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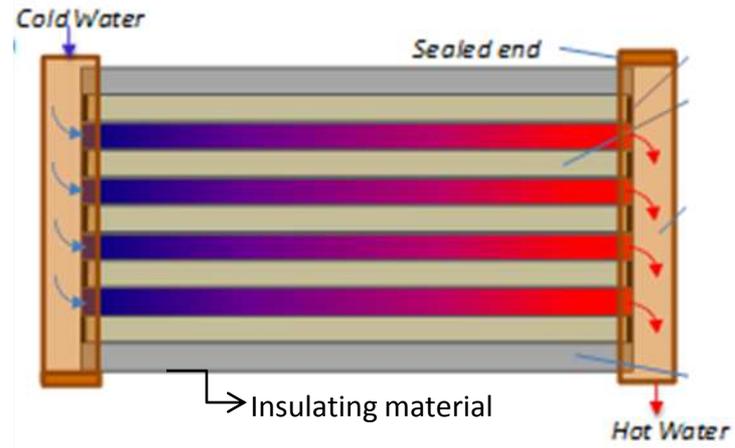


Figure 1 Water flow in parallel channels - Schematic plan view (Malvi, 2012)

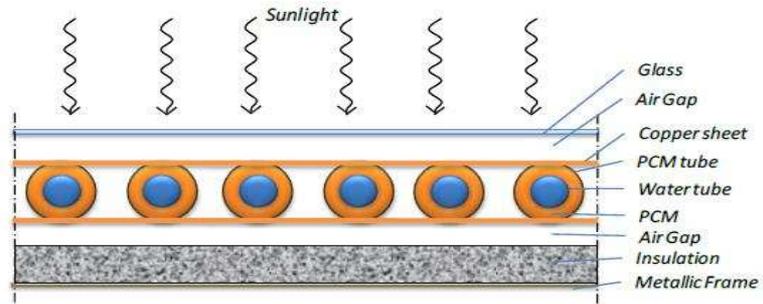
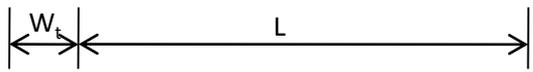
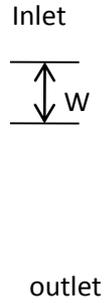


Figure 2 A schematic cross-sectional view of PCM filled flat plate collector (Sharma, 2008)



a) Copper sheet and tube



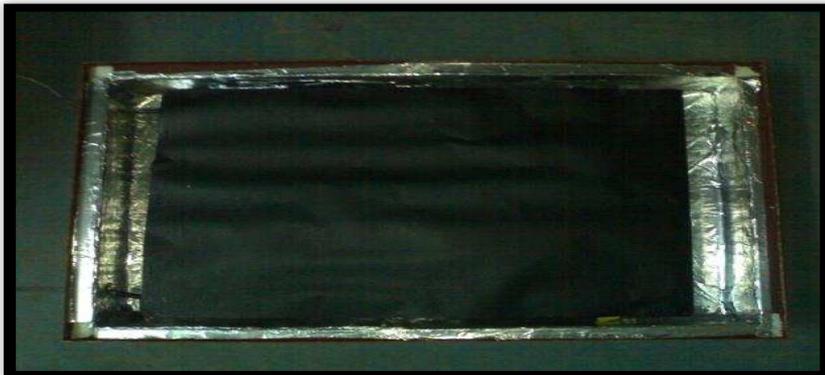
b) Water tube-in-PCM tubes



c) Tube-in-tube work sandwiched in absorber sheet



d) Box with insulation and reflecting surface



e) Absorber sheet placed in collector tray



f) Glass top on collector box

Figure 3 Step by step fabrication of PCM filled flat plate collector

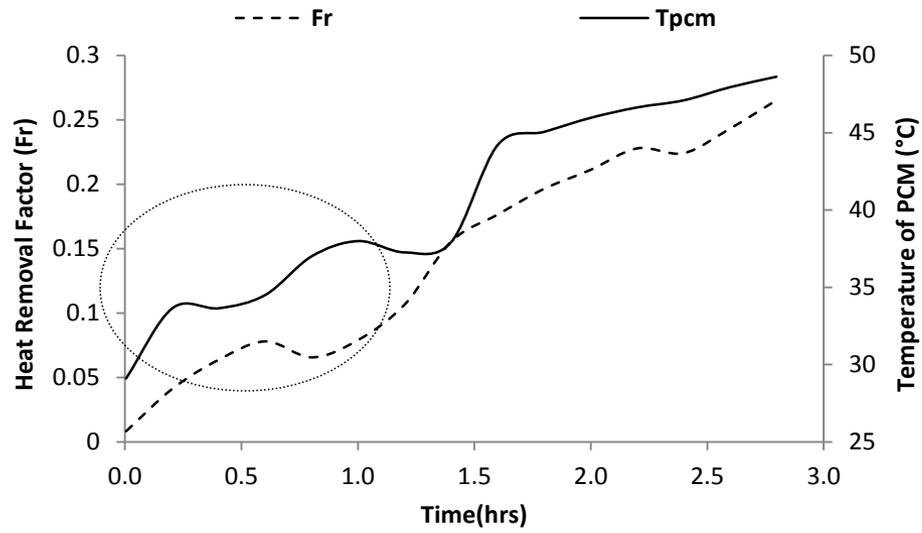


Figure 4. Variable  $F_R$  in PCM integrated collector

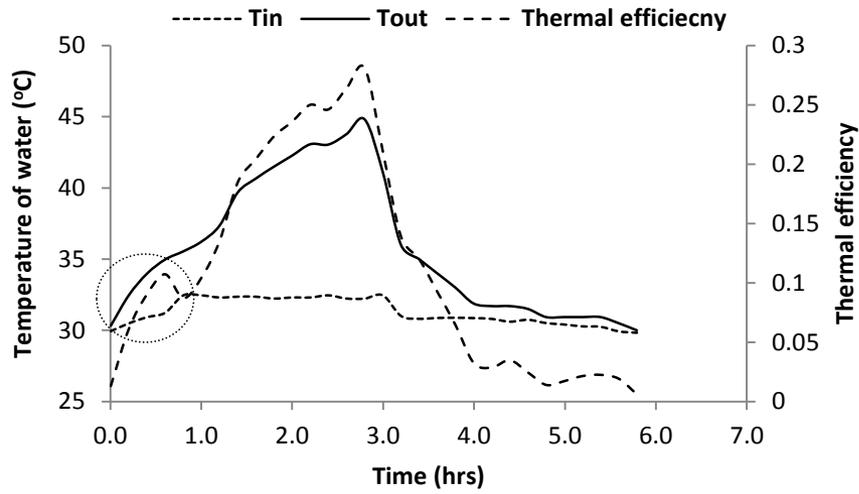


Figure 5. Temperature profile of water with OM35

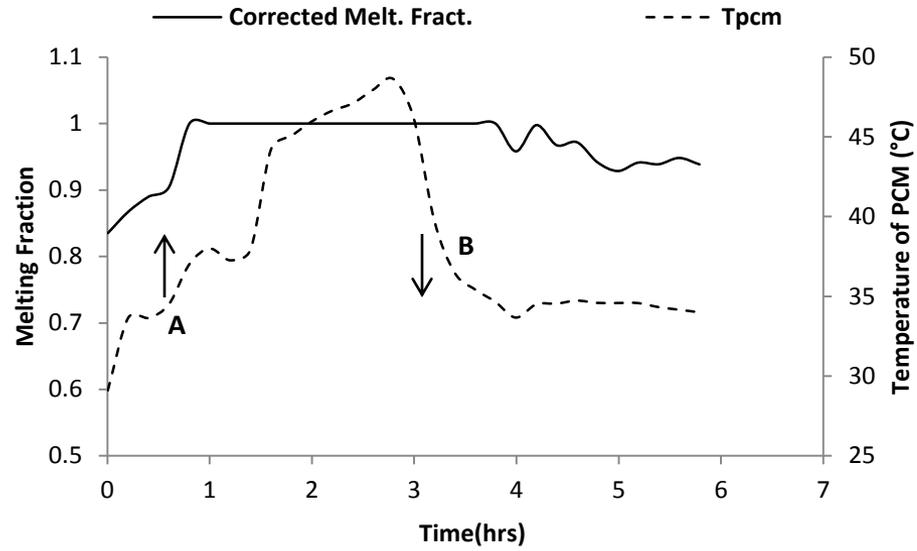


Figure 6. Melt fraction and corrected melt fraction of OM-35 with respect to measured temperature

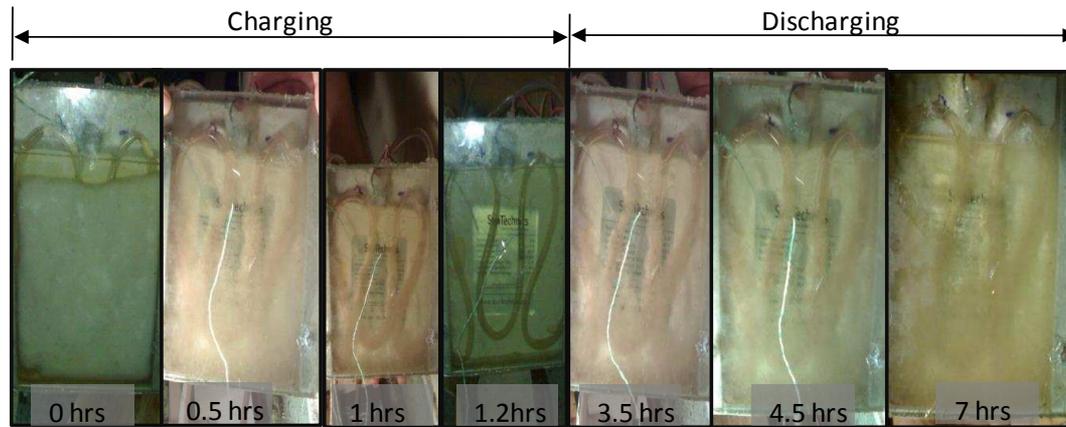


Figure 7. Photographs at various stages of phase-change with OM35. Insulation is not included in the panel.

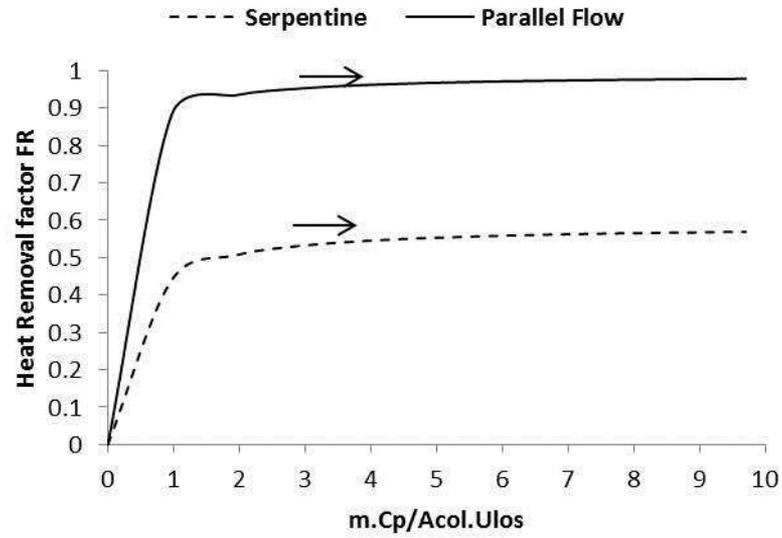


Figure 8 Conventional heat removal factors in solar collector as a function of mass flow rate

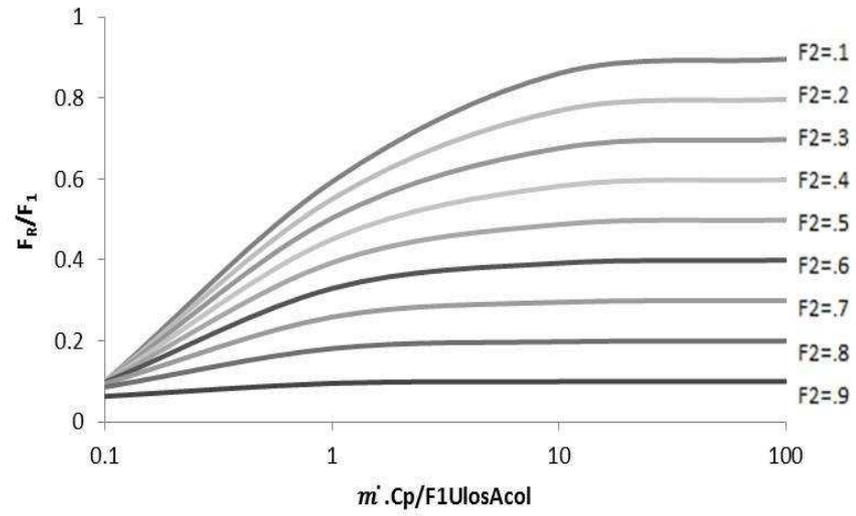


Figure 9 Generalized chart for  $F_R$  for serpentine of arbitrary geometry and number of bends