

Title (en)
CYCLONIC ELEVATOR AND METHOD FOR USING SAME

Title (de)
ZYKLONAUFGUG UND VERWENDUNGSVERFAHREN DAFÜR

Title (fr)
ÉLEVATEUR CYCLONIQUE ET SON PROCÉDÉ D'UTILISATION

Publication
EP 2655894 A4 20140514 (EN)

Application
EP 11851600 A 20111221

Priority
• US 201061427036 P 20101223
• US 2011066629 W 20111221

Abstract (en)
[origin: WO2012088340A2] A cyclonic elevator tube comprising a manifold which supplies fluid under pressure via an annular transition ring with multiple, circumferentially spaced jet orifices. These orifices are set at inwardly and circumferentially directed compound angles for ejecting vortex jets of pressurized fluid through the elevator, to ultimately cause transportation of fluid material through the tubes. This apparatus comprises: a cylindrical chamber; a plurality of helically shaped venturi tubes spaced around the internal circumference of the chamber; a manifold connected to the inlet ends of the venturi tubes; and a high pressure gas supply connected to the manifold. The helix can be right or left handed and preferably the venturi tubes extend for less than one turn of the helix. The angle that the tangent of the helix makes with the longitudinal axis of the chamber is between 1° and 89°. The internal circumference of the chamber may be larger at the inlet end than at the outlet end.

IPC 8 full level
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CPC (source: EP)
F04F 5/16 (2013.01); **F04F 5/24** (2013.01); **F04F 5/42** (2013.01); **F04F 5/46** (2013.01); **F04F 5/466** (2013.01)

Citation (search report)
• [I] FR 1200145 A 19591218 - BERTIN & CIE
• [A] US 4227863 A 19801014 - SOMMERER RAYMOND
• See references of WO 2012088340A2

Designated contracting state (EPC)
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DOCDB simple family (publication)
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