

ABSTRACT

The production process in the manufacturing industry still uses human resources in working, there are manual handling conditions that can cause fatigue in workers. Fatigue of a worker can affect the attitude of the worker, where the worker moves unergonomically, such as working with the wrong posture position. In the production process at CV. Sahabat Teknik, operators experience work attitudes such as standing too long, squatting, bending and making repetitive movements that result in fatigue, discomfort and pain in the limbs and require improvements to work postures to reduce the risk of musculoskeletal disorders (MSDs) using ergonomic analysis, namely the Rapid Upper Limb Assessment (RULA) method and the Nordic Body Map questionnaire. The RULA method is used to assess upper limb complaints. The results of the RULA assessment of CV. Sahabat Teknik operators show a high level of risk, the assessment of grinding machine operators, lathe operators, milling machine operators, welding operators and electrical operators shows action level 3, and the assessment of painting operators and electrical operators shows action level 4. Proposed improvements are made by changing the posture of the operator when working, the grinding machine operator, milling machine operator, welding operator, and assembly operator obtain action level 2 and the proposed posture of the lathe operator, painting operator and electrical operator obtain action level 1.

Keywords: Ergonomics, Posture, Musculoskeletal Disorders (MSDs), Rapid Upper Limb Assessment (RULA), Nordic Body Map

ABSTRAK

Proses produksi pada industri manufaktur masih menggunakan sumber daya manusia dalam berkerja, terdapat kondisi *manual handling* yang dapat menimbulkan kelelahan pada pekerja. Kelelahan seorang pekerja dapat mempengaruhi sikap pekerja, dimana pekerja bergerak secara tidak ergonomis, seperti berkerja dengan posisi postur tubuh yang salah. Pada proses produksi di CV. Sahabat Teknik operator mengalami sikap kerja seperti berdiri terlalu lama, jongkok, membungkuk dan melakukan gerakan yang berulang-ulang sehingga mengakibatkan kelelahan, ketidaknyamanan dan nyeri pada anggota tubuh dan memerlukan perbaikan terhadap postur kerja untuk mengurangi resiko *musculoskeletal disorders* (MSDs) dengan menggunakan analisa ergonomi yaitu metode *Rapid Upper Limb Assessment* (RULA) dan kuesioner *Nordic Body Map*. Metode RULA digunakan untuk menilai keluhan anggota tubuh bagian atas. Hasil penilaian RULA terhadap operator CV. Sahabat Teknik menunjukkan tingkat resiko yang tinggi, penilaian terhadap operator mesin grinda, operator mesin bubut, operator mesin milling, operator pengelasan dan operator kelistrikan menunjukkan *action level 3*, dan penilaian pada operator pengecatan dan operator kelistrikan menunjukkan *action level 4*. Usulan perbaikan dilakukan dengan mengubah postur tubuh operator ketika berkerja, operator mesin gerinda, operator mesin milling, operator pengelasan, dan operator perakitan memperoleh tingkat *action level 2* dan usulan postur tubuh operator mesin bubut, operator pengecatan dan operator kelistrikan memperoleh tingkat *action level 1*.

Kata Kunci: Ergonomi, Postur Tubuh, *Musculoskeletal Disorders* (MSDs), *Rapid Upper Limb Assessment* (RULA), *Nordic Body Map*.