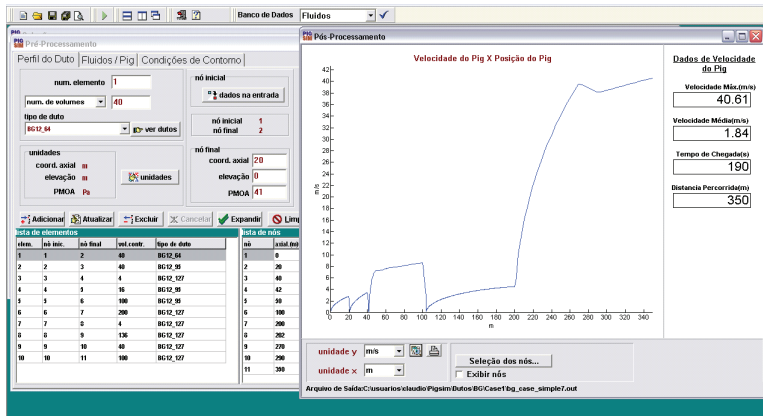


Pipeline Thermo-Hydraulic Simulation Group

Software Development

SIMDUT – Pipeline Thermo-Hydraulic Simulation Group – is a laboratory of the Department of Mechanical Engineering of (PUC-Rio), dedicated to the development of specialized software for pipeline and equipment simulations.

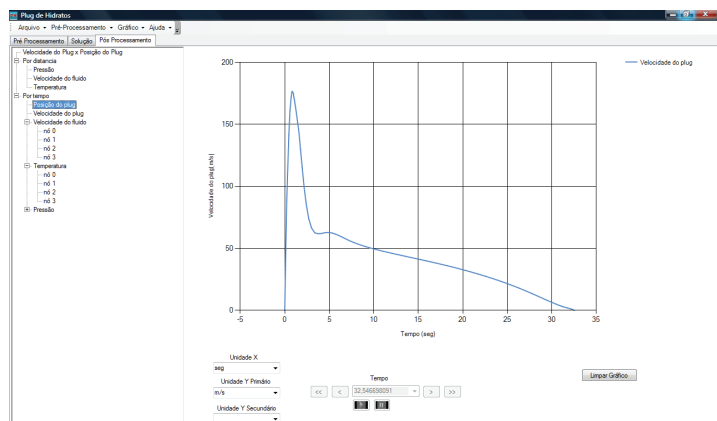


Pipeline Pigging Simulation

PigSim is a software developed to plan pipeline pigging operation. This software is particularly useful to model inertization operations that utilize nitrogen to drive the pig. It also allows the prediction of the total volume of nitrogen employed and the time required to complete the operation.

Hydrate Plug Displacement

This software simulates the dynamics of hydrate plug release in obstructed gas pipelines subjected to unilateral and bilateral depressurization. These simulation results can be helpful in the planning of plug release operations that can potentially lead to risk of the pipeline integrity due plug high speed and accelerations.



Other Software

- Simulator of pipeline inertization operations nitrogen – DESLOCAN2, for (TRANSPETRO) – 2010
- Tool for calculating the drained volume of oil pipelines at no flow conditions– CALCDRENO, for (TRANSPETRO) – 2007
- Tool for calculating the maximum leaked volume of oil pipelines at no flow condition – MAVAZ , for (TRANSPETRO) – 2007
- Tool for pipeline hydraulic calculation at steady state – CALCPRO, for (TRANSPETRO) – 2006-2008
- Simulators for training of operators, for (TRANSPETRO) - 2007-2011

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