

HIGH AND LOW TEMPERATURE BY THERMAL ENERGY STORAGE

High-temperature thermal energy storage

Development of advanced and resilient construction materials (High thermal performance concretes) for high-temperature storage media and concepts, including Concentrated Solar Power (CSP):

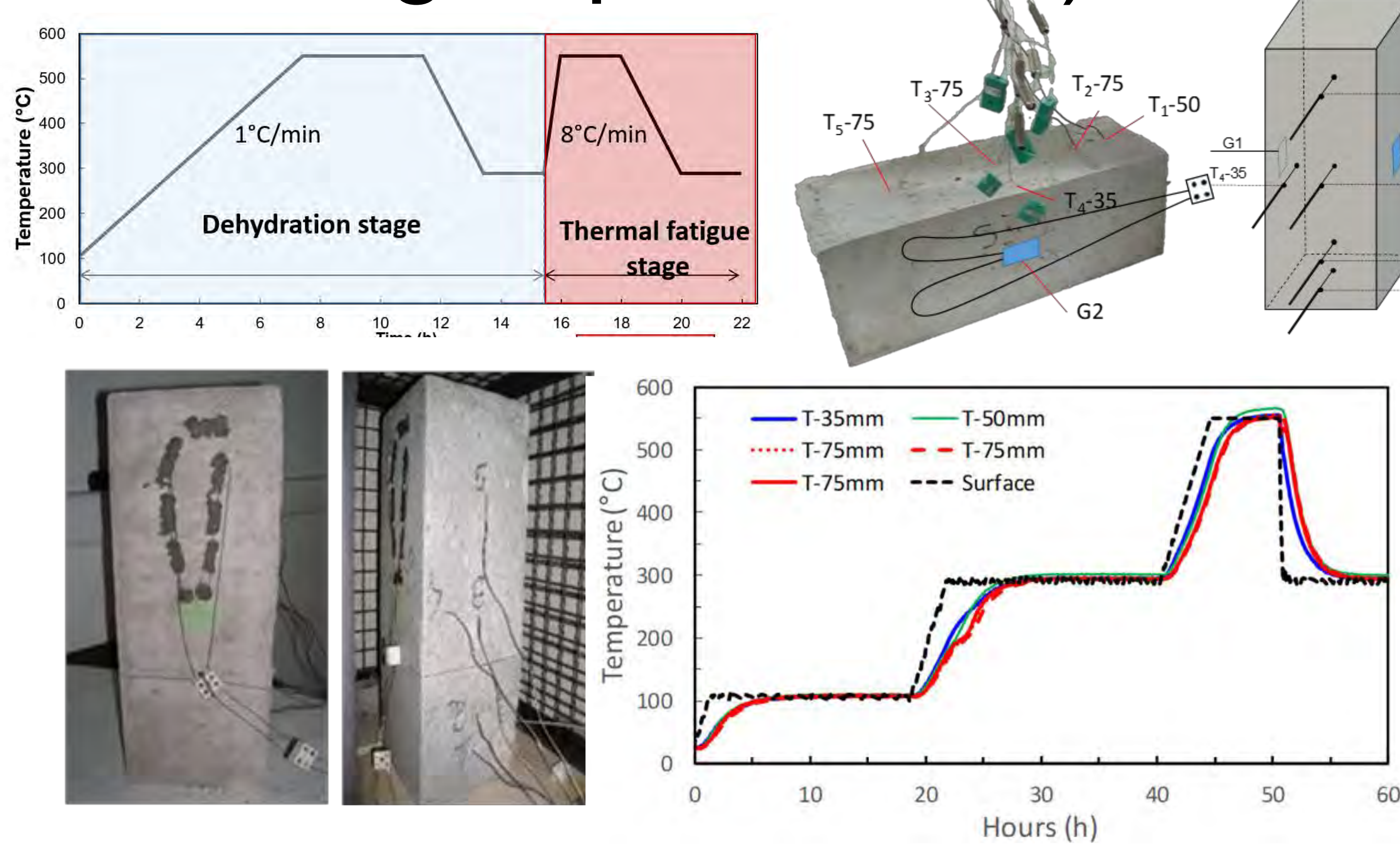


<https://www.sintef.no/projectweb/lorcenis/>++

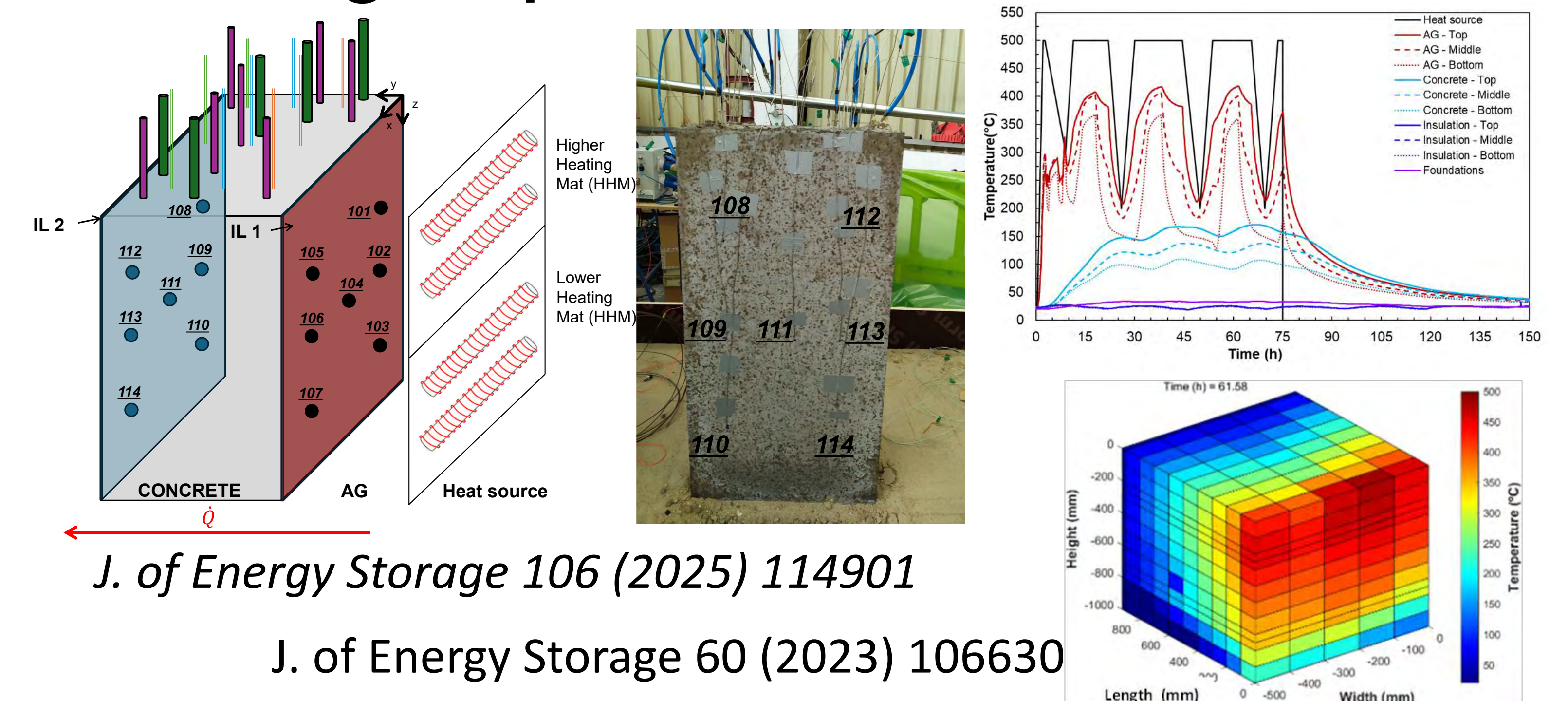


<http://www.newsol.uevora.pt>

I) Concrete module based on PC+BFS binder with PPF for CSP (sensible heat storage up to 550°C)



II) Concrete based on CAC for thermocline Tank (sensible heat storage up to 550°C).



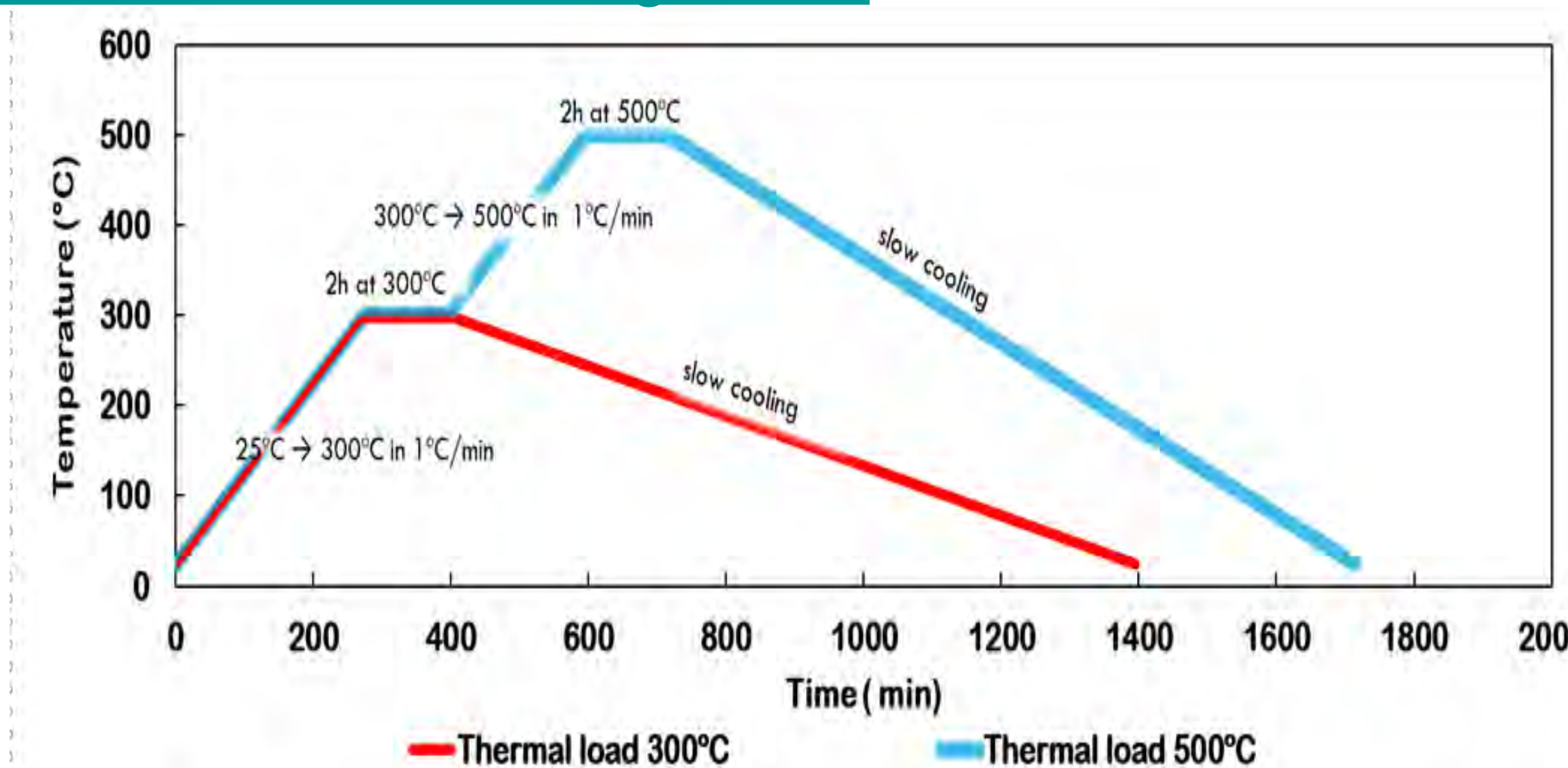
J. of Energy Storage 106 (2025) 114901

J. of Energy Storage 60 (2023) 106630

III) Filler materials, ceramic/CAC concrete, with high resistance to molten salt interaction

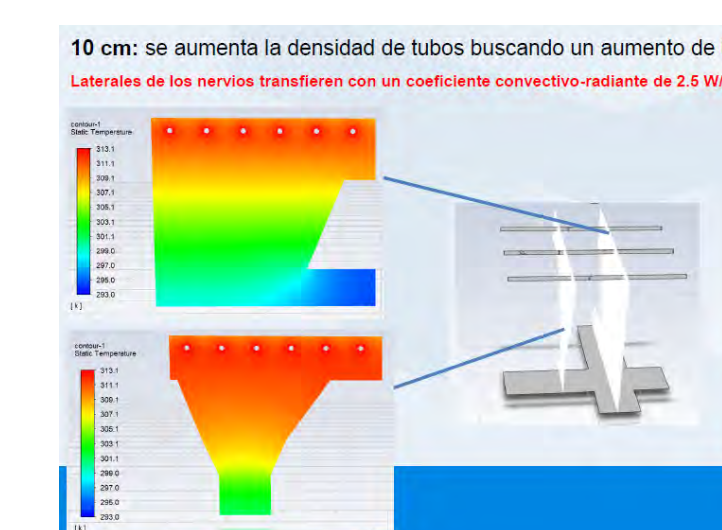
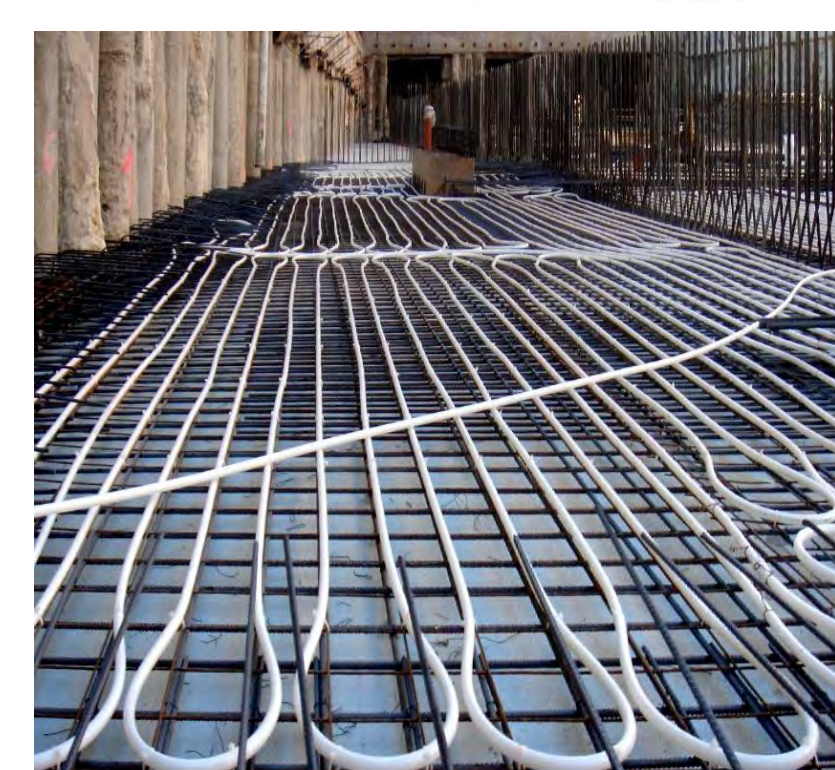


ietcc.csic.es/projects/investigacion-de-fuentes-de-generacion-renovables-y-sistemas-de-almacenamiento-termico-modulares-e-inteligentes/



Low-temperature thermal energy storage

Developing & demonstrating advanced low-temperature thermal energy storage solutions to improve building energy efficiency, renewable energy integration & decarbonization, based on PCM application.



<https://www.ietcc.csic.es/projects/inphase-soluciones-innovadoras-fachadas-prefabricadas-hormigon-pcms-edificios-consumo-casi-nulo/>

<https://www.ietcc.csic.es/projects/forjado-reticular-innovador-con-materiales-de-cambio-de-fase-activado-termicamente-holedeck-active/>