

## ABSTRACT

Risk analysis includes risk assessment, risk management and risk communication which are interconnected. Risk assessment provides input for risk management which discusses further about control, then risk communication plays role in the exchange of information in any process of risk assessment and risk management. The objective of this study was to analyze risk of the welding work of unit produksi 3 line A6 PT DutaCipta PakarPerkasa Surabaya.

This study was a observational study with cross-sectional approach. The objects of the study were the process of FCAW welding in line A6. Primary data were collected by means of interview and observation. Data were analyzed descriptively and displayed in tabulation of frequency which had been adjusted with the risk assessment matrix.

Based on this research, there were 22 potential hazards of welding work. There were 25 pure risks assesses, most of the risks (88%) were included in high-risk category. Risks control was applied technically, administratively and by providing of PPE. The implementation of risk control has been applied well, 100% of risks changed to lower risk category. Fifty nine point zero nine percent of high-risk category decreased to low risk category, 40.91% decreased to moderate risk and 100% moderate risk decreased to a low risk. Risk communication was done by interviews and providing information on the welder to support exchange of information on the process of risk assessment and risk management.

This study concluded that most of the risk FCAW welding work on line A6 including high-risk category. On the implementation of control, control measures has been applied well. Company are advised to implement control at moderate risk category based on risk evaluation.

Keyword : Risk analysis, risk assessment, welding work

## ABSTRAK

Analisis risiko meliputi *risk assessment* (identifikasi bahaya, penilaian risiko, tingkat risiko), *risk management* (penilaian pengendalian, risiko sisa, evaluasi risiko) dan *risk communication* yang ketiganya saling berhubungan. *Risk assessment* memberikan masukan untuk *risk management* yang membahas lebih luas tentang pengendalian, kemudian *risk communication* berperan dalam pertukaran informasi dalam setiap proses *risk assessment* dan *risk management*. Tujuan umum penelitian ini adalah melakukan analisis risiko pekerjaan pengelasan pada unit produksi 3 line A6 PT DUTACIPTA PAKARPERKASA Surabaya.

Penelitian ini termasuk penelitian observasional dan menurut waktunya termasuk penelitian *cross sectional*. Obyek penelitian adalah pekerjaan pengelasan pada line A6 yaitu pengelasan jenis FCAW. Data primer dikumpulkan melalui metode wawancara dan observasi. Data yang diperoleh dianalisis secara deskriptif dan ditampilkan dalam tabulasi frekuensi disesuaikan dengan *risk assessment matrix*.

Berdasarkan hasil penelitian, terdapat 22 potensi bahaya pekerjaan pengelasan. Penilaian risiko murni terdapat 25 risiko, sebagian besar risiko tersebut (88%) termasuk kategori risiko tinggi. Pengendalian risiko diterapkan perusahaan secara teknis, administratif dan penyediaan APD. Penerapan pengendalian risiko pekerjaan pengelasan telah diterapkan dengan baik, 100% risiko mengalami perubahan kategori risiko ke kategori risiko yang lebih rendah. 59,09% kategori risiko tinggi mengalami penurunan menjadi kategori risiko rendah, 40,91% mengalami penurunan menjadi kategori risiko sedang dan 100% risiko sedang mengalami penurunan menjadi risiko rendah. Komunikasi risiko dilakukan dengan wawancara dan pemberian informasi pada juru las untuk mendukung pertukaran informasi pada proses *risk assessment* dan *risk management*.

Berdasarkan hasil penelitian dapat disimpulkan bahwa sebagian besar risiko pekerjaan pengelasan FCAW pada line A6 termasuk kategori risiko tinggi. Pengendalian risiko telah dilakukan dengan baik tetapi, masih harus ditingkatkan untuk menurunkan risiko menjadi tingkat risiko rendah.

Kata kunci: *Risk analysis, risk assessment, pengelasan*