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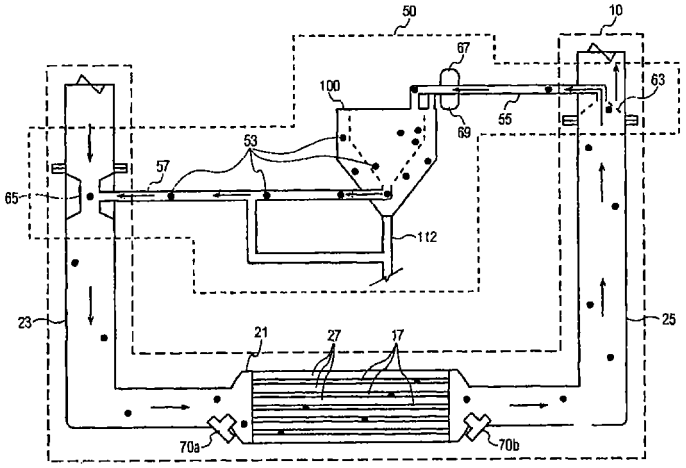
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(54) Title: SYSTEM AND APPARATUS FOR NON-POWERED CLEANING OF TUBULAR HEAT EXCHANGE SYSTEMS



(57) Abstract: In the present invention, a dual hull cyclone (100) is incorporated into a non-powered cleaning system (50) using balls (53) for tubular heat exchange systems (10). The dual hull cyclone separates balls which are smaller than a predeterminated diameter, so that they can be disposed of and replaced. The dual hull cyclone (100) also serves to separate debris from the fluid in the tubular heat exchange system (10) and also debris, that may have accumulated on the balls. This cleaning system comprises a plurality of balls (53) circulating in the fluid of the heat exchange system, a ball inlet (55), a ball outlet (57) and a dual hull cyclone. The balls, consisting of any resilient elastomeric material, are of a predetermined diameter, suitable for cleaning the tubes in the heat exchanger. The balls utilize an asymmetrical weighted core, whereby their specific density is increased.

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