

DESCRIPTIVE ABSTRACT

5 The invention pertains to a method for predicting a failure in the rotation of the rotor of a vacuum pump, comprising the following steps:

- sequences of events related to the change over time of the vacuum pump functional signals are recorded (101),
- a match is sought between at least one sequence of events and at least one pre-established association rule precursory pattern of a vacuum pump behavior model within the recorded sequences of events, said pre-established association rule's precursory patterns involving a failure in the rotor rotation (102), and
- a time prediction window is deduced during which a failure in the rotor rotation will occur in a vacuum pump (103).

The invention also pertains to a pumping device comprising:

- 15 - a vacuum pump (7) comprising at least one rotor and one pump body, said rotor having the potential to be driven rotationally within said pump body by a motor of said pump (7),
 - a functional signal sensor (9) of said pump (7), and
 - a means of predicting (10) a time prediction window during which a failure in the rotor rotation will occur in the vacuum pump (7), said means for prediction (10) calculating the predictive time window based on measurements provided by said functional signal sensor (9).
- 20

FIGURE: 6