

Applicability of a desiccant dew-point cooling system independent of external water sources - DTU Orbit (08/11/2017)

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The applicability of a technical solution for making desiccant cooling systems independent of external water sources is investigated. Water is produced by condensing the desorbed water vapour in a closed regeneration circuit. Desorbed water recovery is applied to a desiccant dew-point cooling system, which includes a desiccant wheel and a dew point cooler. The system is simulated during the summer period in the Mediterranean climate of Rome and it results completely independent of external water sources. The seasonal thermal COP drops 8% in comparison to the open regeneration circuit solution, and electricity consumption increases.

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