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### Patent Search

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**Abstract:**

The present invention discloses a multifunction heat transmission simulator with AI and Machine Learning based modules and method thereof. The simulator includes, but limited to, a housing of a simulator is provided with a base having an impact surface, which is mounted to a heat exchanger; a spring-loaded supporting unit mounted to base, provided with a resilient rod, which is having a first end and a second end, wherein the first end is secured to the base; and a processing unit with a plurality of sensors coupled to the heat exchanger to provide feedback of the varied operations relating to the vibrations induced by an impactor provided with the assembly. Accompanied D [FIG. 1]

**Complete Specification****Description:**

[001] The present invention relates to the field of the multifunction heat transmission simulator, heat exchanging analysis method, and programming techniques. The invention more particularly relates to a multifunction heat transmission simulator with artificial intelligence interface (AI) and Machine Learning based modules and method thereof.

**BACKGROUND OF THE INVENTION**

[002] Low-temperature multiple-effect heat exchanger is the complex technique in main flow current and that heat isothermal technology is parallel to the process, which develops also very fast. In the light operational process in heat exchanger, evaporation of water is concentrated, has the tendency at heat transfer tube surface scale, so material and other resources will add Scale inhibitors, suppresses the fouling in operational process. The control quality of performance of anti-sludging agent and add-on directly affects the scaling rate of heat exchange surface in vaporizer.

[003] Further, the scale inhibitors of current heat exchangers use are all generally external import, and cost is relatively high. If the professional use new scale inhibitors scheme, the way of securing point is in the enterprising Mobile state simulation test of packaged unit, fully verifies suitability, stability, the scale inhibition ability of this S inhibitors under these processing condition and determines optimal addition dosage by simulation test. Actual scaling rate can be subject to the impact of the series of factors such as water quality, temperature, heat transfer tube surface property, spray flow, performance of anti-sludging agent, concentration, make simulation test conclusion really credible. dynamic analog device must the true virtual condition that reflects the extra-large light system of industry.

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