

## Abstract

The invention relates to the estimation of a sloshing response of a sealed and thermally insulating tank for the transport of liquefied gas. A statistical model is trained by a supervised machine learning method on a set of test data that may comprise sea test data,  
5 the statistical model being able to estimate a sloshing response of the tank as a function of a level of filling of the tank and of a current sea state and optionally of at least one of the following: a draft of the ship, a speed of the ship and a heading of the ship. The statistical model trained in this way is used to estimate the sloshing response of a sealed and thermally insulating tank (2) for transporting liquefied gas. In a variant, the statistical model estimates  
10 the sloshing response from a level of filling of the tank and from a current sea state and optionally from at least one of the following: a draft of the ship, a speed of the ship and a heading of the ship.

**Figure for the abstract: Fig. 2**