

Stable dynamic simulation of LNG pipeline by selective change of unit-model

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Regarding the pipeline dynamic simulation using common simulator, the problem of instability can occur. This can particularly be a problem when the phase is changed from 1-phase to 2-phase, usually liquid to liquid-vapor. When this change is made, the sharply increasing volume of vapor may generate non-converging problems, or non-rigorous results. This problem might be generated especially at LNG, because LNG has great volume difference between liquid and vapor. To avoid this problem, switching pipeline model which combined two separated model in parallel was suggested. The options of module could affect the stability of simulation results.