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Ecolibrium



Cool runnings

Refrigeration innovation at SA's
purpose-built motorsport park.





Dr Michael Riese, M.AIRAH, is a business development manager for industrial refrigeration specialist Cold Logic.

Responsibilities

I am the primary contact for our current and prospective defence clients, and oversee Cold Logic's research activities. I scope initial works and projects and create costings and tender replies. For our research projects, I liaise with grant authorities and research institutions to get projects up and running.

Specialty

I started my career as a maintenance machinist and fitter and worked my way up to a PhD in mechanical engineering.

Passions

I am passionate about lifelong learning and increasing participation in STEM. Engineering and science intrigue me and there is so much to learn. In Australia we have this fantastic opportunity to make an impact in our region and a lot of this is based on engaging the general population to become interested in HVAC&R, manufacturing and R&D.

Challenges

Seeing people throw their money away by procuring outdated HVAC&R equipment and off-the-shelf systems that are no longer in line with best practice, often based on vested-interest advice from other suppliers.

Professional development

I read a lot of engineering literature, attend refrigeration conferences and work with universities on new projects.

Inspiring words

"No battle plan survives enemy contact!" – paraphrased from Carl von Clausewitz. I used to plan everything to the nth degree and always got upset when things went wrong or not to plan. These days I just plan the big(ger) stuff and work out the finer details when needed. ■

Energy and comfort considered in new standard

Released at the end of June, AS 5389 aims to reduce emissions in the heating and cooling sector.

At the end of June, Standards Australia published AS5389:2019 *Space heating and cooling and ventilation systems – Calculation of energy and comfort performance*. It provides a method to estimate how much energy will be saved and how much comfort will be improved by using different technologies. The performance is based on four different climates across Australia.

The common thread for the technologies is that they will increase comfort but are not able to provide specified conditions in every case. Technologies included are:

- Desiccant-based solar space cooling systems
- Solar air and water space-heating systems
- Systems that improve comfort by ventilating occupied spaces or roof spaces
- Evaporative cooling systems.

The standard describes how to evaluate the performance of the products when they are used to heat or cool a standard building. It uses a component test system simulation (CTSS) methodology to model the load of the building based on the climatic conditions experienced over a year and the performance of the product exposed to the same climate.

SOLAR COOLING TECHNOLOGIES

"To our knowledge this is the only standardised performance method for solar cooling technologies available

anywhere," says Ken Guthrie, chair of the standards committee that developed the standard. "We expect that this will provide useful information to consumers and to governments wishing to reduce emissions in the heating and cooling sector."

Dr Stephen White, F.AIRAH, of CSIRO, led work supporting this development through the CRC for Low Carbon Living.

"The standard was driven by the NSW government wanting to find additional technologies that could be eligible for NSW Energy Savings Certificates (white certificates) via a deemed savings method," White says. "This standard aims to provide a more level playing field approach for emerging technologies in large-scale multi-technology emissions reduction schemes."

MISCELLANEOUS PUBLICATION

The standard is accompanied by a Miscellaneous Publication that details how to use the standard using the TRNSYS modelling environment. There are also electronic versions of the relevant TRNSYS modules available. ■

Would you like to know more?

The standard and Miscellaneous Publication are available at <https://infostore.saiglobal.com>