

Contribution to the developing of a prediction method for impeller pumps cavitation erosion from the drop in the performances thereof

Cavitation is described as the formation of cavities due to the pressure drop, because these cavities can degrade, in the long term, runners causing considerable losses of performances, in addition to noise and vibrations it generates.

The work lies in developing a method of predicting the pumps cavitation from the drop in their performance based on laboratory tests.

The tests were carried out on a 100 NVA pump, to couple the drop in performance with the impeller's degradation rate.

The goal seemed difficult to achieve given the choice of parameters just as the adherence to the different required similarity conditions.

Therefore, it is better to direct research towards the effect of impellers materials on cavitation phenomenon to determine the duration of the most unfavorable cavitating running that can cause impeller perforation.