

Abstract

Device and method for separating liquid droplets from a gas stream by means of a centrifugal mist eliminator

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The invention relates to a centrifugal droplet separator for separating liquid droplets out of a gas stream, comprising a shell (1) having a circular cross section and a vertical longitudinal axis (11), an upper hood (2) that bounds the shell (1) at the top and has a gas exit port (7) for the gas stream cleaned in the centrifugal droplet separator, a drip plate (8) disposed beneath the gas exit port (7), a lower hood (10) that bounds the shell (1) at the bottom and has a liquid exit port (4) for removal of the deposited liquid droplets, and an inlet (3) that opens tangentially into the shell (1) for supply of the gas stream,

wherein

15 there are at least two nozzles (9) for feeding a stabilizer liquid into the interior of the centrifugal droplet separator, the respective nozzle outlet (15) of which is disposed between the tangential inlet (3) and the drip plate (8) in vertical direction, where the main spraying direction (12) of the nozzles (9) is directed upward at an internal angle of 0 to 60° relative to the vertical longitudinal axis (11).

20 The invention additionally also relates to a method of separating liquid droplets out of a gas stream in such a centrifugal droplet separator.

Fig. 1