

ABSTRACT

The invention relates to a mechanical vapour compression (MVC) desalination arrangement having a low compression ratio, with latent-heat exchangers having a high latent-heat exchange coefficient, with a temperature gradient between primary vapour and secondary vapour of approximately 1°C or less, a compression ratio of 1.11 or less, high vapour volume, low overheating and a low-temperature saline solution to be desalinated, which arrangement allows industrial desalination with less specific energy per unit of desalinated water and is coupled to 100% renewable off-grid energy sources.