

# Unexpected Downtime Caused by Electrical Disturbances



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(Translated from Portuguese)

Currently it is very common that some equipment of great importance in the manufacturing process, such as, Industrial PC's, robots, CNC'S, PLC'S, SDCD's, communication networks, controllers and microprocessor based managers, have some type of problem operating due to the poor energy quality at the site.

The stopped operations/unexpected reset/loss of programming/locking or even the burning of an equipment that is part of the process, can generate significant and high downtimes in a production process. Combined with possible loss of raw material, hours of idle employees, increase overtime, schedule delays, loss of competitiveness in the final product, loss of customers, which nowadays, should be considered as a factor of high relevance for management and business competitiveness.

**68.9% of the unexpected downtime in industrial processes are caused by problems and disturbances of the electrical network.**



The current industrial equipment has more sensitive technologies that are susceptible to fluctuations of voltage, disturbances and interferences of the electrical network which consequently can generate, resets, crashes, loss of communication in industrial networks, loss of Programming machines, and even the burning of electronic plates, sources and other internal components.

The technical assistance when it identifies that the problem comes from the poor quality of energy of the customer, it disclaims the warranty of the damaged components and the loss of the production and the damage of the hours stopped, is as damage to the company.

To identify, the existence of disturbances in the electrical network, it is necessary to do a thorough inspection in the installations, through specific equipment and generate a diagnosis. After this inspection, an energy quality report will be generated.

The **"Energy Quality Report"** It is a thorough analysis service through qualified professionals and state-of-the-art equipment to detect disturbances and interferences in the electrical network, including testing, testing, and measurements in the grounding system. After this analysis, a compliance report or improvements that need to be made to obtain the minimum energy quality indexes for the full operation of the equipment is generated.

Many manufacturers of industrial equipment, include in their terms of warranty the obligation of the customer to hire a company specialized in **"Energy Quality Report"** Prior to the installation of the equipment for conformity and validation of the warranty. This procedure generates a reduction in the problems and conflicts generated between manufacturer and final customer, reducing the costs of visits to technical assistance, of equipment stops and financial losses with the burning of components.

Nota: The above, of 68.9%, came from the statistics of measurements and diagnostics made by the company Amatti Engineering, in its customers in the period from January 2005 to February 2018.