

ABSTRACT

Development in the DOZ Underground Mine PT. Freeport Indonesia is do by drilling and blasting. The first activity after the hole (stope) from the result of drilling and blating was made are ground supporting, the kind of the ground support is rock bolt and wire mesh. The proccess of bolting (with rock bolt and wire mesh) using jackleg drill, because the new hole is not too large, and not possible if using jumbo drill. The use of jackleg drill is very close with ergonomic hazard, because this activity still demand the operator's physic power, because that this activity is necessary to do analysis of ergonomic for the purpose to detect the level of risk from the activity ground supporting use jackleg drill.

This research using three methods to analysis the level of risk in ergonomic hazard, the first method is Rapid Entire Body Assessment (REBA) is the method which can analyzing the level of risk in ergonomic hazard on fast way the work posture of the operator. The second method is Low Back Compressive Force Model, is the method which can estimating load which received by low back when the operator do the work. The last method is Utah Shoulder Moment Estimation, is the method which can estimating load which received by shoulder when the operator do the work.

Based on analyzing from the theree method, majority the level risk of ground supporting is result high level of ergonomic hazard, because that the correction act needed to keep clear from the ergonomic hazard.