

Simulation method and system for the management of a pipeline network

A simulation method for the management of a pipeline network (PN) comprising input and output nodes (S_1, S_2, C_1) comprises:

- 5 - defining operating states characterizing operating conditions of the pipeline network,
- determining, for each operating state ST_p , a three-dimensional dynamic matrix DM_{ST_p} whose each coefficient $DM_{ST_p}(i, j, t_k)$ corresponds to a pressure variation value from an initial pressure value at a j-th node at a k-th time step t_k following a variation, at a i-th node, of a flow rate value,
- 10 - estimating, for a given node at a given moment, a pressure value on the basis of an operating schedule providing information regarding variations of the flow rate value for each node and evolutions of the operating conditions of the pipeline network until said given moment, said estimation using the operating states and the three-
- 15 dimensional dynamic matrices.

FIG. 1