

SERVICES

Trainings

We offer training courses customized to your employee's needs, in the form of in-house training courses and as specialist seminars at EMA Indutec. The specialist seminars are described in detail on this and the next page.

Dates

Principles of induction technology (online)

Date 1: May 12, 2021

Date 2: September 6, 2021

Date 3: December 1, 2021

Fundamentals of inverter technology (online)

Date 1: May 18, 2021

Date 2: November 18, 2021

Fundamentals of inductor construction

Date 1: September 13 -15, 2021

Prices

Prices on demand.

On request, we are also happy to offer in-house training.

Documents

Each participant is given extensive training documentation as well as a certificate.

Number of participants

For the *Principles of induction technology* course the minimum number of participants is 4 people.

A maximum of 12 participants can attend.

For the *Principles of converter technology* course the minimum number of participants is 4 people.

A maximum of 8 participants can attend this course.

The *Principles of inductor construction* course can be attended by a maximum of 4 participants.

However, there must be at least 2 participants.

Training locations

EMA Indutec GmbH, Meckesheim, Germany or at the customer's premises.

Accommodation

Accommodation can be organized on request.

Principles of induction technology

How do I reduce reluctance to engage with induction technology?

What exactly is induction and how does induction hardening work?

What must I be aware of during inductive hardening?

Basic training on induction technology – Theory as a 1-day course

Theory:

- Induction theory
- Electromagnetic properties
- Materials science
- Inductive hardening
- Inductor types
- Inductive tempering
- Inductor design – field-guiding elements
- Maintenance and handling of inductor

Advanced training – Theory and practice as a 2-day course

Theory:

- Induction theory
- Electromagnetic properties
- Materials science
- Inductive hardening
- Inductor types
- Inductive tempering
- Inductor design – field-guiding elements
- Maintenance and handling of inductors

Practice:

- Experiments with various inductor concepts (feed, shot, steel sheeting) on one of our laboratory machines.
- Evaluation of the experiments in the laboratory
- Discussion of the results

Previous knowledge:

- Basic understanding of electrical technology
- Basic understanding of hardening technology

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Principles of converter technology

How do I reduce reluctance to engage with converters?
How do I limit errors?

Quick response time in the event of damage with detailed error description for the EMA Indutec service hotline.

Basic training on converters – Theory as a 1-day course

Theory:

- Inductivity
- Capacity
- Oscillating circuits
- Rectifiers
- Functions
- Components

Advanced training – Theory and practice as a 2-day course

Theory:

- Inductivity
- Capacity
- Oscillating circuits
- Rectifiers
- Functions
- Components

Practice:

- Signals
- Simple troubleshooting
- Inverter test
- Rectifier test
- Converter Show View from EMA Indutec
- Maintenance tips

Previous knowledge:

- Basic understanding of electrical technology (Ohm's law, parallel circuits and series circuits of components, how diodes, throttles, capacitors, transformers, etc.)

Principles of inductor construction

How do I reduce reluctance to engage with inductors?
The training should enable the participants to make minor repairs to their inductors independently.
It is taught, what to be aware of with inductors.

Basic training – Theory and practice as a 3-day course

Theory:

- Induction theory
- Inductive hardening
- Inductor types
- Field development
- Inductor types
- Concentrators and their effects
- Principles of inductor construction

Practice:

- Cutting copper components
- Bending pipes
- Soldering
- Welding
- Drilling
- Installation

Previous knowledge:

- Basic understanding of the mechanical processing of metals
- Knowledge of welding (WIG), hard soldering and soldering of metals, and the bending and cutting of pipes