

Title (en)

APPARATUS FOR THE CENTRIFUGAL SEPARATION OF A MIXTURE OF PHASES

Publication

EP 0249668 B1 19900425 (FR)

Application

EP 86401297 A 19860616

Priority

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Abstract (en)

[origin: EP0249668A1] 1. Apparatus for the centrifugal separation of a mixture including at least one gaseous phase, this apparatus comprising, in a fixed enclosure (21), a rotating element constituted by a treatment rotor (24) incorporating perforated (48) discs (49) offset angularly one from the other, upstream by a rotary distributor (49.1) and downstream by a ventilator (36), the mixture to be treated being directed by the rotary diffuser, which transforms the upstream pressure drop due to the ventilator into a helical speed greater than the speed of rotation of the rotor, through the perforations of the discs to form active helicoidal streams, which latter are separated by dead helicoidal sheets trapped in the rotor and rotating substantially at the same speed as this rotor, in which sheets the heavy phase to be separated passes between the discs as far as the fixed part of the enclosure where it is collected and evacuated, characterized in that the treatment rotor (24) is interposed between an upstream chamber (27) for suction of the mixture to be treated and a downstream chamber (46) collecting the separated gaseous phase, the rotor comprising a coaxial hollow tubular shafting (52) which places in communication through end openings (54, 55) this collecting chamber (46) with the chamber (34, 35) of the ventilator, which is separated in the enclosure (21) by a partition (26) from the suction chamber (27), whereas the collecting chamber (46) is separated in the enclosure (21) by a partitioning (45), on the one hand, from the peripheral zone (32) in which arrives the separated heavy phase and a helicoidal leakage flow is established in the same axial direction (F.5) as that (F.1) of the principal flow of the mixture through the rotor, on the other hand, from a conical extension (31) of the enclosure forming cyclone and receiving the leakage flow charged with heavy phase to trap and collect the latter.

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