

Title (en)

DENSE-PHASE FLUID CLEANING SYSTEM UTILIZING ULTRASONIC TRANSDUCERS

Title (de)

ULTRASCHALL-REINIGUNGSSYSTEM UNTER VERWENDUNG EINES FLUIDES IN SEINER DICHTEN PHASE

Title (fr)

SYSTEME DE NETTOYAGE PAR FLUIDE A PHASE DENSE METTANT EN OEUVRE DES TRANSDUCTEURS ULTRASONIQUES

Publication

**EP 1429875 A1 20040623 (EN)**

Application

**EP 02800381 A 20020927**

Priority

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- US 32562001 P 20010928
- US 2550502 A 20020926

Abstract (en)

[origin: WO03028909A1] A cleaning system (20) utilizing a pressurized dense-phase cleaning fluid (22) includes a cleaning containment vessel (24) having a containment-vessel interior (26), and a pressurization source (44) in fluid communication with the containment-vessel interior (26) to produce a cleaning pressure therein. There is at least one ultrasonic energy source (32) directing ultrasonic energy into the containment-vessel interior (26). Where there are two ultrasonic energy sources (32), they desirably function at different frequencies. Each ultrasonic energy source (32) includes a transducer housing (34) having a transducer-housing interior (36), an ultrasonic transducer (38) within the transducer-housing interior (36) and directing a beam of ultrasonic energy through the transducer housing (34) and into the containment-vessel interior (26), and a gas-pressure source (44) in fluid communication with the transducer-housing interior (36). The gas-pressure source produces a pressure in the transducer-housing interior (36) substantially equal to the cleaning pressure.

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**B08B 3/12**; **B08B 7/00**

IPC 8 full level

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