

Failures Identification in Refrigeration Equipment

Abstract

A refrigerator is an essential element in the preservation of perishable products; if there is some damage, its poorly performance prevents to guarantee the quality of the products contained in it, because the temperature and humidity conditions of the container are not the desired. In this work, we identify the essential processes and the most critical variables of the equipment, according to the sub-processes carried out in it. We propose a diagnosis path to establish the failures in the refrigerator, considering the most common faults mentioned in the literature. We present a failure identification process, described like a state machine which allows checking all the important elements of the equipment before to assure the presence of a failure, and in case of this, categorize according to the kind of failure and the possible component damaged. For simple interpretation of the equipment condition, we define a list of codes for the refrigerator, in order to ease the task of the technical staff.