

ABSTRAK

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Mesin Bubut Celtic 14 merupakan salah satu media praktik utama di Bengkel Produksi Jurusan Teknik Mesin Politeknik Negeri Sriwijaya yang telah digunakan sejak tahun 1982. Pemakaian yang intensif selama lebih dari empat dekade menyebabkan penurunan kinerja, terutama pada sistem kelistrikan dan komponen kontaktor. Kondisi ini menimbulkan berbagai permasalahan seperti konsleting, keausan, dan gangguan operasional yang berdampak pada kualitas hasil pembubutan serta keselamatan kerja. Oleh karena itu, dilakukan rekondisi terhadap kontaktor mesin bubut Celtic 14 sebagai upaya untuk mengembalikan performa mesin mendekati standar pabrikan. Metode penelitian yang digunakan meliputi observasi langsung, wawancara dengan teknisi, studi literatur, serta dokumentasi proses perbaikan. Tahapan rekondisi dilakukan secara sistematis, mulai dari identifikasi kerusakan, pembongkaran komponen, inspeksi detail, penggantian atau perbaikan bagian yang rusak, hingga perakitan kembali dan pengujian akhir, kekuatan material, serta performa operasional mesin. Hasil pengujian menunjukkan bahwa mesin mampu beroperasi kembali secara normal dengan putaran spindle stabil, suara transmisi halus, Rekondisi ini memberikan manfaat nyata berupa perpanjangan umur pakai mesin, peningkatan keandalan operasional, serta dukungan terhadap kegiatan praktikum mahasiswa. Dengan demikian, rekondisi kontaktor pada Mesin Bubut Celtic 14 terbukti efektif dalam mengembalikan fungsi

Kata Kunci: Rekondisi mesin, Mesin Bubut Celtic 14, Kontaktor, Perawatan mesin

ABSTRACT

Contactor Reconditioning On The Celtic 14 Lathe Machine At Sriwijaya State Polytechnic

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The Celtic 14 Lathe Machine is one of the main practice media in the Production Workshop of the Mechanical Engineering Department at Politeknik Negeri Sriwijaya, which has been in use since 1982. Intensive operation for more than four decades has led to performance degradation, particularly in the electrical system and contactor components. This condition has caused various problems such as short circuits, wear, and operational disturbances, which affect both the quality of machining results and work safety. Therefore, reconditioning of the contactor in the Celtic 14 lathe was carried out as an effort to restore the machine's performance close to factory standards. The research method employed includes direct observation, interviews with technicians, literature study, and documentation of the repair process. The reconditioning stages were conducted systematically, starting from damage identification, component disassembly, detailed inspection, replacement or repair of defective parts, followed by reassembly and final testing of material strength and machine operational performance. The test results showed that the machine was able to operate normally again with stable spindle rotation and smooth transmission sound. This reconditioning provided tangible benefits in the form of extended machine lifespan, improved operational reliability, and support for student practicum activities. Thus, the reconditioning of the contactor in the Celtic 14 lathe proved effective in restoring its function.

Keywords: Machine reconditioning, Celtic 14 Lathe, Contactor, Machine maintenance