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(54) Title (EN): WATER EVAPORATIVE COOLED REFRIGERANT CONDENSING RADIATOR UPGRADE

(54) Title (FR): MISE À NIVEAU DE RADIATEUR DE CONDENSATION DE FLUIDE FRIGORIGÈNE REFROIDI PAR ÉVAPORATION D'EAU

(57) Abstract:

(EN): A direct evaporative cooling system add-on to the existing air conditioning system for more effectively removing the Latent-heat-of-condensation of the refrigerant greatly enhances the EER rating of the system. Upgrading the conventional air-conditioning systems from air cooled refrigerant-condensing-radiator to water-evaporative-cooling via an ADD-ON unit, comprising a reservoir that stores water to be periodically pumped up a pipe under pressure controlled by the electronic controller for timing and quantity. The water is sprinkling uniformly with the help of a plurality of holes in the pipeline wetting the condensing radiator, some of which evaporates cooling the radiator and the excess returning to the reservoir to be recycled over the radiator repeatedly allowing the evaporation and heat exchange process to continue. This cooling effect reduces the pressures required by the compressor at the same time reducing the power drawn from the electrical grid saving money on the electric bill and in turn reducing the carbon footprint created by the use of air conditioning.

(FR): La présente invention concerne un système de refroidissement par évaporation directe ajouté au système de climatisation existant destiné à éliminer plus efficacement la chaleur latente de condensation du fluide frigorigène qui augmente considérablement l'EER nominale du système. La mise à niveau des systèmes de climatisation classiques de radiateur de condensation de fluide frigorigène refroidi à l'air à refroidissement par évaporation d'eau par le biais d'une unité ajoutée, comprenant un réservoir qui stocke l'eau devant être pompée périodiquement jusqu'à un tube sous pression commandé en moment et quantité par le dispositif de commande électronique. L'eau est pulvérisée uniformément à l'aide d'une pluralité de trous ménagés dans la conduite mouillant le radiateur de condensation, dont une partie s'évapore refroidissant le radiateur et l'excédent revenant au réservoir pour être recyclé sur le radiateur de manière répétée permettant au processus d'évaporation et d'échange de chaleur de continuer. Cet effet de refroidissement réduit les pressions requises par le compresseur tout en réduisant la puissance attirée

du réseau électrique, faisant économiser de l'argent sur la facture d'électricité et réduisant à son tour l'empreinte carbone créée par l'utilisation de climatisation.

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Declarations:

Declaration made as to the identity of the inventor (PCT Rules 4.17(i) and 51bis.1(a)(i))

Declaration made as applicant's entitlement, as at the international filing date, to apply for and be granted a patent (Rules 4.17(ii) and 51bis.1(a)(ii)), in a case where the declaration under Rule 4.17(iv) is not appropriate

Declaration made as applicant's entitlement, as at the international filing date, to claim the priority of the earlier application, where the applicant is not the applicant who filed the earlier application or where the applicant's name has changed since the filing of the earlier application (Rules 4.17(iii) and 51bis.1(a)(iii))

Declaration of inventorship (Rules 4.17(iv) and 51bis.1(a)(iv)) for the purposes of the designation of the United States of America