

SPM Certified training

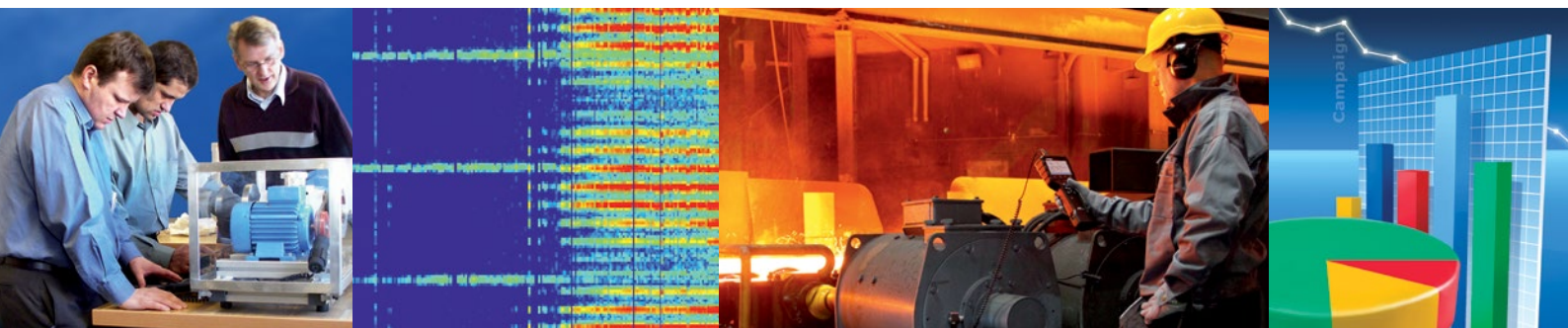
# Condition Monitoring Analyst

SPM Academy offers three levels of SPM certified training courses. The participant learns about shock pulse and vibration measurement techniques as well as general maintenance strategies. The certification is a proof of knowledge and capability in the certified area, and a useful merit for various jobs in industrial sectors. Most courses end with a written exam.

**Level 1-3** The first level is an introduction to condition monitoring and intended for sales and service engineers working in a plant environment. It covers the basics of shock pulse and vibration techniques, emphasizing practical implementation and hands-on use of the portable Leonova instruments and Condmaster software. Basic evaluation of shock pulse and vibration measuring results will be carried out.

The second level is intended for engineers involved in more advanced analysis, and focuses on SPM HD and time signal analysis. It contains a lot of practical hands-on training using the Leonova and Intellinova products. Analysis tools available in the Condmaster software and the Intellinova online system will be covered. The participants are expected to have basic vibration analysis knowledge equivalent to ISO CAT I.

Engineers involved in service and support, including advanced analysis of SPM HD and vibration techniques, will benefit greatly from the level 3 training course. The course is structured around practical cases from various industrial sectors. It includes time signal, spectrum and envelope analysis. Additional balancing and alignment can be included in the training. The participants are expected to have vibration analysis knowledge equivalent to ISO CAT II.



LEVEL  
1

## Condition Monitoring Analyst - Basic training

### Basic training - getting started

#### Summary of topics

- **SPM HD:** Basics of the Shock Pulse Method.
- **Vibration:** ISO 10816 and ISO 2372 basics, calculation, evaluation rules and practical use. Introduction to spectrum analysis.
- **Condmaster:** General structure of the software and guidance in setting up measuring points in a measuring round.
- **Maintenance practices:** When to select shock pulse and/or vibration techniques in maintenance routing.
- **Machine fault diagnosis:** Common faults like bearing damage, unbalance and misalignment.

**Duration:**

3 days

**Target audience:**

Beginners or new employees

**Language:**

English [presentations, literature]

LEVEL  
2

## Condition Monitoring Analyst - Analyst training

### Analyst training – routine measurements of rotating machines

#### Summary of topics

- **Transducers:** Types of transducers used in different environments for various techniques.
- **Signals:** Understanding signal processing from transducer to measuring system.
- **SPM HD:** Deeper knowledge about time signals and spectrum analysis.
- **Measuring techniques:** FRF, Cepstrum, Live phase, long time recording etc.
- **Processing of data:** Using filters and triggers.
- **Analysis:** Using advanced tools for evaluation in Condmaster.
- **Online system:** Intellinova, Linx and FSS, understanding and using IntelliLogic.
- **Measurements:** Practical session with online and offline systems.

**Duration:**

3 days focusing on portable instruments + 2 days focusing on online systems

**Certification requirement:**

12 months experience of using shock pulse and vibration techniques, and passing the final exam.

**Language:**

English [presentations, literature and examination]

LEVEL  
3

## Condition Monitoring Analyst - Specialist training

### Specialist training – advanced analysis, balancing/alignment [optional]

#### Summary of topics

- **Focus:** Understanding the production process in various industrial sectors.
- **Evaluation:** Typical applications in the sectors, working with cases.
- **Solutions:** Selection of measuring system and measuring techniques.
- **Measuring point setup:** Configuring measuring points for various application types.
- **Alarm handling:** Individual alarms, filters, trends.
- **Analysis:** Time signal, spectrum and envelope analysis.
- **Optional:** Balancing and alignment of machines.

**Duration:**

4 days + 1 optional additional day for balancing and alignment

**Certification requirement:**

18 months experience of using shock pulse and vibration techniques, and passing the final exam.

**Language:**

English [presentations, literature and examination]