterapkan dalam menentukan prioritas adalah metode ELECTRE (*Elimination and Choice Translating Reality*), sedangkan pengembangan perangkat lunak menggunakan metode *Rapid Application Development* (RAD). Hasil penelitian menunjukkan bahwa sistem pendukung keputusan berbasis *web* telah berhasil dikembangkan menggunakan *framework* Laravel dan basis data MySQL. Penerapan metode ELECTRE terbukti efektif dalam memproses data SPK dan menghasilkan urutan prioritas yang objektif, di mana alternatif SPK dengan skor dominasi tertinggi direkomendasikan untuk segera dirilis ke rantai produksi. Pengujian *Black Box Testing* menunjukkan bahwa seluruh fungsionalitas sistem berjalan 100% valid dan sesuai dengan spesifikasi kebutuhan pengguna tanpa adanya kesalahan. Kesimpulan dari penelitian ini adalah sistem pendukung keputusan berbasis ELECTRE berhasil dibangun dan mampu memberikan solusi objektif atas permasalahan penentuan prioritas produksi yang sebelumnya dilakukan secara manual. Pengujian penerimaan pengguna menggunakan *System Usability Scale* (SUS) menghasilkan skor rata-rata sebesar 85,88 yang masuk dalam kategori "*Excellent*". Hal ini membuktikan bahwa sistem yang dikembangkan memiliki tingkat kebergunaan (*usability*) yang sangat baik dan mudah dioperasikan oleh pihak perusahaan.

Kata kunci: Sistem Pendukung Keputusan, Prioritas Produksi, Karoseri, ELECTRE, RAD

ABSTRACT

This research is entitled "Web-Based Decision Support System for Determining Carrosserie Production Order Priority Using the ELECTRE Method". The objective of this research is to design and develop a web-based decision support system (DSS) to determine the priority of carrosserie production orders at PT Trijaya Union to reduce the risk of delays. The criteria variables used include the length of the order since the Work Order (SPK) was issued, material readiness, Design, Interior, and Exterior (measured based on the remaining deadline ratio and the actual work progress percentage). The analysis method applied in determining the priority is the ELECTRE (Elimination and Choice Translating Reality) method, while the software development utilizes the Rapid Application Development (RAD) method. The results showed that the web-based decision support system was successfully developed using the Laravel framework and MySQL database. The application of the ELECTRE method proved effective in processing SPK data and producing an objective priority ranking, where the SPK alternative with the highest domination score is recommended to be immediately released to the production floor. Black Box Testing showed that all system functionalities are 100% valid and run according to user requirement specifications without any errors. The conclusion of this research is that the ELECTRE-based decision support system was successfully built and is able to provide an objective solution to the problem of determining production priorities which was previously done manually. User acceptance testing using the System Usability Scale (SUS) resulted in an average score of 85.88, falling into the "Excellent" category. This proves that the developed system has very good usability and is easy for the company to operate.

Keywords: Decision Support System, Production Priority, Carrosserie, ELECTRE, RAD