

## MSP/SPC (Statistical Process Control): aiming for six sigma



QST-33 3 Days (21 Hours)

### Description

MSP or SPC is nowadays a proven preventive method which makes it possible to anticipate the appearance of non-compliant products in production for large series. This method, widely used within the framework of 'six sigma', is based on 2 fundamental approaches developed in this training: the calculation of the capabilities of the means of production; monitoring and controlling industrial processes using control cards which detect process deviations.

### Who is this training for ?

#### For whom

Engineer and technician in quality, production and methods services. "Six sigma" project manager.

#### Prerequisites

- It is recommended to have knowledge of statistical basics or to have followed training

### Training objectives

- [Implement the different stages of an MSP approach.](#)
- [Build control charts and know how to use them.](#)

### Training program

#### La MSP dans une démarche d'amélioration

- Culture changes at the origin of MSP: transition from % to ppm; the logic of prevention; link with six sigma.
- Principles of MSP.
- Associated statistical concepts: the normal law, centering and dispersion.

#### Étape 1: Organiser son projet MSP

- Choose the process, the product and the parameters to follow.
- Identify the phases of the process, the conditions for success, create your project team.

### Étape 2: Mesurer la performance de son processus

- Check the normality of production.
- Calculate the machine and process "capabilities": Cp, Cpk, Cm, Cmk.

### Étape 3: Mettre en place un système de pilotage

- Build your control charts: Calculation of control and monitoring limits: control charts (average/standard deviation).
- Case of small series.
- Management using control cards: read the cards, spot trends, identify random and assignable causes; define management rules, use a logbook, trigger improvement actions.
- Control charts with attributes (p, np, c, u) and individual values.
- Rely on self-control.

### Étape 4: Améliorer la démarche MSP

- Audit the system, make assessments, monitor improvements. Lead and communicate.
- Recalculate the control limits if necessary.