

A standard study for improving thermal performance of the hot and cold water pipe insulation in buildings

Hyung-Kyou Ryu(ryuhk1972@krimfi.re.kr)

KRIMFI(Korea Research institute of Mechanical Facilities Industry)

Abstract

Recently, It has increased the importance of building energy saving. Pipe insulation as well as building envelope insulation is to improve energy efficiency and reduce the energy loss. However, there continues to use the old standard for pipe insulation that is one of the most important elements in energy savings in buildings. The purpose of this study is to propose suitable pipe insulation thickness for reducing building energy use. The study also reviews pipe insulation thickness standard in accordance to Korea standard, ASHRAE 90.1 and BS5422 and analyzed through thermal simulation. As a result, it is necessary to apply the performance design method of the pipe insulation thickness to reduce the energy loss of the piping.

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Keywords: *Pipe, Pipe insulation, Insulation thickness, Performance design method*

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