ABSTRACT

The manufacturing industry is growing, especially metal plating industry. However, most of the metal plating industry in Indonesia is still in the scale of the home industry, with the processing system is still less attention to the health of workers. This study aimed to analyze the use of chromium in the metal plating and hand skin condition of workers CV X in the village of Candi region Durungbanjar, Sidoarjo.

This study is a qualitative descriptive using cross sectional design. Data was collected by questionnaire, observation sheet, interview and diagnosis sheet. Using the total population by the number of 10 respondents. Respondents in this study were workers metal plating CV X in the village of Candi region Durungbanjar, Sidoarjo. The variables of this study is the use of chromium in the metal plating, individual workers and the skin condition of hands workers of metal plating.

Metal plating process is divided into two divisions, namely polishing and plating. Beginning with a metal polishing and followed by a plating that uses chemicals such as HCl, sodium, drug adhesives, nickel and chromium. The type of chromium is hexavalent chromium. Metal plating using electroplating techniques, which using electromagnetic conductivity to plate the metal with chromium. Health complaints experienced are erythema, skin burn, dermal necrosis and dermal edema. A total of five workers suffer from chrome holes tested positive. The characteristics of workers who have a strong correlation with chrome hole that is the difference between the working period of less than five years and more than 5 years with contingency coefficient 0.667.

Use of chromium in the metal plating can cause health problems in workers metal plating, there is chrome hole skin ulceration. Therefore, it needs to pay more attention to the health and safety of workers metal plating, especially for home industry scale.

Keywords: chromium, metal plating, workers, hand skin condition