

IRSTEA Facilities, Equipment and Resources available for PIRE

- 2 High pressure rheometry (capillary in dynamic loops) with and without tank reactor
- 1 High pressure DTA (differential thermal analysis)
- 2 high pressure batch reactors (25 l and 3 l)
- 2 FBRM (1 high pressure and 1 atmospheric)
- 1 Atmospheric pressure DSC
- 2 Atmospheric rheometer (1 rotational and 1 loop)
- 1 High-pressure Syringe pump
- 1 High-pressure coil heat exchangers
- 1 High-pressure heat transfer coefficient measurement
- Advanced predictive modelling tool describing thermodynamics, kinetics, and physical properties of hydrate slurries
- Advanced predictive modelling tool describing hydrate-based processes (thermal energy (cold) storage/restitution (hydrate formation/dissociation) and secondary distribution (hydrate slurry flow)) based on heat and mass balances (dynamic simulation using volume finite approach).