



# Internasjonale nyheter Nr 22

## IIR NEWS

### New Informatory Note on high-temperature heat pumps

IIR's latest Informatory Note demonstrates that high-temperature heat pumps are a key technology in the decarbonisation of process industries. The IIR has just published a new Informatory Note on high-temperature heat pumps (HTHPs) for industrial applications prepared by Dereje S. Ayou, José Miguel Corberan and Alberto Coronas. It highlights that HTHPs are a prime option for harnessing the huge energy potential of waste heat in processing industries, improving their energy efficiency and reducing their carbon footprint. The HTHP market is dominated by vapour compression technology, but few equipment of this type are capable of delivering heat at temperature levels (over 90°C) compatible with the needs of the food, chemical and paper industries in particular. Current research and development activities are therefore focused on technologies and working fluids adapted to these needs. Absorption heat transformers and absorption-compression heat pumps are the most promising solutions in this respect. The note also includes a series of recommendations aimed at developing this technology. This Informatory Note can be downloaded from FRIDOC by following the link below. A Summary for policymakers outlining the main conclusions and recommendations of this Informatory Note is also available in open access.

### Isochoric freezing could cut down energy use in the global food cold chain

Compared to conventional isobaric freezing, isochoric freezing could significantly improve the quality of frozen food and generate substantial energy savings



### Novel catalysts to address overheating in hypersonic aircraft

Researchers at Australia's RMIT University have developed 3D-printed catalysts to address the challenge of overheating in hypersonic aircraft and possibly other industrial

### IIR partnership in two new EU-funded projects: SophiA and ENOUGH

In October, the IIR participated in two kick-off meetings of newly granted European projects **SophiA** and **ENOUGH**, which officially started on October 1, 2021. Both projects are funded by the European Union's Horizon 2020 research and innovation programme.

**SophiA** "Sustainable Off-grid solutions for Pharmacies and Hospitals In Africa"

**ENOUGH** The European ENOUGH project aims to reduce GHG emissions in the EU by at least 50% by 2050 in EU compared to 1990 values, by implementing a zero-carbon food chain strategy.

### Daikin Europe N.V. Plans to invest €840 million & create 4,000 jobs:

Daikin Europe has announced a Strategic Management Plan "Fusion 25" to accelerate growth in the next five years. The company aims to address the needs of a changing society, and to become a total solutions provider in the HVAC&R sector in all its regions (Europe, Middle East and Africa). The projected turnover is € 5.7 billion by financial year 2025, compared with 2020 €3.4 billion in 2020. Investments will expand its R&D Centers in Europe, manufacturing, as well as sales and service capacity, and will fund the development of the digitalization. Daikin N.V. aims to recruit 4,000 employees by 2025, bringing its workforce to around 16,000. At least 400 staff will reinforce its activities in Belgium, especially for R&D, Service and HQ functions. *Fusion 25* targets three strategic growth areas: carbon neutrality (net zero) by 2050; Provision of total solutions; Creation of healthy indoor air. *Heat pumps will be a key focus.*

#### Europe:

### Does the energy boom bring opportunities for heat pumps?:

Since the emergence of insufficient electricity in China, gas and electricity bills in European countries such as the United Kingdom have soared. European countries are taking countermeasures to deal with the problem of rising energy prices and to reduce the burden on consumers. In late September, the French government decided to take measures to increase prices, which they called a "tariff shield." Italy also decided to take emergency measures worth 3 billion euros. As a renewable energy source, heat pumps have achieved rapid development in Europe. Speeding up the transition to clean energy is an effective way to deal with rising fossil fuel prices. However, the extent of the increase in electricity tariffs is also of concern.

### The global R32 AC market increasing

The global air conditioner market in both the residential and commercial sectors is estimated to have decreased by nearly 10 % in 2020 compared with 2019. On the contrary, demand for R32 air conditioners is estimated to have increased by about 10 %. The number of countries where R32 units account for the majority of the split-type room air conditioner (RAC) market is increasing, mainly in Asia, Europe, and Oceania. The penetration of R32 units in the entire global split-type RAC market including Japan is estimated to have reached over 50 % in 2020.

### Danfoss breaks ground on new Turbocor manufacturing facility

Danfoss held a groundbreaking event for its new manufacturing facility in Tallahassee, Florida, on September 21, 2021. The new facility will triple the current manufacturing capacity to meet a fast-growing demand from the American, European and Asian-Pacific markets for cooling and heating high-efficiency compressors.