

Dataicann: vibration and current data of an induction motor

Dataset containing vibration and current data of a 4kW induction motor with 6306-2Z/C3 bearings that rotates at 1500rpm (25Hz) with a supply frequency of 50Hz. This machine has been subjected to nine different tests (Table 1), for each of which five operating variables (Table 2) have been measured at a sampling frequency of 5000Hz.

Test	Duration (s)
Mechanical fault (eccentric mass on pulley)	4
Combined electrical and mechanical fault	4
Normal operation	4
Electrical fault (5 ohm resistor in phase R)	4
Electrical fault (10 ohm resistor in phase R)	4
Electrical fault (15 ohm resistor in phase R)	4
Electrical fault (20 ohm resistor in phase R)	4
Gradual electrical fault (resistance increases and decreases in phase R)	4
Gradual electrical fault (gradual increase of resistance in phase R)	8

Table 1. Tests performed.

Variable	Description
a_c	Bearings vibration acceleration
a_x	Horizontal vibration acceleration
a_y	Vertical vibration acceleration
i_r	Phase R current
i_s	Phase S current

Table 2. Variables measured in the tests.

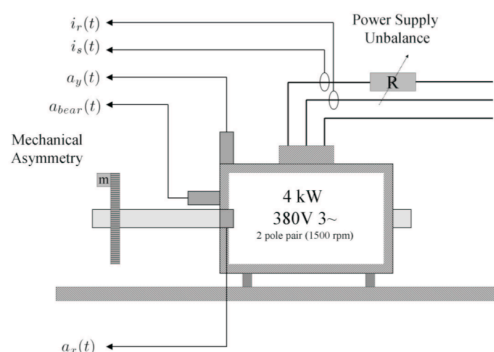


Figure 1. Scheme of the tests.

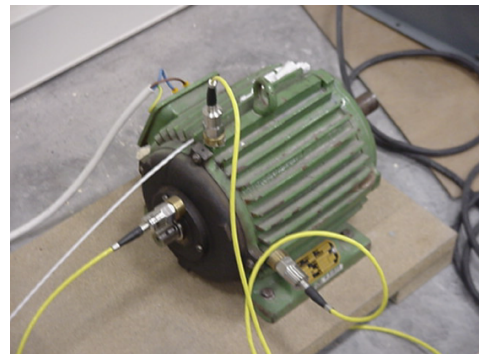


Figure 2. Testing machine.