

Euler's Technology for Cooling of Fluid III

(尤拉降溫技術 III)

(Mechanism for cooling down of fluid using cooling by proxy method)

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Inventor: Euler Cheung

Background/Development of Idea:

Is there other way to implement the EDMIII technique in fluid? One method is by inserting ions which are sensitive to the presence of E-M field. As they share the thermal energy of the fluid, we can cool down the fluid by proxy.

Summary & Discussion:

The fluid is drawn into compartment by a pumping device to mix with many ionized fluid. When ions mix with the original fluid, it also receive part of its thermal energy. The randomly moving ions is then subject to at least one Magnetic/Electrical field across the compartment. Since ions would align themselves according to the flux line(s) from the imposing force field, which dissipate the kinetic energy of the ions in the axis parallel to the flux lines. (Originally the thermal kinetic energy drive the ions to go anywhere, but the thermal kinetic energy move the molecules oppose the direction which the ion is attract/repel by the force field is thus neutralized by competing against the force field.) As the ions is reduced to a lower temperature using these processes, the fluid which is unaffected by these processes would resupply its thermal kinetic energy, lead to cooling down of itself. The process is repeating itself until the control mechanism has been informed by the sensor that the fluid has reach desired temperature. To output the cooled down fluid, the fluid is then pumping out from the compartment through a filtering mechanism which keep all ions inside the compartment for reuse.

We can control the speed of the process by the strength, frequency and the number of Electrical/Magnetic fields imposed in the compartment, proportion of the ions and sensitivity of ions to the E/M field. Higher strength would mean more kinetic energy of ions being neutralized in the process, thus increase the rate of cooling. The optimal reduction of thermal energy happens when three orthogonal E/M fields are imposed to the same compartment as kinetic energy are taken from three axis simultaneously. Ions has the role of absorbing thermal kinetic energy from the fluid, thus their proportion, readiness and level of reaction toward the imposing field would determine how much energy could be neutralized in one time.

Claim: The system in its entirety with at least all its essential components each for the purpose stated above and together as a whole for the purpose of cooling down fluid without generating waste heat as a by-product.

Related Claims:

Applications:

Refrigerator

Air-conditioner

Advantages:

1. Low energy expenditure.

Technicalities:

1. Time required maybe longer.