

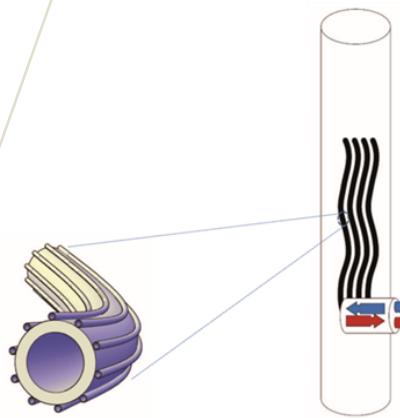
HEAT EXCHANGER BASED ON LOW COST MATERIAL

Heat exchanger based on low cost material, easy to install and maintain. It is based on a flexible polymer structure and left free in a moving external fluid.

PRESENTATION

While conventional heat exchangers use metal as the base material for heat exchanges, the new exchanger, which is a technological breakthrough, is based on a flexible polymer structure. The system is easily arranged in a free flow, typically in an existing wastewater pipeline. The movement of the thermal probes allows up to 30% increase in the power exchanged.

Heat exchanger - Energy recovery - Fatal heat - Energy - Physics



Flexer probe

Example of integration
into a water pipe

Applications

Heat recovery

Thermal storage



COMPETITIVE ADVANTAGES

- Inexpensive material (polymer)
- Low operating cost: ease of installation and maintenance (low fouling and resistant to chemical corrosion)
- High modularity, small footprint
- Good thermal efficiency

APPLICATIONS

- In existing wastewater pipes
- In a river
- In agroalimentary and chemical processes for example

INTELLECTUAL PROPERTY

French patent application n ° FR1858012, filed on September 6, 2018
International patent application No. PCT / FR2019 / 051851, filed on July 25, 2019

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DEVELOPMENT PHASE

- Device validated in the laboratory - TRL4