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Product range: Crane air conditioners

Statement on the proposal for the restriction of PFAS by the European Chemicals Agency (ECHA)

Dear Sir or Madam,

In the following you will find arguments concerning the proposal for the planned restriction of PFAS by the European Chemicals Agency (ECHA), as well as information on an appropriate course of action.

Company

FrigorTec GmbH is a globally operating, medium-sized company specializing in the development and production of refrigeration technology equipment.

For more than 60 years, FrigorTec has been manufacturing crane air conditioning units for container terminals and port facilities as well as for heat plants such as foundries, steel mills and rolling mills. On the one hand, the units create optimal working conditions for crane operators in the crane cab. On the other, the units ensure a reliable room temperature for sensitive power and control electronics. The units, which have been tried and tested worldwide, are available in many installation variants and power levels.

Due to the compact, robust design and the materials used, the units are particularly suitable for high ambient temperatures (up to +90°C), salty air and constant vibrations.

FrigorTec currently uses the non-flammable refrigerants R515B, R450A and R513A with GWP values of 293 to 631 in this application, depending on the required maximum ambient temperature.

On April 5, 2022, the European Commission presented a proposal for an amendment to the "Regulation of the European Parliament and of the Council on Fluorinated Greenhouse Gases" (F-Gas Regulation), which, among other things, provides for a tightening of the prohibitions on use in conjunction with a greatly accelerated phase-down of the market availability of F-gases and especially of HFC refrigerants.

Among other things, a GWP of less than 150 is required for stationary operation, which would ultimately mean a ban on the above refrigerants.

Natural refrigerants such as CO₂, NH₃ or flammable refrigerants of safety class A3 such as R290 or R600a cannot be used due to their substance properties such as dew and boiling line, critical temperature, pressure at ambient temperature at the ambient temperatures of up to +90°C described above.

Process description

The air conditioning unit for container cooling is mounted on the outside of the container wall. The space conditions determine whether an upright or a horizontal version is chosen. In both cases, the unit blows cool air into the room at the bottom. Above, the heated air is drawn in by a fan and cooled. Temperatures in the container are kept in a temperature range between 20-30°C at up to +90°C ambient temperature. In the case of cabin cooling, the air conditioning unit is mounted directly on the cabin wall. It operates particularly quietly and is convenient to use. In the cooling mode, cold supply air flows into the crane cab below the ceiling; in the heating mode, warm supply air flows in above the floor. This provides optimum comfort for the crane operator. German legislation and international requirements stipulate maximum temperatures at such workplaces.

Problem

To safeguard the steel industry in Europe, crane air-conditioning units are to be regarded as system-relevant.

Should a restriction of PFAS by the European Chemicals Agency (ECHA) come into force, this would mean a ban on the refrigerants R515B, R450A and R513A.

As described above, natural refrigerants are currently not an alternative due to the substance properties described above.

Yours sincerely,
FrigorTec GmbH



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