

# Humidity of indoor air needs attention

This last issue of 2021 is focussing on one aspect of the IEQ which is not always at the forefront: humidity of the air indoors. Humidity became also visible in the context of COVID-19 measures, the first article “Relative humidity effects on viruses and human responses” reports that there are good reasons to maintain a RH of around 36%. When taking good care of our respiratory system, see article “The nose – our personal high-performance air conditioning system and mighty protector” the advice is to keep the RH in the range of 40–50%.

These advised ranges are higher as the default values presented in the EN 16798-1. They seem conservative with the advised range of 20 – 30%. These lower values are merely based on the fact that the evidence in many studies is not very strong and that the impact of humidification and de-humidification has a substantial influence on the energy use of buildings and that poor maintenance of humidification sections in AHU’s can cause adverse effect on the IEQ in buildings.

However, we all know the complains about dry air during winter time. In the past this was mainly caused by too high ventilation rates due to leaky buildings. Nowadays more buildings are better insulated and weather stripped which leads to lower infiltration rates and better control of the required ventilation rate. For residential buildings which the low ventilation rate of 0.5 (lowest class according EN 16798-1) dry air complains may be minimal due to the internal water vapour production by persons and their activities. When ventilating according higher comfort and health expectations, dry air complains during winter time are to be expected in the colder regions in Europe. For non-residential buildings where the internal latent load is much lower, dry air complains when not humidifying are quite common.

In these cases, humidification control should be considered, the energy use impact can be limited by using latent energy recovery system, quite common in many non-residential buildings but also worth to be considered

in residential buildings. About humidification: there are safe to use and maintain humidification system which capacity (and maintenance and running costs) can be limited when using latent heat recovery systems.

## Revision of the Energy Performance Buildings Directive (EPBD:2018)

The Commission is currently preparing a revision of the EPBD. I expect the coming months of 2022 discussions at policy level to finalise this draft, hopefully before the summer 2022. We really need an update given all the EU policy targets. The EU Green Deal - Fit for 55 by 2030 etc. are the drivers for the EPBD revision in 2022. Some highlights: more attention to ventilation, a definition for Deep Renovation is proposed, the concept of NZEB (nearly zero energy buildings) is replaced by Nearly Zero Emission Buildings. EU MS’s have to report National Renovation Action Plans by 2025 (and every 5 years to update). The concept of Minimum Energy Performance Requirements is introduced. A Building Renovation Passport to be assessed by certified accredited experts is expected to become in force by delegated act to be ready by 2023. New cost optimality procedure by 2026. All new buildings shall be zero carbon emission by 2030 (public buildings by 2027). IEQ parameters have to be include in EPCs for new buildings by 2030. Life-cycle GWP (EN15978) for all new buildings by 2030.

The REHVA board, RJ editorial board and REHVA staff wishes all our readers a healthy, prosperous and inspiring 2022. We thank all our readers, supporters and all authors that contributed to the success of this journal in 2021. ■



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