

[12] Patent

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[21] Application No.: GCC/P/2001/1136 [22] Filing Date: 13/01/2001 [30] Priority: [31] Priority No. [32] Priority date [33] State 10011538.1 01/3/2000 DE [72] Inventors: 1- Rainer Rudischer, 2-Wolfgang Herschier [73] Owner: Institut fur Luft- und Kaltetchnik gemeinnutzige Gesellschaft mbH, Bertolt- Brecht-Allee 20, Dresden 01309, Germany [74] Agent: Suleiman Ibrahim Al-Ammar	[51] Int. Cl. ⁷ : F25B 27/00 [56] Cited Documents: - DE 19640159 A1 (INSTITUT FUR LUFT- UND KALTECHNIK GEMEINNUTZIGE GMBH) 02 April 1998 - US 5301516 A (POINDEXTER) 12 April 1994

[54] SYSTEM FOR THE COOLING OF PROCESS AND DRINKING WATER

[57] Abstract: The invention refers to a system for the cooling of process and drinking water, especially for very sunny and warm countries with developed infrastructures, where the process and drinking water in the public supply network, on account of the ambient conditions and/or the methods of water treatment, is warmed relatively intensively, so that no cold or at least cool water is available where needed. The purpose of the invention is to create a system for the cooling or warming of process and drinking water whose power supply is largely photovoltaic and which can be transported easily thanks to a compact design. In accordance with the invention, the compression refrigeration system used for generation of the cold possesses a power supply which is largely photovoltaic. The compression refrigeration system comprises a compressor, an evaporator, a condenser, a refrigerant collector and an expansion valve. The evaporator is fabricated as a counterflow panel-type heat exchanger in corrosion-resistant design and the condenser is fabricated as an air-cooled condenser. The motor of the compressor is driven via an inverter by a PV generator. The outlet of the evaporator on the water side leads into an insulated water supply tank. For autonomous operation the inverter is equipped with a charge regulator for a battery, and is connected downstream to a frequency converter. It is also possible, however, to provide a link to the mains supply after the inverter.

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No. of figures: 6

