Maintenance
The forgotten aspect of low energy buildings?

Amr Suliman

Amr Suliman is a doctoral researcher at Loughborough University investigating the optimisation of the energy performance of closed looped hydronic heating and cooling systems.

Time: 4pm - 5pm, 24 Feb 2023

Zoom meeting room:
https://ucl.zoom.us/j/5942880382

Presenter Introduction:

Amr Suliman's work looks into the impact of mechanical filtration and its capability in restoring the performance of hydronic systems. Amr also utilises infrared thermography to diagnose the performance of HVAC systems by highlighting and anticipating blockages and system failure. Amr is a member of ASHRAE UK board and sits in a number of technical committees.

Presentation Summary:

The lecture is based on experimental research conducted at Loughborough University looking at how maintaining water quality in heating systems can contribute to improved energy use and system longevity. Corrosion is an unavoidable issue in HVAC systems and could lead to significant financial losses due to plant failures and constant repair. The lecture explores that corroded water can increase the energy performance of the pump by up to 80% if not been treated. The lecture also presents how infrared thermography can be employed to detect system failures and potential clogging at an early stage thus allowing for system optimisation.

Organizers:

Department of Civil, Environmental and Geomatic Engineering, UCL
The Bartlett School of Sustainable Construction, UCL
CIBSE Intelligent Buildings Group
CIB W098 – Intelligent and Responsive Buildings

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