

## CURRENT ANALYSIS FOR ELECTRIC MOTORS

### DESCRIPTION OF THE INVENTION

Development of fault detection algorithm in rotary asynchronous machines, through the current analysis technique, both on a permanent regime and on a transitional regime.

The algorithm has been implemented in low voltage motors and the following settings:

Rotor bar braking, eccentricity, bearing failures.

### APPLICATION BUSINESS SECTORS

Industry  
Manufacturing  
Water purification and distribution  
Mineral extraction  
Agriculture and other associated services

### TECHNICAL ADVANTAGES AND BUSINESS BENEFITS

The application of the algorithm allows to recognize the state of a motor and detect any failures in order to avoid the breakdown. Therefore the advantages are the following:

- Optimizing the maintenance planning
- Avoiding energy losses
- Avoiding economic loss

Furthermore the non-intrusive technique is a clear competitive advantage due to unnecessary stops at the industrial plant.

### STATUS DEVELOPED OF THE TECHNOLOGY

The algorithm developed allows to detect motor failures by applying the permanent current analysis (MCSA) and transient analysis (ATCSA) but not enough data is available to obtain relevant conclusions on the likelihood of success in real environments. In order to obtain clearly defined patterns, and not just detect whether it's a healthy motor or a broken motor, a larger amount of data and laboratory tests are required.

On the other hand, qualified personnel is required in order to interpret the measurements. An important progress would be the application of some artificial intelligence technique that would allow this diagnosis to be automated.

### INTELLECTUAL PROPERTY RIGHTS

### COLLABORATION SOUGHT



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### RELATED IMAGES

### CONTACT DETAIL

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