



## MECHANICAL ANALYSES SKILLS

Analyses carried out on the customer's entire project cycle from the call for tender through up to the tests.

### Static analyses

Linear and non-linear analyses (contact, material plasticity, large deformations), modal analyses, pressurized equipment analyses.

### Dynamic analyses

Fatigue, dynamic response, transient response: half-sine shock, time function stress, frequency response: sine inputs, optical performance verification.

### Vibration tests

Prediction of vibratory response levels before testing and determination of input levels. Analyses of the results and adaptation according to the product behaviour.

Correlation of digital models and test results.

### Thermic and fluidic analyses

Stationary or transient analyses, analysis of different types of exchanges: conduction, natural or forced convection, radiation, modelling of fluids: Air or liquid (water, brine, dielectric oil etc.)

### Thermic

Heat transfer in solids (conduction), free, forced and mixed convection. Radiation, heat sources (heat generation rate, thermal power, temperature)

### Fluids

Hydraulic analysis of the cooling circuit, determination of the velocity field, calculation of the coefficient and convection, calculation of load losses.

### Seism

Responses under seismic level with PSD method (Power Spectral Density), according to Eurocode 8.

