wieland provides

2024

PATENT PENDING

AI assisted flooded evaporator

Artificial Intelligence already has an impact on our lives and Wieland Provides believes there is a great potential even for the heat exchanger sector.

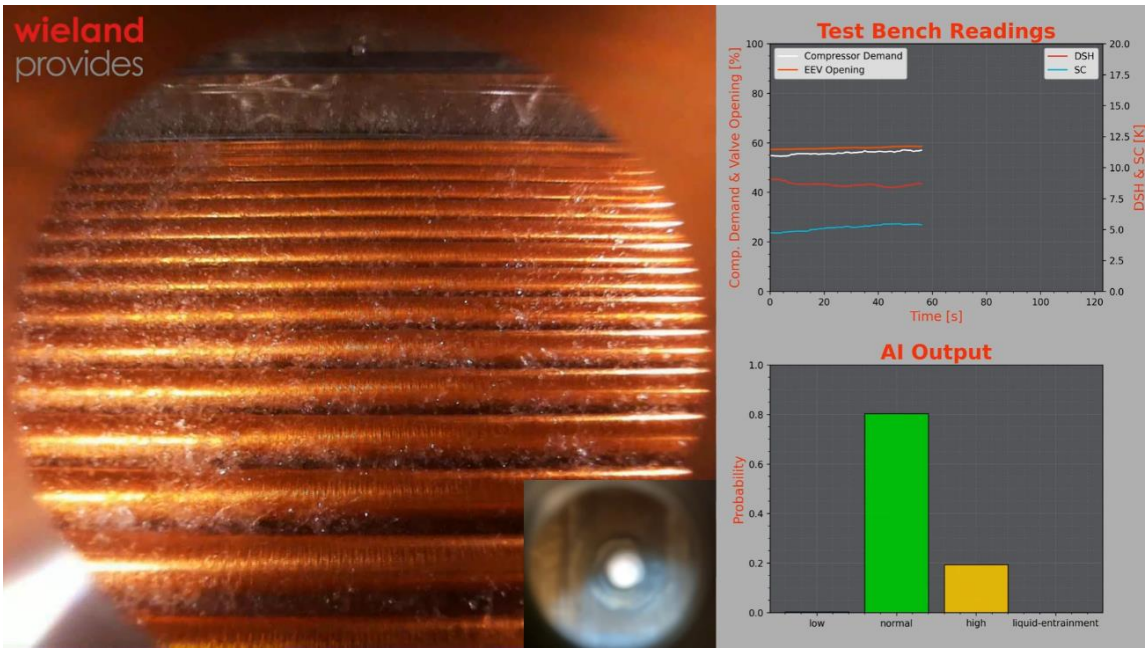
Flooded evaporators are a consolidated technology, but they require the proper knowledge and attention to work at their full potential. With the awareness of sustainability, efficiency, and cost optimization, it is worthwhile to take full advantage of the high heat transfer coefficient that can be achieved with our flooded evaporators, thanks also to the state-of-the-art Wieland technical tubes.

Different methods can be used to control the feeding of the evaporator: liquid level control and subcooling are just two examples. These practices require however good and validated measurements, knowing the behavior of the evaporator at the different working conditions, often making it necessary to map the entire working range.

AI can resolve all of this since it can distinguish the different conditions of the two-phase refrigerant inside the shell of our flooded evaporators.

Just a few examples where AI makes a difference:

- liquid entrainment detection
- low / nominal / high refrigerant liquid level recognition
- oil foam detection
- irregular distribution of refrigerant



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