



8th IIR Gustav Lorentzen Conference on Natural Working Fluids

Copenhagen, 7 – 10 September 2008

Refrigeration and Energy – The Natural Choice

Technical Visit 1 (TV1)

Energy efficient refrigeration with natural refrigerants CO₂ and R1270 in a Føtex Supermarket

The cooling load from the cold rooms and display cabinets in the supermarket are handled by 2 central outdoor air-cooled units. The medium temperature display cabinets and cooling rooms are served by a package unit, where R1270 as primary refrigerant cools volatile (evaporating) CO₂ as secondary refrigerant. Featuring the Birton patent pending thermal pump system, circulating CO₂ with "free energy" only. Cooling capacity: 260 kW at evaporation temperature -10°C and ambient temperature +30°C. The low temperature cabinets and freezing rooms are served by a R1270 and CO₂ in a cascade system. Cooling capacity: 70 kW at evaporation temperature -38°C and ambient temperature +30°C.



A picture from the installation

Programme

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|-------|---------|--|
| 13:45 | 25 min. | Short introduction (in Room 212 at the Conference Centre)
By Bent Johansen, Birton as |
| 14:10 | 30 min. | Transport by bus to Shopping Center City 2 |
| 14:40 | 60 min. | Visit shop and refrigeration system at Føtex Supermarket
By Bent Johansen, Birton as |
| 15:40 | 30 min. | Transport by bus back to Conference Centre |
| 16:10 | 30 min. | Follow-up / discussions and questions (in room 212 at the Conference Centre)
By Bent Johansen, Birton as |
| 16:40 | | End of Technical Visit 1 (estimated) |

Number of participants:

Because of practical limitations the maximum number of participants is 50 persons.

Address:

Føtex Supermarket, Shopping Center City 2, Hveen Boulevard, 2630 Høje Taastrup

References:

Føtex: www.fotex.dk (only in Danish)

Birton A/S: www.birton.dk (only in Danish)

Conference Paper "Application and Experience with Natural Refrigeration CarbonDioxide / CO₂ and HydroCarbon R1270" (CDP 12 – T3-04)