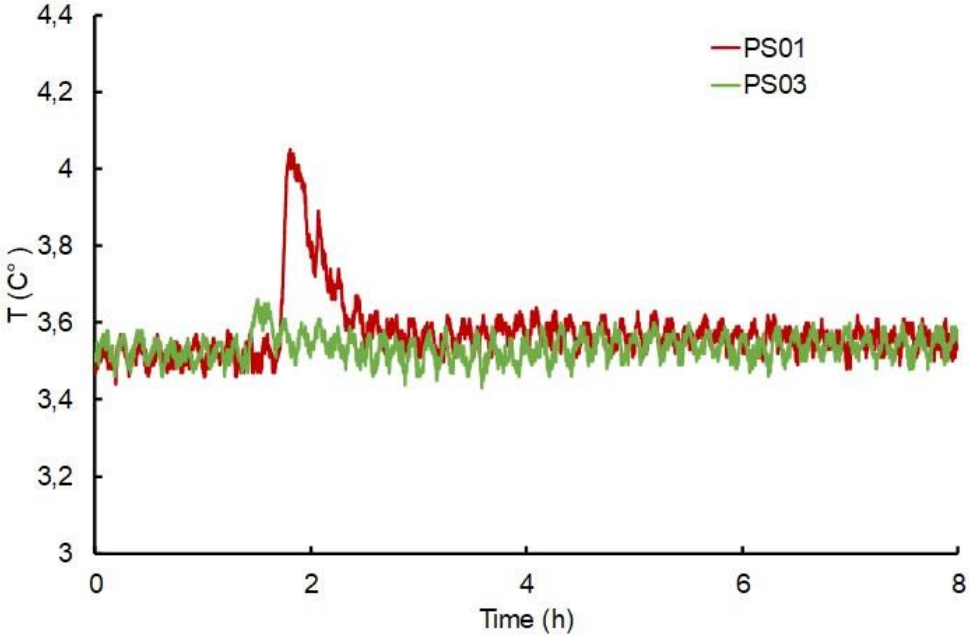
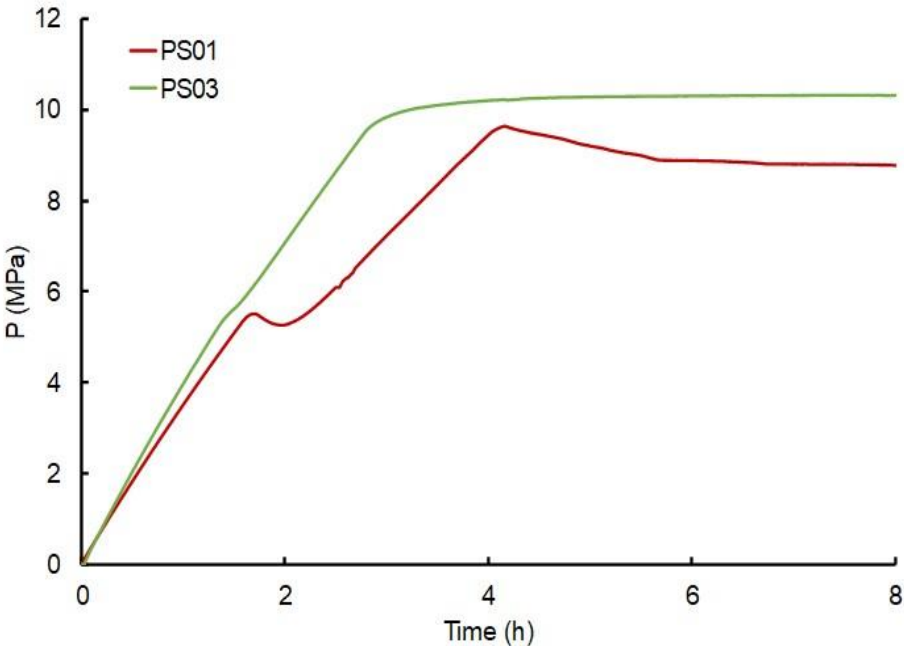


Supplementary Materials:



(a)

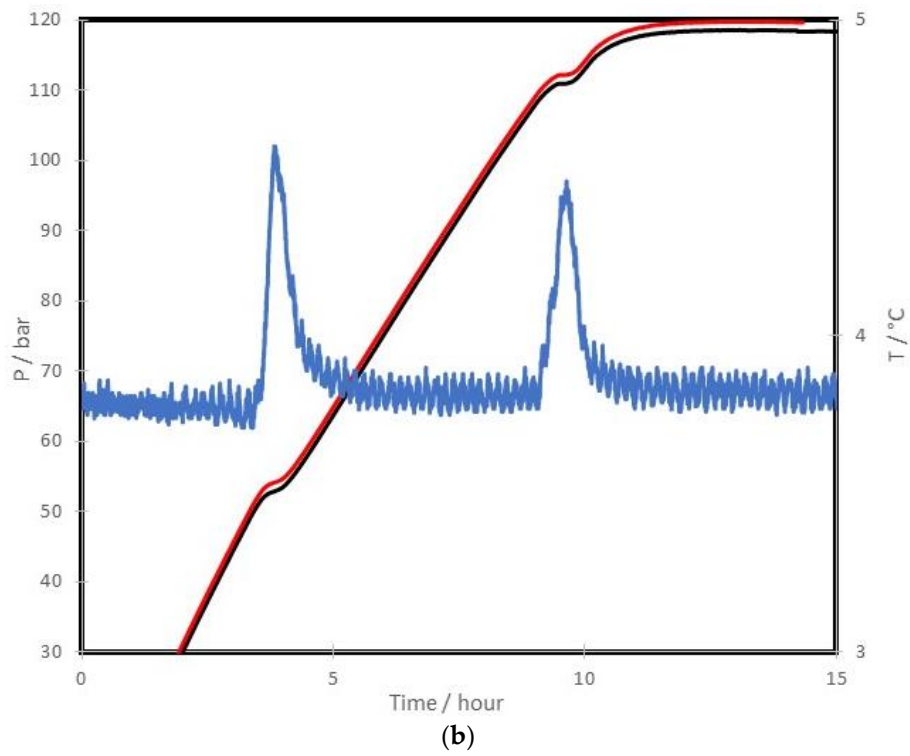


Figure S1. Pressure and temperature profiles during the first hours of methane hydrate formation and dissociation experiments around 53 % water saturation, and a gas flowrate of (a) 87 mln.min⁻¹ with different particle sizes and (b) 50 mln.min⁻¹ for non-sieved sand.