ANALISIS PENGENDALIAN RISIKO BAHAYA PENGECORAN LOGAM DENGAN METODE *FAILURE MODE AND EFFECT ANALYSIS* (FMEA) DAN *HAZARD IDENTIFICATION RISK ASSESMENT* (HIRA)

(STUDI KASUS: UKM COR ALUMUNIUM)

Muhammad Hafiz Anshari [1], Ferida Yuamita[2]
[1] **muh.hafizanshari009@gmail.com** , [2] **feridayuamita@uty.ac.id**
[1,2] Program Studi Teknik Industri, Fakultas Sains & Teknologi
Universitas Teknologi Yogyakarta

ABSTRAK

Pada kegiatan kerja UKM Cor Alumunium seperti pemasakan, pencetakan, dsb. Masih banyak ditemukan risiko dan bahaya kerja yang sewaktu – waktu bisa menimpa para pekerja. Sehingga dapat menimbulkan kerugian material, fisik, finansial, serta produksi. Untuk mengurangi dan mencegah terjadinya kecelakaan kerja yang dapat menimbulkan cidera atau kerugian materi, dsb. Berdasarkan hasil identifikasi serta penilaian risiko menggunakan metode *FMEA (Failure Mode and Effect Analysis)* dengan pengolahan kuisioner terhadap 5 orang pekerja, didapatkan nilai *Risk Priority Number (RPN)* pada jenis risiko luka bakar atau melepuh pada bagian kulit sebesar 103.2, keseleo atau terkilir 91.728, gangguan atau iritasi pada mata 82.992, gangguan indra pendengaran 76.608, luka memar atau tergores akibat material dan alat 71.672, dan gangguan pernafasan 68.4. Hasil identifikasi risiko dan bahaya menggunakan metode HIRA (Hazard Identification Risk Assessment) ditemukan 20 potensi bahaya yang terdapat paa 4 aspek kerja yang dapat merugikan karyawan serta pemilik. Dan dari keempat aspek kerja dengan 20 potensi bahaya kerja masih terdapat hasil *risk rating* kategori parah dan sangat parah dengan rentang nilai risk rating sebesar 15-25, serta masih banyak terdapat potensi bahaya dengan skala kategori sedang dengan rentang nilai 6-12. Usulan perbaikan kedepan untuk lebih meningkatkan faktor keselamatan dan kesegatan kerja pada lingkungan kerja dengan melakukan kontrol dan pengawasan secara rutin, serta penggunaan APD sesuai standar yang telah ditentukan.

Kata Kunci: *FMEA, HIRA, Pengendalian, Risiko, Bahaya*

ANALYSIS OF HAZARDS CONTROL IN METAL CASTING USING FAILURE MODE AND EFFECT ANALYSIS (FMEA) AND HAZARD IDENTIFICATION RISK ASSESSMENT (HIRA) METHODS (CASE STUDY: COR ALUMINUM SME)

ABSTRACT

In Cast Aluminum UKM work activities such as cooking, printing, etc. It has any occupational risks and hazards that can befall workers at any time. So that it can cause material, physical, financial, and production losses. To reduce and prevent work accidents that can cause injury or material loss, etc. Based on the results of identification and risk assessment using the FMEA (Failure Mode and Effect Analysis) method with questionnaire processing to 5 workers, the Risk Priority Number (RPN) value for the type of risk of burns or blisters on the skin is 103.2, sprains or sprains 91,728, disturbance or irritation to the eyes 82,992, hearing loss 76,608, bruises or scratches caused by materials and tools 71,672, and breathing problems 68.4. The results of risk and hazard identification using the HIRA (Hazard Identification Risk Assessment) method found 20 potential hazards in 4 work aspects that could harm employees and owners. And from the four aspects of work with 20 potential work hazards there are still severe and very severe risk rating categories with a risk rating value range of 15-25, and there are still many potential hazards with a medium category scale with a value range of 6-12. Proposed improvements in the future to further improve the safety and health factors in the work environment by carrying out routine control and supervision, as well as using PPE according to predetermined standards.

Keywords: FMEA, HIRA, Control, Risk, Hazard

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