

Thermally Assisted Dissociation of Methane Hydrates & the Impact of CO₂ Injection

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Supporting Information for the Reproducibility of hydrate formation tests

This section discusses the reproducibility of the hydrate formation tests. We have obtained reproducible results on hydrate formation and hydrate distribution in this reactor for over years. We have provided the following data that shows the temperature response at selected thermocouple locations. C3 and C4 thermocouple locations are chosen to represent the case. In the following graph we have repeated the same hydrate formation test 3 times with the exact same conditions. The temperature data is reported below.

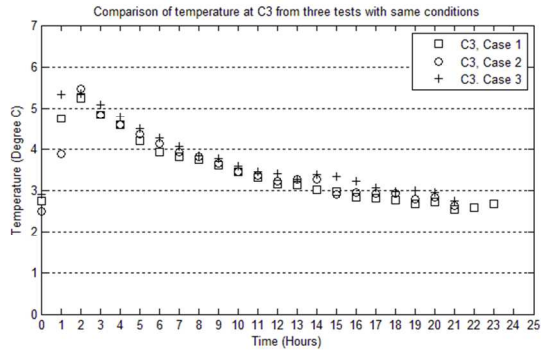


Figure 1 Temperature at location C3 during hydrate formation test

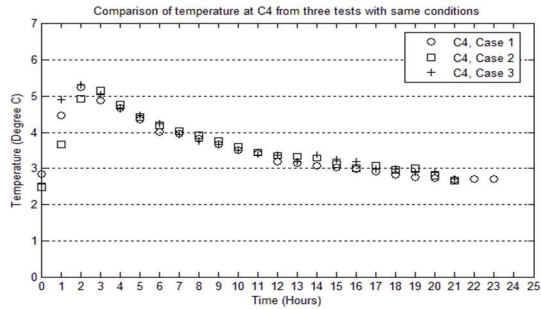


Figure 2 Temperature at location C4 during hydrate formation test.

As shown in the above 2 graphs, the rise in the temperature due to exothermic nature of hydrate formation test follows the same trend and values in all three cases. This indicates that the hydrate formation and as a result hydrate distribution in this large scale vessel is fairly constant in every test, as a result we conclude that the dissociation tests are also reproducible.