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(54) Title: VIBRATING FILTRATION DEVICE

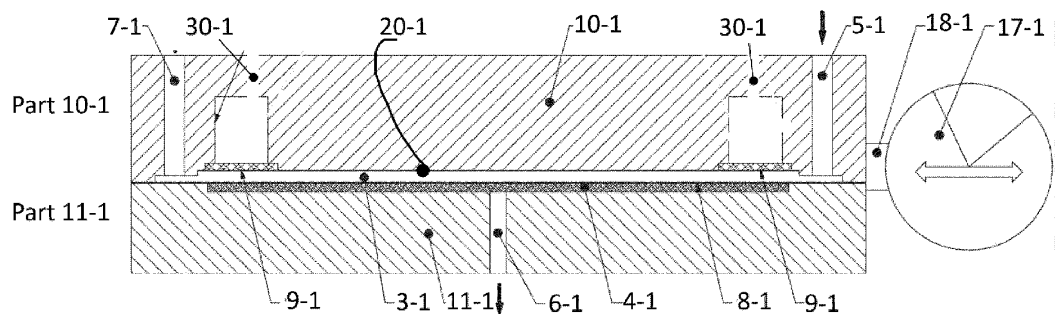


Figure 1

(57) Abstract: The present disclosure relates to a filtration device (1) for low pressure vibration filtration of a liquid comprising one or more filter modules (2), each filter module comprising: a) a volume chamber (3) comprising a feed inlet (5) for a liquid to be filtered and a retentate outlet (7); b) a drainage chamber (4) fluidly connected to the volume chamber (3) and comprising a permeate outlet (6); c) a semipermeable membrane (8) separating the volume chamber from the drainage chamber allowing one or more components of the liquid (permeate) to pass from the volume chamber (3) to the drainage chamber while retaining one or more components of the liquid (retentate) in the volume chamber (3); d) one or more flexible wall elements (9), positioned distally in at least one end of the volume chamber (3), wherein the flexible wall element is impermeable to, but in contact with the liquid to be filtered on one side, and in contact with the external atmospheric environment on the other side, thereby separating the liquid from the external atmospheric environment; wherein the volume chamber (3) and the semipermeable membrane are configured to allow the liquid in the volume chamber (3) to move across the surface of the semipermeable membrane when the filter module (2) is subjected to a vibrating motion; wherein the volume chamber (3) and the flexible wall element are configured to extend or contract the flexible wall element determined by the pressure of the liquid on flexible wall element applied when the filter module is subjected to a vibrating motion; and wherein the filtration device further comprises a vibration motor (17) having a receptacle (18) for mounting the filter module (2), the vibration motor (17) being configured for providing a vibrating motion to the filter module (2).

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