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**Ergonomics of the thermal environment - Assessment and
management of human cold and heat stress**

热环境的人类工效学 人体冷热应激评估与管理

(English Translation)

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Reference

Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents" Drafting.

This document refers to ISO 15265:2004 "Ergonomics of thermal environments. Risk assessment for the prevention of heat stress or discomfort in work environments" Strategy" (see Chapter 5), ISO 15743:2008 "Ergonomics of thermal environments Risk assessment and management of cold workplaces" (see Chapter 6), ISO 9886:2004 "Ergonomics Thermal Damage Assessment Based on Physiological Index Measurements" (see Chapter

7), ISO 7933:2004 "Ergonomics of Thermal Environments to Determine and Explain Heat Stress through Computational Analysis to Predict Thermal Damage" (see Chapter 8), ISO 11079:2007 "Thermal Environmental ergonomics using essential clothing thermal resistance (IREQ) and local cold effects to determine and explain cold stress" (see Chapter 9), ISO 12894:2001 Ergonomics of thermal environments Medical supervision of individuals exposed to extreme heat or cold (see Chapter 10) and ISO 9920:2009 "Estimation of Thermal Resistance and Water Vapor Resistance of Ergonomic Clothing in Thermal Environments" (see Chapter 11) 7 international standards were drafted, one the degree of consistency is not equivalent.

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1 Scope

This document.

---Describes a strategy for assessing and explaining risks of physiological limitations or discomfort when a person works in a given climate environment;

---Proposes strategies and practical tools for assessing and managing cold risks in the workplace;

---Proposed the conditions and conditions for evaluating heat loss based on the measurement of physiological parameters such as human body core temperature, skin temperature, heart rate and weight loss.

method;

---Specifies methods for analyzing, evaluating and explaining the heat stress experienced by the human body in a thermal environment, and predicting the sweat rate of the human body under working conditions and core temperature;

---Specifies the evaluation methods and strategies for cold stress when the human body is exposed to cold environments;

---Provides recommendations for the safety of humans exposed to extreme thermal environments, helping those responsible for such risks to cope with different situations.

determine the level of medical supervision under the circumstances;

---Specifies the estimation of heat transfer characteristics of clothing suits (dry) under steady-state conditions based on known clothing thermal resistance values of clothing, suits and textiles Heat loss and evaporation heat loss resistance) method; the effects of body movement and air penetration on thermal resistance and water vapor resistance were studied.