

MULTICRITERIA DECISION MAKING TO CHOOSE PERSONAL PROTECTIVE EQUIPMENT'S VENDOR WITH RISK MANAGEMENT AND ANALYTICAL NETWORK PROCES (ANP)

Name : Chandra Priyandika
Student Identity Number : 9108 201 412
Supervision lecturer : Prof.Ir. Mosses L. Singgih, M.Sc.,MregSc,Ph.D

ABSTRACT

Personal Protective Equipment (PPE) is used for the last option to minimize accidents risk in work place. There are many kind of high risk in the workplace of Alstom company, so according to Indonesian's rule No. 1 in 1970, the company must give PPE for worker. The decision making to choose PPE usually is very simple in company, sometimes it is not suitable with hazard identifications result and there is no complex decision to choose PPE's vendor.

This reaserch will use Risk Management Methode to define risk for every hazard that exist in workplace, so the company can define what kind of PPE will they use. After that, to choose the best vendors that supply PPE for the company, this reasearch use ANP to prioritize them.

There are 29 machine in workplace that will be analized with Risk identification.The highest total risk is grinding machine. From this result, PPE can be analize, there are helmet, ear plug, face shield, work jacket, harness, gloves, and safety shoes. From 7 PPE, helmet is used to make criteria to choose the best vendor. ANP is used to prioritized vendors and the result is PT. Berkat Keselamatan Dunia for number 1, PT. Sumber Keselamatan Kerja is for number 2, PT. Sumber Keselamatan kerja is for number 3, and the last one is PT. safetindo.

Key word : Personal Protective Equipment (PPE), Risk Management, Analytical Network Process (ANP)