





TQM Itaca Technology design and manufacture specific automatic dedicated stations for the inspection and analysis on Sintered, die casting or CNC machined parts.

These family of systems are extremely flexible due to its modular composition (signal conversion hardware, automatic impact hammer and high precision wide-range microphone) that can be deployed and adapted in several configurations depending on the different requests.

The system is composed by an automatized loading and orienting system, with a belt conveyor loader that will transfer the parts to be checked in the testing zone, where an automatic TQM IMAD909 impact hammer will be present and a microphone, either connected to the hardware for signal acquisition iDaq4Sonic, and then directly communicating with the software ITASONIC.

The system is based on a step-by-step training process in the <u>ITASONIC</u> software, based on previously-identified good and rejected parts. The software will calculate the "sonic fingerprint" of these components and will perform the selection between GOOD and REJECTED parts for the new parts under evaluation after the training.

At the end of the test, during normal functioning and with typical duration of 5 seconds or less, the part is automatically directed to the proper container and then sent to the following operations.

This test allows to perform savings in terms of:

- time (in-process automatized control);
- costs (good/rejected parts separations in the in-process line, between finishing phases, with optimization of the following steps);

and allows to perform a macroscopic control on presence of defects and cracks without implying the use of slower and more expensive techniques (X-rays analysis, penetrating liquids tests etc.).























