



Press release

Super-sized ATMOsphere America proves business case for natural refrigerants

Atlanta, 6 July 2015: The 26th ATMOsphere America, which took place in Atlanta 25 -26 June, featured over 80 presentations from HVAC&R industry experts, who came together to discuss the latest market and policy changes affecting the North American natural refrigerant industry. The biggest event ever organised by shecco, it provided a showcase of the broad range of CO₂, ammonia, and hydrocarbon solutions available for nearly all HVAC&R applications, capturing the growing confidence in the business case for natural refrigerants.

“I am proud to say that this is the 4th time we are organising this event in the US, and it's the best one so far! The good news is that we are seeing innovation in every market, and there won't just be one natural refrigerant solution to displace HFCs but there will be multiple solutions. I think this is something very positive, as it will create a lot of energy and innovation. ” Marc Chasserot, shecco Managing Director, and ATMOsphere America Chairman.

Update on North American policy and market trends: commitment to natural refrigerants is clear

The regulations and standards session at this year's ATMOsphere America provided updates on the recent work of the U.S. EPA (Environmental Protection Agency), DOE (Department of Energy), UL (Underwriters Laboratories) and CARB (California Air Resources Board) as well as updates on the policies of the EU, Japan and China. While the EPA's recent approval of isobutane, propane and the blend R-411A for selected applications and the delisting of high-GWP HFCs indicates strong support for natural refrigerants, it is California's radical plans to reduce 80% of HFCs by 2030 - beyond even the EU's F-Gas Regulation, that provided a real sense of excitement about the future for HFC alternatives.

The market opportunities and state of the industry sessions, designed to take a snapshot of the business climate for natural refrigerants from an end user, system and component supplier perspective provided a plethora of interesting insights. For CO₂ in commercial refrigeration Delhaize America announced plans to make it a standard in northern climates, with Harrison Horning encouraging the entire industry to push boundaries saying: “Let's go to the moon”.

For Hillphoenix this means bringing down the price premium on CO₂ installations and spreading their use to warmer climates; while for Hussmann, who are new to the CO₂ transcritical market, this means increasing collaborative efforts on best practices.

In the food service sector McDonald's hopes to replicate the European roll-out of hydrocarbon-based equipment across the U.S and encouraged the same for the entire food service industry which has nearly 1 million restaurants across the U.S. Starbucks, a first time presenter at ATMOsphere, announced plans to transition more than 150,000 units to natural refrigerants in order to green its stores.

On the industrial refrigeration side, the market for low charge ammonia installations is expected to experience unprecedented growth, and is estimated to be worth \$400 billion. These installations could also significantly reduce energy use, with Southern California Edison's Paul Delaney estimating they could provide an efficiency gain for 5-10% for industrial and large refrigerated warehouses. Several low charge solutions were presented, including by Evapco, NXCOLD, Danfoss Industrial and Colmac Coil.

All of these positive trends were confirmed by shecco's Deputy Managing Director Nina Masson who presented a sneak peak at the market data collected for the upcoming "GUIDE to Natural Refrigerants in North America – State of the Industry", set for release at the end of August. According to Masson in North America nearly 300,000 pieces of light commercial equipment use CO₂ or hydrocarbons, 338 stores use CO₂ transcritical, cascade, and secondary systems and over 250 "next-generation" industrial installations use low-charge NH₃, cascade and CO₂ transcritical systems.

Abundance of technology case studies showcase high efficiency of natural refrigerants

As always ATMOsphere America provided an opportunity to learn about the very latest technology developments. A series of technology case study sessions focused on low charge ammonia, heat pumps and commercial refrigeration, providing no shortage of evidence on the advantages of natural refrigerants.

Among the industry "firsts" Carnot Refrigeration presented an award-winning CO₂ transcritical system for server rooms installed at Bell Canada, whilst embraco and Thermofisher Scientific talked about their hydrocarbon variable speed ultra low temperature (ULT) freezer.

Other case studies from Mayekawa and Sanden focused on the high energy efficiency of CO₂ heat pump solutions for commercial and residential applications. The former helped a winery and hotel achieve 22-24% reductions in overall energy costs, while the latter were proven to be 40% more efficient in cold ambients than synthetic refrigerant heat pump water heaters (HPWH).

On the topic of CO₂/NH₃ cascade systems CTA architects revealed annual cost savings and reduced refrigerant costs of \$5,500 annually at a Defense Commissary Agency (DeCA) installation.

With regard to components, Emerson's presentation on electronic controls explained how they optimise CO₂ transcritical system performance based on changing environmental conditions. Bitzer looked at how CO₂ compressors are making their way into industrial applications, and the advantages they bring.

These are but a few of the over 25 technical presentations, which will be covered in more detail in a series of articles on R744.com, hydrocarbons21.com and ammonia21.com.

Presentations from ATMOSphere America 2015 are now available online:
<http://www.atmo.org/events.presentations.php?eventid=30>

About shecco

For more than a decade market development expert shecco has been active in helping bring climate friendly technologies faster to market. shecco supports over 100+ partners worldwide in the HVAC&R sector, where the focus is on sustainable refrigeration, heating & cooling technologies using natural refrigerants. shecco offers a variety of services in three areas: 1) media & publications, including online industry platforms and a catalogue of dedicated research reports; 2) market development, including market research, consultancy and public affairs services, as well as special international projects; and 3) events, including international conferences and national workshops.

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