

**Programme of the eurammon lecture event at Chillventa on 12 October 2022,  
10:00-12:00 a.m. in Nuremberg**

Time	Programme
10:00 – 10:20	<b>eurammon Technical Committee Energy Efficiency</b> Tommy Angback, chair of the eurammon Technical Committee Energy Efficiency Alfa Laval Lund AB
10:20 – 10:40	<b>Energy-efficient heat exchanger technology for heat pumps using natural refrigerants</b> Tommy Angback, chair of the eurammon Technical Committee Energy Efficiency Alfa Laval Lund AB
10:40 – 11:00	<b>Industrial Heat Pumps – Standards and Energy Efficiency</b> Alexander C. Pachai, chair of the eurammon Technical Committee Industrial Heat Pumps Johnson Controls Denmark ApS
11:00 – 11:20	<b>Why to use NH3 in these time as evaporative/with adiabatic precooled condenser</b> Michael Rabenstein, eurammon Steering Committee EVAPCO Europe GmbH
11:20 – 11:40	<b>Direct expansion (DX) or flooded operation of NH3 air cooler and their energy efficiency advantages</b> Franz Sperl, eurammon Technical Committee Industrial Heat Pumps Güntner GmbH & Co. KG
11:40 – 11:55	<b>District heating with ammonia heat pumps using river water</b> Rainer Brinkmann, eurammon Technical Committee Industrial Heat Pumps Johnson Controls Systems & Service GmbH

**eurammon at Chillventa: The future belongs to natural refrigerants**

Chillventa is back, and eurammon is part of it. When international refrigeration, AC, ventilation, and heat pump experts flock to Exhibition Centre Nuremberg from 11 to 13 October 2022, it will be the first reunion of this kind since 2018. Chillventa, the world's leading trade fair for refrigeration technology, brings together the specialists and leading lights of the sector from all around the globe. There eurammon will inform visitors about its work and vision at booth 9-312: The future belongs to natural refrigerants. The association will make a significant contribution to the programme by providing extensive information about the benefits of natural refrigerants - the highlight being the eurammon lecture event on 12 October from 10 a.m.-12 p.m. at booth 9-550 in Hall 9.

**Expert speakers at the lecture event**

The lectures will be held by eurammon members, who are active in one of the Technical Committees. One focus of the lecture event will be on energy efficiency during the operation of industrial heat pumps and components with natural refrigerants. Three of the six lectures will deal with this topic. In addition, eurammon will focus on the work it does for its members. Tommy Angback chairman of the eurammon Technical Committee for Energy Efficiency will combine both focal points.

First, Mr Angback will present the work of the committee. According to the International Energy Agency increasing energy efficiency is the most critical parameter in reducing global carbon dioxide emissions. Informing the public correctly about the opportunities and requirements associated with the use of natural refrigerants, is a crucial means in providing the possibility for end users as well as manufacturers to judge and assess for themselves. The committee members research, compose, and publish best practice references, case studies, papers, and information papers which demonstrate opportunities to increase energy efficiency applying natural refrigerant systems.

### **Up-to-date heat pump applications**

In his second presentation, Mr Angback will talk about the latest development in plate heat exchanger technology used for this generation of heat pumps that offers reliable operation, high COP (Coefficient of Performance), short payback periods and does not have the drawback of using a refrigerant with a high global warming potential. Plate heat exchangers have been successfully used in heat pump applications for a long time and in recent years a growing trend has been to use them in heat pumps operating with natural refrigerants such as ammonia, hydrocarbons, and CO<sub>2</sub>, and to use them in high-capacity equipment.

### **Energy efficiency in focus**

Alexander Cohr Pachai, chairman of the eurammon Technical Committee for Industrial heat Pumps will talk about the Committee's efforts to provide members with decision support regarding the appropriate refrigeration system or electrically driven heat pump. For this purpose, the committee members have evaluated energy efficiency case studies and developed an Excel spreadsheet that makes it easier for companies to get meaningful information.

### **Not all fits all - evaporative condensers for natural refrigerants**

The eurammon message is clear: natural refrigerants are sustainable for environmental as well as economic reasons. However, one cannot simply exchange one refrigerant for the other. In an entertaining lecture Michael Rabenstein, member of the eurammon Steering Committee will explain why not all fits all and what role evaporative condensers play in the selection of the best refrigerants there are – naturals.

### **Rethinking classical applications for ammonia systems**

We all know that natural refrigerants are becoming an alternative to more and more applications, increasing the demand for such solutions. In contrast, Franz Sperl from the Technical Committee for Industrial Heat Pumps will point out unused potential in classical applications. Get prepared for an interesting lecture on the transition from direct expansion to flooded operation of ammonia air coolers.

### **District heating with river water**

The use of large heat pumps is becoming increasingly important for district heating supply. The technical implementation of a 2-stage large heat pump system with ammonia for the use of river water using the example of the Stadtwerke Rosenheim will be presented in the lecture by Rainer Brinkmann from the Technical Committee for Industrial Heat Pumps, who thus concludes the event. eurammon invites everybody to attend the lecture event on 12 October, 10 a.m.-12 p.m. at booth #9-550 and to visit the eurammon booth #9-312, both in Hall 9 which will attract all those interested in "Applications, training & codes of practice".

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