

WORKWEAR FOR MOLTEN METAL PROTECTION

Introduction

Works with molten metal is in high temperature so that profession of foundry is hazardous for workers (1). The most common metals that are used in foundry industry are; iron, aluminium, copper, steel, brass. Molten drops of these metals may pour on or splash to the workers body. As a result of this situation, a series of serious injuries or death might be occurred. However, using suitable protective clothes, most of these threats may be reduced considerably (2). All metals have different physical and chemical characters; therefore, when the protective clothes are chosen, these characters are taken into consideration (3). With choosing the right protective fabric against to specific metal that is poured, the molten metal can run off from fabrics and prevent metal drops to adhere and ignite the clothing (1).

Experimental

In the scope of this study, a survey study is being performed in foundry factories around Izmir. This questionnaire is intended to obtain information about production fields of factories, materials (leather, wool, cotton) that are commonly used in protective workwear clothing in foundry factories and useful components of protective clothes (upper garment, trouser, overall, gloves) in the field and during pouring the metal. In the following paragraph, there are some results of questionnaire are given. Prepared questionnaire was performed by seven international foundry firms up to now.

Results

People performed questionnaire are graduated from university, except only one. Their positions are health and safety supervisor, foundry production supervisor and manager of human resources in firms. Generally these people are experienced in foundry industry. Two of them are working more than 20 years. Also other five people are working for 3-20 years in this sector. It was wanted to give an average point between 1 and 5 to their equipments from firm's representative. 1 and 2 aren't given by any firms. Four firms believe their equipments has intermediate protection level, two firms completely rely on their equipments, 4 point is given by one firm (Figure 1).

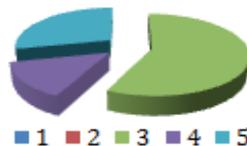


Figure 1. Protective clothes protection level according to firms.

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References

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3. **EN ISO 9185 (2007)** Protective clothing —Assessment of resistance of materials to molten metal splash The European Standard has the status of a British Standard
4. **Turkish Foundry Industry Association., (2013),**"Turkish Foundry Industry", p 23.