

ABSTRACT

PT. IGLAS (Persero), Gresik is a glass producing industry, mainly glass bottle. Like most industries, PT. IGLAS (Persero), Gresik use and produce heat during the production process especially in glass melting and forming process. The heat produced from production process will increase work environment temperature and cause physiological problems. The aim of this research is to identify the physiological problems' forms which appear among workers and to analyze the factors that related to physiological problems. The factors studied in this research were air temperature, air flow rate, air humidity, heat radiation, work load, age, body size, and educational degree.

This research used descriptive research method with cross sectional design. The research's population was all workers in Melting, Forming, Inspection, and Quality Control unit. The sample's selection used total sampling technique with sample amount was 33 people (first shift). The obtained data analyzed by crosstab and association coefficient count.

The result of this research showed that 2 from 4 production units had some heat sources with the result of work climates measurement are varied between them. Most workers had 7 hours of work a day with moderate category of work load accepted. All workers are male with most of them was 40 years or more at age, had a normal body size, had a senior high school for the educational degree, and accustomed to take a rest and drink. The percentages of workers who had psychological problem are higher than who hadn't.

The conclusion of this research is all factors of independent variables are related to physiological problems researched with majority of the association's strength between variables are weak. Then, researcher suggested to the office management to improve air circulation within work environment and make a scheduled health examination for workers.

Keywords: heat stress, physiological problems, related factors.