

RINGKASAN

Keselamatan dan Kesehatan kerja (K3) dalam industri pertambangan terus-menerus berkembang seiring dengan kemajuan teknologi, dan permasalahan yang terjadi dalam industri pertambangan semakin beragam. Ragam permasalahan semakin banyak, risiko untuk terjadi kecelakaan yang berujung cedera dan kematian juga semakin besar di PT. Freeport Indonesia. Pada tahun 2020 departemen produksi DMLZ PT. Freeport Indonesia akan menaikkan jumlah produksi, dimana perusahaan sendiri memiliki motto "*Safety First, Production will Follow*". Maka agar produksi berjalan dengan aman, dibutuhkan kajian mengenai kesehatan dan keselamatan kerja yang baik pula. Tujuan dari penelitian ini adalah untuk mengukur dan menganalisis tingkat *frequency rate* dan *severity rate* ; menganalisis tingkat risiko di kegiatan produksi di tambang bawah tanah DMLZ PT. Freeport Indonesia; dan mengevaluasi upaya penanggulangan risiko dari kegiatan produksi di tambang bawah tanah DMLZ PT. Freeport Indonesia.

Penelitian ini dilakukan dengan metode HIRADC yaitu matriks risiko 4x4 yang digunakan oleh perusahaan, berdasarkan AS/NZS 4360:2004 di semua level yang ada di departemen produksi tambang bawah tanah DMLZ PT. Freeport Indonesia.

Hasil pengukuran menunjukkan tingkat *severity rate* dan *frequency rate* yang menurun sesuai tren selama 5 tahun terakhir, tingkat risiko dari setiap kegiatan dan risiko tertinggi terpapar peledakan pada kegiatan produksi, serta evaluasi upaya penanggulangan yang baik dalam meminimalisir tingkat risiko dengan menggunakan metode HIRADC tersebut.

ABSTRACT

Occupational Health and Safety (OHS) in mining industry keeps on developing along with the advancement of technology, yet the problems that kept happening in mining industry increasingly diverse. As diverse the problem is, as well as the risk of an occurrence of an accident that led to injury and death also getting increased in PT. Freeport Indonesia. In 2020, production department of PT. Freeport Indonesia will increase its amount of production, when the company itself has motto which is that “Safety First, Production will Follow”. For the sake of production can run safely, it will need a good study about Occupational Health and Safety as well. The aim of this research is to measure and analyse frequency rate and severity rate; to analyse the level of risk in the production activity of DMLZ Underground Mine PT. Freeport Indonesia; and to evaluate risk countermeasure of production activity of DMLZ Underground Mine PT. Freeport Indonesia.

The research was implemented by using HIRADC method, which is that risk matrix of 4x4 that has been used to by the company, based on AS/NZS 4360:2004 in all of the level which is that located in production department of DMLZ Underground Mine PT. Freeport Indonesia.

The results of the measurements show the frequency rate and severity rate which were decreased based on trendline for the last five years; risk level from every activity of production department and the highest risk of production activity which is that exposed by blasting; and the countermeasures evaluation which is that good to minimize the risk level by using the HIRADC method.

