

---

**References:**

- [1] J.K. Kissock, J.M. Hannig, T.I. Whitney, and M.L. Drake. State of the art on high temperature thermal energy storage for power generation. part 1 concepts, materials and modellization. *Renewable and Sustainable Energy Reviews*, 14(2), 2010.
- [2] Adèle Soupart-Caron (Soupart). Stockage de chaleur dans les matériaux à changement de phase. PhD thèses, 2015. Thèse de doctorat dirigée par Marty, Philippe et Fourmigue, Jean François Mécanique des Fluides, procédés, énergétique Grenoble Alpes 2015.
- [3] F. BENMOUSSA, H. BENMOUSSA, A. BENZAOUI, stockage de l'énergie thermique: effet des paramètres physiques et géométriques sur les performances de stockage.
- [4] BECHIRI. M Optimisation du stockage par chaleur sensible et latente dans un module plan et cylindrique en régime instationnaire.
- [5] F. W. Schmidt et J. Szego, Transient response of a solid sensible heat thermal storage units single fluid, *J. Heat Transfer*, Vol. 98, pp. 471-477, (1976).
- [6] F. W. Schmidt, R. R. Somers, J. Szego et D. H. Laananen, Design Optimization of a Single Fluid, Solid Sensible Heat Storage Unit. *J. Heat Transfer*, Vol. 99 (2), pp. 174-179, (1977).
- [7] J. Szego et F. W. Schmidt, Transient Behavior of a Solid Sensible Heat Thermal Storage Exchanger. *J. Heat Transfer*, Vol. 100 (1), pp. 148-154 (1978).
- [8] J. P. Bardon, B. Fourcher et B. Cassagne, Stockage périodique par chaleur sensible aspects fondamentaux lies a la cinétique des transferts. *Int. J. Heat Mass, Transfer*. Vol. 22, pp. 229-236,(1979).
- [9] R. Tamme, D. Laing and W. Steinmann, Advanced Thermal Energy Storage Technology for Parabolic Trough. *International Solar Energy Conference*, pp. 563-571, (2003)
- [10] S. Vaivudh, W. Rakwichian et S. Chindaruksa, Heat transfer of high thermal energy storage with heat exchanger for solar trough power plant. *Energy Conversion and Management*, Vol. 49, pp. 3311–3317, (2008)
- [11] S. Kuravi, J. Trahan, Y. Goswami, C. Jotshi, E. Stefanakos et N. Goel, Investigation of a high-temperature packed-bed sensible heat thermal energy storage system with large-sized elements. *J. Sol. Energy Eng*, Vol.135, N° 4, 041008 (9 pages), (2013)
- [12] H. Rieger, U. Projahn et H. Beer, Analysis of the heat transport mechanisms during melting around a horizontal circular cylinder. *Int. J. of Heat and Mass Transfer*, Vol. 25, N° 1, pp.137–147, (1982)

- [13] M. Lacroix, numerical simulation of a shell-and-tube latent heat thermal energy storage unit.  
Solar Energy, Vol. 50, N° 4, pp. 357-367, (1993)
- [14] Y. Zhang et A. Faghri, Semi-analytical solution of thermal energy storage system with conjugate laminar forced convection.  
Int. J. Heat Mass Transfer, Vol. 39, N° 4, pp. 717-724, (1996)
- [15] K. A. R. Ismail, O.C. Quispe et J. R. Henrõquez, A numerical and experimental study on a parallel plate ice bank.  
Applied Thermal Engineering, Vol. 19, pp. 163-193, (1999)
- [16] M. Akgün, O. Aydın et K. Kaygusuz, Experimental study on melting/solidification characteristics of a paraffin as PCM.  
Energy Conversion and Management, Vol. 48, pp. 669–678, (2007)
- [17] Y.B. Tao, Y.L. He et Z. G. Qu, Numerical study on performance of molten salt phase change thermal energy storage system with enhanced tubes.  
Solar Energy, Vol. 86, pp. 1155–1163, (2012)
- [18] A. H. Mosaffa, C. A. Infante Ferreira, F. Talati et M. A. Rosen, Thermal performance of a multiple PCM thermal storage unit for free cooling.  
Energy Conversion and Management, Vol. 67, pp. 1–7, (2013)
- [19] H.Mehling et L.F.Cabeza, *Heat and cold storage with PCM*, Springer - Verlag Berlin Heidelberg ed 2008.
- [20] E. Oro, A. Gil, A. de Gracia, D. Boer, et L. F. Cabeza, "Comparative life cycle assessment of thermal energy storage systems for solar power plants", *Renewable Energy*, vol. 44, pp. 166-173, 2012.
- [21] M. Medrano, A. Gil, I. Martorell, X. Potau, et L. F. Cabeza, "State of the art on high temperature thermal energy storage for power generation. Part 2-Case studies", *Renewable and Sustainable Energy Reviews*, vol. 14, no. 1, pp. 56-72, 2010.
- [22] NREL, "Survey of thermal storage for parabolic trough power plants,"NREL/SR-550-27925, 2000
- [23] A. Kaizawa, H. Kamano, A. Kawai, T. Jozuka, T. Senda, N. Maruoka, et T. Akiyama, "Thermal and flow behaviors in heat transportation container using phase change material", *Energy Conversion and Management*, vol. 49, no. 4, pp. 698-706, Apr.2008.
- [24] A. Sharma, V. V. Tyagi, C. R. Chen, et D. Buddhi, "Review on thermal energy storage with phase change materials and applications", *Renewable and Sustainable Energy Reviews*, vol. 13, no. 2, pp. 318-345, Feb.2009.
- [25] A. Abhat, "Low temperature latent heat thermal energy storage: Heat storage materials", *Sol. Energy*, vol. 30, no. 4, pp. 313-332, 1983.

- [26] M. Hadjieva, S. Kanev, et J. Argirov, "Thermophysical properties of some paraffins applicable to thermal energy storage", *Solar Energy Materials and Solar Cells*, vol. 27, no. 2, pp. 181-187, July 1992.
- [27] C. Alkan, "Enthalpy of melting and solidification of sulfonated paraffins as phase change materials for thermal energy storage", *Thermochimica Acta*, vol. 451, no. 1-2, pp. 126-130, Dec. 2006.
- [28] Y. Yuan, N. Zhang, W. Tao, X. Cao, et Y. He, "Fatty acids as phase change materials: A review", *Renewable and Sustainable Energy Reviews*, vol. 29, pp. 482-498, Jan. 2014.
- [29] SAMSSA Newsletter, "Sugar Alcohol based Materials for Seasonal Storage Applications", 2015.
- [30] A. Kaizawa, N. Maruoka, A. Kawai, H. Kamano, T. Jozuka, T. Senda, et T. Akiyama, "Thermophysical and heat transfer properties of phase change material candidate for waste heat transportation system", *Heat Mass Transfer*, vol. 44, no. 7, pp. 763-769, 2008.
- [31] A. Gil, C. Barreneche, P. Moreno, C. Solé, A. Inés Fernandez, et L. F. Cabeza, "Thermal behaviour of d-mannitol when used as PCM: Comparison of results obtained by DSC and in a thermal energy storage unit at pilot plant scale", *Applied Energy*, vol. 111, pp. 1107-1113, Nov. 2013.
- [32] M. Kenisarin et K. Mahkamov "Salt hydrates as latent heat storage materials: Thermophysical properties and costs" *Solar Energy Materials and Solar Cells* 145, Part 3 255-86 2016
- [33] J. P. Kotzé, T. W. Von Backström, et P. J. Erens, "A combined latent thermal energy storage and steam generator concept using metallic phase change materials and metallic heat transfer fluids for concentrated solar power," 2011
- [34] H. Ge, H. Li, S. Mei, et J. Liu, "Low melting point liquid metal as a new class of phase change material: An emerging frontier in energy area", *Renewable and Sustainable Energy Reviews*, vol. 21, no. 0, pp. 331-346, May 2013
- [35] F. Roget, C. Favotto, et J. Rogez, "Study of the KNO<sub>3</sub>-LiNO<sub>3</sub> and KNO<sub>3</sub>-NaNO<sub>3</sub>-LiNO<sub>3</sub> eutectics as phase change materials for thermal storage in a low-temperature solar power plant", *Sol. Energy*, vol. 95, no. 0, pp. 155-169, Sept. 2013.
- [36] A. Sari, H. Sari, et A. Önal, "Thermal properties and thermal reliability of eutectic mixtures of some fatty acids as latent heat storage materials", *Energy Conversion and Management*, vol. 45, no. 3, pp. 365-376, Feb. 2004.
- [37] CSTB .Matériaux à changement de phase : vers une climatisation douce 05 décembre 2007.
- [38] Dupont Energain product information sheet [pdf], 28 décembre 2004.

[39] CSTB .Utilisation des MCP en climatisation passive et chauffage d'intersation [pdf].

[40] Joseph VIRGOVE .Intégration des matériaux à changement de phase dans les bâtiments. [pdf] juin 2007.

[41] M.J. Hosseini Experimental and computational evolution of a shell and tube heat exchanger as a PCM thermal storage system .