

ABSTRAK

Laboratorium sistem manufaktur merupakan salah satu laboratorium yang terdapat di Universitas Trunojoyo Madura Jurusan Teknik Industri. Laboratorium sistem manufaktur memiliki potensi bahaya dan risiko didalamnya seperti adanya kabel listrik yang berserakan. Kecelakaan kerja juga pernah terjadi di laboratorium sistem manufaktur seperti ketika operator mengoperasikan mesin *circular saw*, serbuk dan debu yang dihasilkan masuk kedalam mata operator. Berdasarkan latar belakang tersebut untuk mengurangi potensi bahaya dan kecelakaan maka diperlukan manajemen risiko meliputi identifikasi masalah, penilaian risiko, dan pengendalian risiko. Tujuan penelitian ini adalah mengidentifikasi dan menilai risiko yang dapat terjadi pada laboratorium sistem manufaktur, memetakan tingkat risiko pada laboratorium sistem manufaktur, dan menyusun mitigasi yang sesuai dengan risiko yang terdapat pada laboratorium sistem manufaktur. Metode penyelesaian masalah yang digunakan yaitu metode *Hazard Identification, Risk Assessment, and Risk Control* (HIRARC). Hasil identifikasi bahaya yang diperoleh terdapat 5 jenis potensi bahaya dan 105 risiko pada laboratorium sistem manufaktur. Hasil penilaian risiko pada laboratorium sistem manufaktur yaitu 32 risiko rendah, 39 risiko sedang, 33 risiko tinggi, 0 risiko ekstrem. Pengendalian risiko dilakukan mulai dari eliminasi, substitusi, rekayasa *engineering*, administratif, dan APD.

Kata Kunci: laboratorium, HIRARC, mitigasi, risiko.

ABSTRACT

The manufacturing systems laboratory is one of the laboratories at Trunojoyo Madura University, Department of Industrial Engineering. The manufacturing systems laboratory has potential dangers and risks, such as scattered electrical cables. Work accidents have also occurred in manufacturing systems laboratories, such as when the operator operated a circular saw machine, the resulting powder and dust entered the operator's eyes. Based on this background, to reduce the potential for danger and accidents, risk management is needed including problem identification, risk assessment and risk control. The aim of this research is to identify and assess risks that can occur in manufacturing systems laboratories, map the level of risk in manufacturing systems laboratories, and develop mitigation that is appropriate to the risks contained in manufacturing systems laboratories. The problem solving method used is the Hazard Identification, Risk Assessment, and Risk Control (HIRARC) method. The hazard identification results obtained contained 5 types of potential hazards and 105 risks in the manufacturing system laboratory. The results of the risk assessment in the manufacturing systems laboratory were 32 low risks, 39 medium risks, 33 high risks, 0 extreme risks. Risk control is carried out starting from elimination, substitution, engineering, administration and PPE.

Keywords: *laboratory, HIRARC, mitigation, risk..*