



# Von Roll Insulation Training 2018

**vonRoll**

# High-voltage course

Locations:	Breitenbach, Switzerland and Delle, France
Dates 1st training course:	March 12 - 15, 2018
Dates 2nd training course:	October 22 - 25, 2018
Fee:	CHF 3,500 + VAT

The insulation course focuses on insulation for high-voltage electric rotating machines. It has become increasingly popular and is now open to everyone involved in insulation technology for rotating machines and wanting to remain up to date. The target audience for this course is technicians, engineers, and managers who wish to gain deeper insight into and exchange ideas on insulation technology and materials. Participants benefit from a basic knowledge of electrical engineering, physics, and chemistry, although this is not required. The number of participants is limited to twelve to ensure the quality of interaction.

## Course content

The high-voltage course includes the following topics:

### 1. General knowledge

- » Basics of motors and generators
- » Mica and mica paper
- » Insulation materials and their evaluation

### 2. Insulation technology

- » Resins and varnishes, impregnation techniques
- » Resin-rich & VPI technology, theory and practice
- » Suppression of partial discharge
- » Winding wires
- » Composite materials
- » Processing equipment and technology
- » Testing of sample coils

### 3. Insulation systems

- » High-voltage motors
- » Large power generators
- » Traction motors
- » Wind-turbine generators

### 4. Factory visits and application exercises

- » Flexible materials and liquids
- » Winding wires
- » Composite materials
- » Applications laboratory
- » High-voltage laboratory



# Low-voltage course

Location: Trofarello, Italy  
Dates: June 4 - 6, 2018  
Fee: EUR 1,900 + VAT

This training session provides a detailed view of insulating materials and systems for low-voltage rotating machines, including their selection, processing and testing.

The course includes three days of classroom learning and hands-on activities well suited for production and design engineers, R&D staff, repair specialists, end-users, and other technical staff, who require more thorough knowledge of these insulation systems.

## Course content

This course takes place at our center of excellence for liquids in Trofarello, in the region of Turin (Torino), Italy, and includes the following topics:

- » Introduction and fundamentals
- » Winding wires
- » Flexible insulation
- » Electrical adhesive materials
- » Banding tapes
- » Impregnation resins and varnishes
- » Potting and encapsulating compounds
- » Component and systems testing (UL focus)
- » Customer acceptance testing
- » Stresses in inverter-driven drives



# Overview

In the early 1990s, Von Roll began organizing training on insulation technology for rotating electric machines. Over the years, this effort has evolved into a unique program with the following objectives:

- » Better understanding of insulation technology for electric rotating machines and up-to-date knowledge on insulating materials and systems
- » Practical experience in the application of electrical insulating materials

Von Roll offers a variety of courses to our customers and to our own technical staff, covering both high-voltage and low-voltage applications. Due to international participation, the courses are generally held in English.

## Learning approach

Our courses are designed as an interactive educational experience with formal classroom lectures as well as practical hands-on laboratory exercises and plant tours. Our specialist instructors share their product and application expertise with participants. Instructors include Von Roll application engineers, R&D personnel, and marketing specialists, who have years of field experience and education, including PhDs in electrical and chemical engineering.

We find these courses to be a two-way process—we also learn from you. Von Roll integrates the experiences and challenges that emerge from discussions with course participants into new generations of products and services. It is all part of the continuous process of innovation. So bring your questions with you and share them with both our experts and your peers in the industry. We look forward to working with you and informing you on these topics.

## Contact

For more information, visit <http://www.vonroll.com/en/von-roll-insulation-training.html>

You may wish to contact Von Roll customer service or your regional Von Roll sales manager for further details and information.

The course organizers may be reached directly at:  
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