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Building environment design — Design, test methods and control of hydronic radiant heating and cooling panel systems —

Part 6: Input parameters for the energy calculation

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Foreword

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This document was prepared by Technical Committee ISO/TC 205, *Building environment design*.

A list of all parts in the ISO 18566 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

The radiant heating and cooling system consists of heat emitting/absorbing, heat supply, distribution and control systems. Typical applications are low temperature radiant heating and high temperature radiant cooling. They are classified as embedded radiant heating and cooling systems and prefabricated radiant heating and cooling panel systems.

While the ISO 11855 series is for embedded radiant heating and cooling systems without an open-air gap, the ISO 18566 series is for radiant heating and cooling panel systems with an open air gap. Because the system specifications for ISO 18566 are different from those of ISO 11855, it was necessary to develop separate ISO standards regarding the design and test methods of the cooling and heating capacity and control.

ISO 18566-1 specifies the comfort criteria, technical specifications and requirements which should be considered in the manufacturing and installation of radiant heating and cooling systems. ISO 18566-2 provides the test facility and test method for heating and cooling capacity of ceiling mounted radiant panels. ISO 18566-3 specifies the design considerations and design processes of ceiling mounted radiant panels. ISO 18566-4 addresses the control of ceiling mounted radiant heating and cooling panels to ensure the maximum performance which was intended in the design stage when the system is actually being operated in a building. This document presents a determination method of input parameters for the energy efficiency of heating and cooling products in relation to ISO 52031.[1)]

ISO 18566 does not cover the panels that are embedded into the ceiling, wall or floor structure. This document is partly based on EN 14240, EN 14037 and ASNI/ASHRAE Standard 138.

1) Under preparation. Stage at the time of publication: ISO/DIS 52031:—.