

Title (en)
METHOD FOR PRODUCING CHLORINE BY GAS PHASE OXIDATION OF HYDROGEN CHLORIDE IN A FLUIDIZED-BED REACTOR

Title (de)
VERFAHREN ZUR HERSTELLUNG VON CHLOR DURCH GASPHASENOXIDATION VON CHLORWASSERSTOFF IN EINEM WIRBELSCHICHTREAKTOR

Title (fr)
PROCÉDÉ DE PRODUCTION DE CHLORE PAR OXYDATION EN PHASE GAZEUSE DE CHLORURE D'HYDROGÈNE DANS UN RÉACTEUR À LIT FLUIDISÉ

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Abstract (en)
[origin: WO2011015503A1] The invention relates to a method for producing chlorine by gas phase oxidation of hydrogen chloride on a heterogeneous, particulate catalyzer in a fluidized-bed reactor, obtaining a product gas mixture that is freed of any carried catalyzer particles in cyclones (1) disposed in the upper region of the fluidized-bed reactor, comprising a cylindrical upper part (2) having a tangential or spiral inlet (3) for the product gas mixture and narrowing at the lower end thereof via a conical part (4) into a cyclone downpipe (5), and a central immersion pipe (6) in the upper region of the cyclone (1) for diverting the product gas mixture freed of the carried catalyzer particles, characterized in that # one to seven cascades of two to five cyclones each connected in series are used, wherein the cyclones (1) of each cascade, except for the cyclone (1) first permeated, which is designed that approximately 90 to 99% by weight of the carried catalyst particles are precipitated, each comprise a trickle valve (7) at the lower end of the cyclone downpipe (5) comprising an angled pipe terminator (8) and a loose flap valve (9) suspended at an angle α to the vertical, wherein the angle α and the weight of the flap valve (9) are designed so that the torque of the flap valve (9) based on the diameter of the outlet opening out of the angled pipe terminator (8) is in the range of 2 to 300 N/m².

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