

Title (en)
SQUIRREL-CAGE FRAME RADIATOR

Title (de)
KÄFIGLÄUFERRAHMENRADIATOR

Title (fr)
RADIATEUR À CADRE EN COURT-CIRCUIT

Publication
EP 4321829 A1 20240214 (EN)

Application
EP 23163957 A 20230324

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Abstract (en)
The invention provides a squirrel-cage frame radiator comprises a frame (1), which consists of a water inlet pipe (11), a return pipe and radiating pipes (13); a radiating fin (2), which is fixed with the radiating pipes; and a radiating panel (3), which is fixed with the radiating pipes and shields the radiating fin. The water inlet pipe and return pipe are elliptical annular, the water inlet pipe is located at the upper part of return pipe, and the radiating pipes wind around the elliptical annular water inlet pipe and the elliptical annular return pipe and is connected between the opposite sides of the water inlet pipe and the return pipe at intervals. The upper part of the water inlet pipe is equipped with a radiating cover. The radiating fin is formed with radiating fin cavity, and two sides thereof are formed with a radiating fin strip.

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Citation (applicant)
• CN 106931801 A 20170707 - DALIAN HENGBAO IND CO LTD
• CN 2467998 Y 20011226 - ZHAO LIANCHENG [CN]
• CN 1841002 A 20061004 - ESAP CO LTD [IT]
• CN 2771782 Y 20060412 - SUN DELIANG [CN]
• CN 2725824 Y 20050914 - YU LIANYONG [CN]
• CN 1963368 A 20070516 - SHANGDONG SANDE HEATING AND VE [CN]
• CN 201149455 Y 20081112 - ANSHAN STEEL REAL ESTATE DEV G [CN]
• CN 201680750 U 20101222 - ZUOYONG ZHU
• CN 201892445 U 20110706 - TIANJIN LEINI AIER INDUSTRY AND TRADE CO LTD
• CN 204923953 U 20151230 - NUOCISS HVAC TECHNOLOGY CO LTD
• CN 205690921 U 20161116 - CHANGSHOU GEWEIPU GAS EQUIPMENT CO LTD
• CN 106247823 A 20161221 - CHANGSHOU GEWEIPU GAS EQUIPMENT CO LTD
• CN 210118822 U 20200228 - CHANGSHOU GEWEIPU GAS EQUIPMENT CO LTD

Citation (search report)
• [A] CN 104075370 A 20141001 - CHANGSHOU GEWEIPU GAS EQUIPMENT CO LTD
• [A] CN 106247823 A 20161221 - CHANGSHOU GEWEIPU GAS EQUIPMENT CO LTD
• [A] US 4655195 A 19870407 - BOYNTON SHARON L [US]
• [A] FR 3038701 A3 20170113 - NINGBO NINGDA ELECTRICAL APPLIANCES CO LTD [CN]
• [A] CN 210118822 U 20200228 - CHANGSHOU GEWEIPU GAS EQUIPMENT CO LTD
• [A] EP 0785403 A1 19970723 - HAFRA NAAMLOZE VENNOOTSCHAP [BE]

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