

ABSTRACT

The present invention relates to a gravitational vapor compressor (GVC) device comprising at least one vertical compression chamber (16) and a plurality of droplet spray generating nozzles (10) are arranged at the top thereof, which
5 nozzles form a flow of droplets in the water vapor flow along a height h_1 of the vertical shell (16). The speed of the droplets from the droplet beams (10) is adjusted along the height h_1 to the terminal fall velocity in relation to a gas flow, the compression chamber (16) has a height h_2 from which droplets fall at the same or similar terminal velocity inside a water vapor flow, which compresses
10 the water vapor. The gravitational vapor compressor device further comprises a secondary vapor outlet duct (13).

FIG. 1