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NEW COMPRESSION HEAT PUMP MEDIA AS REPLACEMENTS FOR CFC'S

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Abstract

The necessity to reduce the output of chloro-fluoro-carbon (CFC) compounds calls for the investigation of alternatives to existing compression heat pump working media. In a comprehensive study 940 substances were investigated in a simulation program to see if they are possible replacements for CFC media.

As a result of this study, three substances can be proposed as alternative media. These are ethylchloride, ethylbromide and propylchloride. These substances are compared with well-known CFC compression heat pump media. The proposed substances show equal or even better performance parameters than most of the CFC-media now in use.

NOUVEAUX FLUIDES POUR POMPES A CHALEUR A COMPRESSION EN REMPLACEMENT DES CFC.

RESUME : La nécessité de réduire la production de chlorofluorocarbones (CFC) appelle la recherche de solutions de remplacement pour les fluides actifs des pompes à chaleur à compression. Dans une étude approfondie, 940 substances ont été examinées dans un programme de simulation pour voir si elles pourraient remplacer les CFC.

A la suite de cette étude, on peut proposer trois substances, à savoir : le chlorure d'éthyle, le bromure d'éthyle et le chlorure de propyle. Ces substances sont comparées aux CFC traditionnels des pompes à chaleur à compression. Elles présentent des paramètres de performance égaux ou même supérieurs à ceux de la plupart des CFC utilisés actuellement.

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