

Fig.6. HHA column performance for different L/G ratios. For (a), (b), (c) and (d), black dot (●), L/G ratio of 0.5; red box (■), L/G ratio of 1.0; blue triangle (▲), L/G ratio of 1.5.

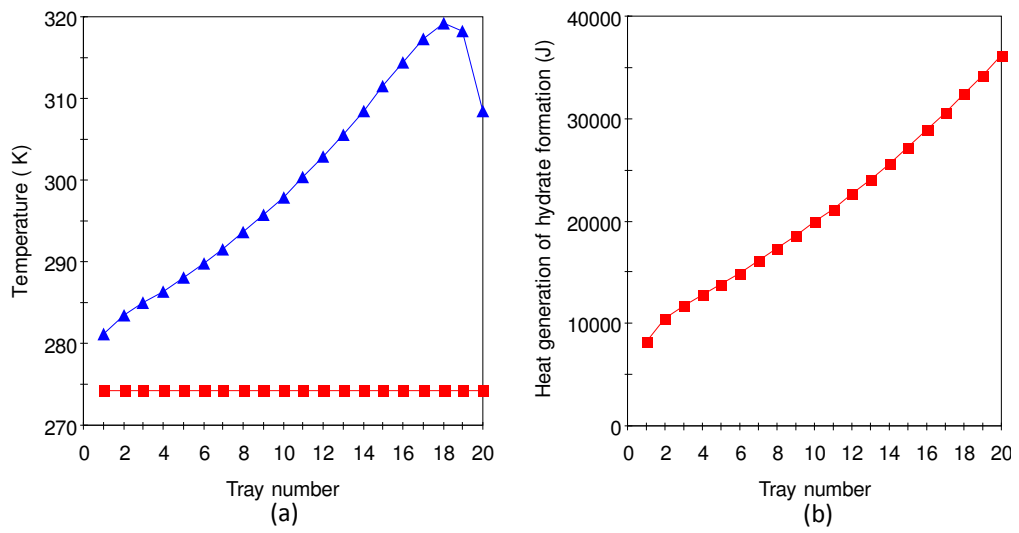


Fig.7. Temperature profile and heat generation of HHA process. For (a), red box (■), heat draw out case; blue triangle (▲), no heat exchange case.