

ABSTRAK

Nama : Joseph Junior
NPM : 062330200300
Jurusan : Teknik Mesin
Program Studi : Diploma Tiga Teknik Mesin
Judul Laporan Akhir : Rekondisi Mesin *Bandsaw* Krisbow Horizontal KW
15-52 di Bengkel Teknik Mesin Politeknik Negeri
Sriwijaya (Perbaikan)

(2026: xiii + 68 Halaman + 14 Gambar + 21 Tabel + 7 Lampiran)

Mesin *Bandsaw* merupakan salah satu mesin perkakas yang digunakan untuk proses pemotongan material logam dengan tingkat ketelitian dan efisiensi yang baik. Mesin *Bandsaw* Krisbow KW 15-52 yang terdapat di Bengkel Mekanik Jurusan Teknik Mesin Politeknik Negeri Sriwijaya mengalami berbagai kerusakan sehingga tidak dapat digunakan untuk kegiatan praktikum. Tujuan penelitian ini adalah melakukan rekondisi Mesin *Bandsaw* Krisbow KW 15-52 agar dapat berfungsi kembali sesuai dengan kondisi operasionalnya. Metode yang digunakan meliputi observasi, wawancara, diskusi, identifikasi kerusakan, perencanaan perbaikan, proses rekondisi, serta pengujian fungsi dan kinerja mesin. Hasil identifikasi menunjukkan adanya kerusakan pada motor listrik akibat *short circuit*, keausan *bearing as pulley*, keausan ulir poros ragum, kebocoran sistem *hydraulic feed control*, hilangnya pasak *handle* ragum, hilangnya *v-belt*, kerusakan sistem kelistrikan, kondisi pompa *coolant* yang kotor, serta *body* mesin yang kusam dan berkarat. Tindakan perbaikan yang dilakukan meliputi *rewinding* motor listrik, penggantian *bearing*, pembuatan ulang ulir trapesium TR20×4, perbaikan sistem hidrolik, pembuatan pasak baru, pemasangan *v-belt*, pembersihan sistem *coolant*, dan pengecatan ulang *body* mesin. Hasil pengujian menunjukkan bahwa seluruh komponen yang telah diperbaiki dapat berfungsi dengan baik dan mesin mampu beroperasi kembali secara normal. Dengan demikian, proses rekondisi yang dilakukan berhasil mengembalikan fungsi dan kinerja Mesin *Bandsaw* Krisbow KW 15-52 sehingga layak digunakan kembali sebagai sarana praktikum di Bengkel Mekanik.

Kata kunci: Rekondisi, Mesin *Bandsaw*, Perbaikan Mesin, *Hydraulic Feed Control*, Krisbow KW 15-52.

ABSTRACT

Reconditioning of the Krisbow KW 15-52 Horizontal Bandsaw Machine at the Mechanical Workshop of the Mechanical Engineering Department, Sriwijaya State Polytechnic

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Joseph Junior

NPM. 062330200300

**DIPLOMA THREE MECHANICAL ENGINEERING STUDY PROGRAM
MECHANICAL ENGINEERING DEPARTMENT
STATE POLYTECHNIC OF SRIWIJAYA**

A bandsaw machine is one of the machine tools used for cutting metal materials with good accuracy and efficiency. The Krisbow KW 15-52 Bandsaw Machine at the Mechanical Workshop of the Mechanical Engineering Department, Politeknik Negeri Sriwijaya, experienced various failures that prevented it from being used for practical learning activities. This study aims to recondition the Krisbow KW 15-52 bandsaw machine so that it can operate properly according to its intended function. The research methods included observation, interviews, discussions, damage identification, repair planning, reconditioning processes, and machine performance testing. The identification results revealed several failures, including an electric motor short circuit, worn pulley shaft bearings, worn vise screw threads, leakage in the hydraulic feed control system, a missing vise handle key, a missing V-belt, damaged electrical wiring, a dirty coolant pump system, and a corroded machine body. The repair activities consisted of electric motor rewinding, bearing replacement, manufacturing a new TR20×4 trapezoidal thread, hydraulic system repair, fabrication of a new key, V-belt installation, coolant system cleaning, and machine repainting. The testing results showed that all repaired components functioned properly and the machine was able to operate normally again. Therefore, the reconditioning process successfully restored the functionality and performance of the Krisbow KW 15-52 Bandsaw Machine, making it suitable for reuse as practical training equipment in the mechanical workshop.

Keywords: *Reconditioning, Bandsaw Machine, Machine Repair, Hydraulic Feed Control, Krisbow KW 15-52.*