

ISHRAE Research Project RP-AIP 1

IEQ Standard Implementation Methodology

Synopsis

Indoor environmental quality indicates the condition of environment inside the building which is defined and determined by factors such as thermal comfort, indoor air quality, acoustic comfort and lighting comfort. These factors significantly affect the productivity and well-being of occupants in an indoor environment. In the year 2016, ISHRAE released India's first Indoor Environmental Quality (IEQ) Standard (ISHRAE Standard-100001:2016). Above mentioned factors as referred as elements in the standard. The IEQ standard includes definitions for the elements affecting human health and comfort, threshold values of parameters contributing to these elements, specifications of measurement instruments and measurement methodology.

A Research Project (RP – AIP 1) was conducted as pilot study to understand and evaluate implementation methodology in buildings and also review the availability of instruments at Indian as well as international market. Experimental investigation of IEQ parameters at Jaipur were carried out at three buildings, located in composite climatic zone. Whereas the IEQ investigations at Chennai were carried out in diverse end-use buildings which include commercial, office, residential and institutional buildings. A total of 10 different buildings were selected which included 2 commercial buildings (one computational room and one departmental stores), 3 institutional rooms (2 student offices and a laboratory), 4 office buildings (including 2 conference halls) and 3 residences. As suggested in ISHRAE's IEQ standard, an occupant satisfaction survey was also conducted by using a seven-point scale for all IEQ parameters along with measurements.

This research project, besides, raising and offering clarity about the method of taking measurements, also presents comments on the availability of instruments required as per the standard. It suggests the necessity of some clarifications and revisiting accuracy and resolution of some measuring instrument with justifications.

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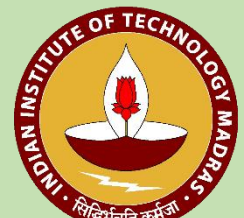
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