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Clothing for protection against heat and flame — Determination of contact heat transmission through protective clothing or constituent materials —

Part 2: Test method using contact heat produced by dropping small cylinders

Vêtements de protection contre la chaleur et la flamme — Détermination de la transmission thermique par contact à travers les vêtements de protection ou leurs matériaux constitutifs —

Partie 2: Méthode d'essai utilisant la transmission thermique par contact produite par des petits cylindres compte-gouttes

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Foreword

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International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 12127-2 was prepared by Technical Committee ISO/TC 94, *Personal safety — Protective clothing and equipment*, Subcommittee SC 13, *Protective clothing*.

ISO 12127 consists of the following parts, under the general title *Clothing for protection against heat and flame — Determination of contact heat transmission through protective clothing or constituent materials*:

— *Part 1: Test method using contact heat produced by heating cylinder*

— *Part 2: Test method using contact heat produced by dropping small cylinders*

Introduction

Protective clothing designed to protect the welders is exposed to high-temperature particles generated from the welding point into the welding environment. These hot particles are small splashes of molten metal, sparks and slag. When the small splashes of molten metal are scattered, they produce heat into the atmosphere, become oxidized and start to change from a molten state into a solidified state.

The diversity of the conditions in which splashes of molten metal and other hot particles may come into contact with materials used for welder's protective clothing makes it difficult to evaluate the hazards that may arise under conditions of use.

The most important protective function is resistance to heat transfer through the layers of clothing from high-temperature metal drops, sparks and solidified hot particles trapped on the fabric in folds or in seamed areas.

The test method described in this part of ISO 12127 allows this heat transfer to be assessed when a hot steel cylinder simulating a small hot particle is allowed to fall on the material. Furthermore, this method can be used to assess charring and hole formation in the material.

This part of ISO 12127 forms a part of a series of standards concerned with clothing designed to protect against heat and fire. This part of ISO 12127 is especially used to assess the consequences for protection of the impact of small hot metal particles on clothing materials.

ISO 12127-1 is a revision of ISO 12127:1996.