

PROTECTIVE CLOTHING AGAINST THE EFFECTS OF HEAT

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Protective clothing against the effects of heat and welding has to meet the requirements of the corresponding use. In addition to basic requirements for protective clothing the following items were investigated

- reaction to heat radiation;
- inflammability;
- reaction to molten metals;
- reaction to welding beads and
- reaction to UV radiation.

Based on the corresponding German standards and newly developed test procedures, these characteristics were examined in the laboratory and in the field using on the whole 33 different materials for protective clothing as delivered, after pretreatment by cleaning and to be discarded.

Among others, it was the aim of this study to substitute asbestos in heat-resistant clothing by other materials capable of maintaining the protective effect and the durability.

On the basis of an extensive literature research and in cooperation with metallurgical plants and manufacturers of heat-resistant clothing, 88 potential asbestos substitutes were chosen and charged in situ by liquid iron. The sensory evaluation showed 30 materials to be capable of substituting asbestos.

The results of these tests were translated into safety technical requirements considering industrial experiences.