



# **THE USE OF A SORPTION HEAT STORAGE IN ORDER TO STABILIZE THE OPERATION OF SOURCES IN PRODUCTION PLANT**

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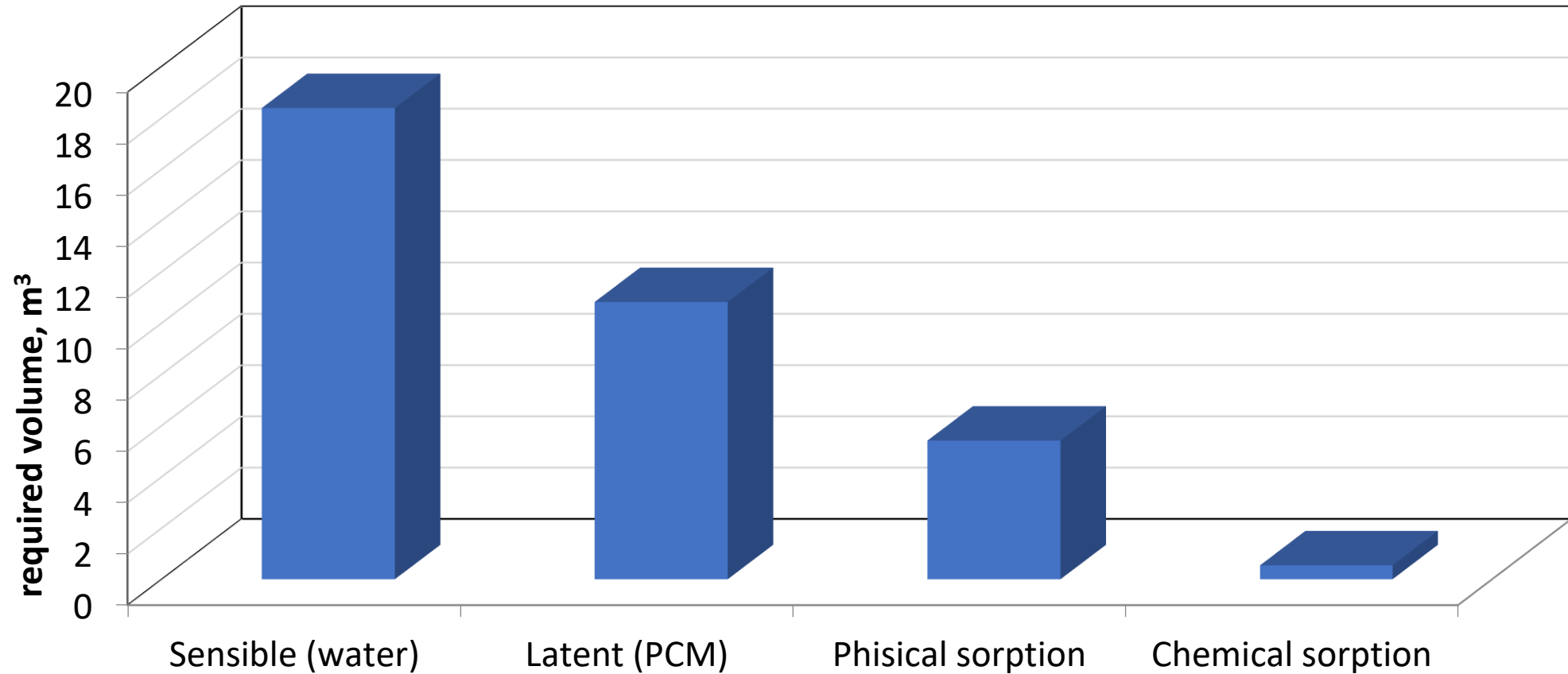
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**20–21 MAY 2021**

# Problem to solve

- Industrial plants very often meet the problem of mismatching the moment of heat overproduction with time when this heat could be used for other purposes.
- What should be the proper heat storage for such case?
- **Analised object:** production plant whose work cycle provides for a one-shift operation, and in addition, the use of heat occurs only three times a week. The plant heats water from its own wells (average annual water temperature 8 C), and at the same time discharges sewage with a temperature of 35 C into the sewage system.

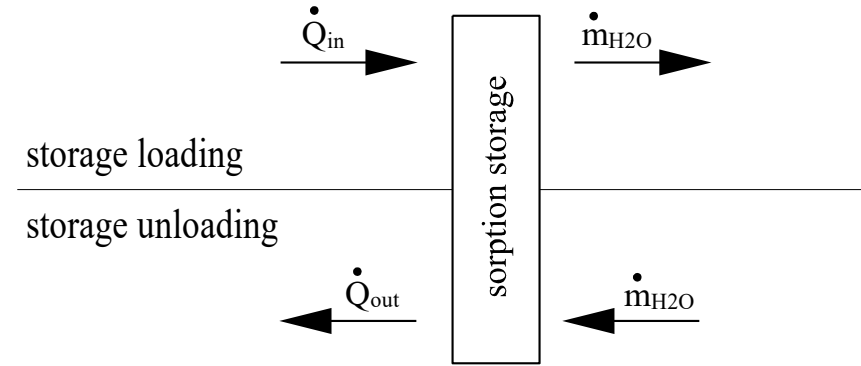
# Heat storage methods (200 kWh)



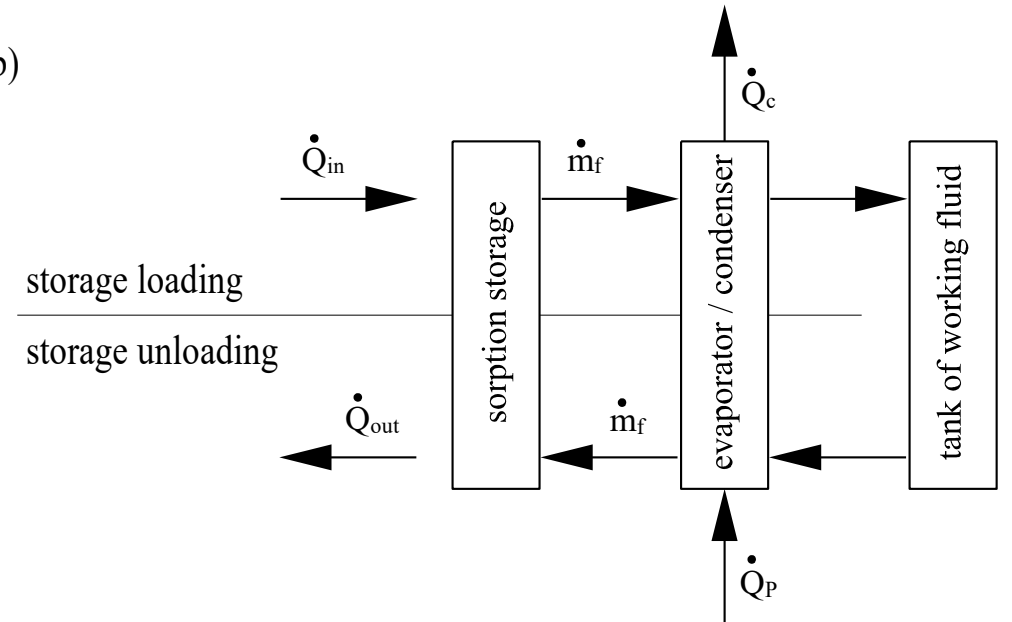
# Adsorption heat storage

- a) open type
- b) closed type

a)



b)



# Results

- Main heat source (coal boiler) can be reduced by 30%;
- Production plant can recover 11% of the energy consumed;
- Installation can be easily connected to solar panels (what can make further savings in the future)