

## >> Coperion know-how at your disposal: 3-days @ 7 hrs Training for Polyolefin Processing and UG-Pelletizing system in 2024

### COURSE OBJECTIVES

- To provide process engineers and operation supervisors with an understanding of the fundamental and practical aspects of the design and operating mode of a ZSK twin screw compounder
- To update knowledge in the field of polyolefin compounding

### LANGUAGE

All courses will be held in English if there is no other predefinition.

### TRAINER

- Michael Gnllka  
Engineer Process Technology Polyolefins  
Coperion GmbH, Stuttgart, Germany
- Manuel Mueller  
Start Up Engineer  
Coperion GmbH, Stuttgart, Germany



### DATES AND LOCATION

#### SESSION 1

**April 9-11, 2024**

Coperion GmbH, Stuttgart, Germany

#### SESSION 2

**October 8-10, 2024**

Coperion GmbH, Stuttgart, Germany

### SEMINAR FEE

EUR 1750, - per trainee. This price will be charged plus VAT.

### ATTENDEES WILL RECEIVE

- Coloured Coperion textbook in PDF; download provided by Coperion.
  - POLYOLEFIN PROCESSING AND UG-PELLETIZING SYSTEM IN 2024
  - Certificate upon completion of the course
- Small breakfast, lunch and drinks during a.m./p.m. breaks

### INDIVIDUAL SEMINARS

In addition to the regularly scheduled classes in Stuttgart, Germany, courses can be held at your company's site.

Training contents can be modified according to your objectives. Having discussed your needs, we work out a customized training schedule and pricing for you.

## >> Content. Seminar on Process Technology for Polyolefin Compounding

### 1 Polyolefin Processing (Day 1 + 2)

#### DAY 1

- Basic process knowledge in the field of polyolefin compounding
- Self cleaning screw profile of twin screw extruders
- Development of the ZSK twin screw extruders
- Screw elements: layout and definitions
- Working principle of screw elements
- Compounding plants and comparison of different extruder systems
- Process sections inside of the ZSK
  - Feeding
  - Melting
  - Degassing
  - Metering
  - Screw tip design
- Materials for different applications
- Melt Pump
- Plant layout
  - Compounding and Pelletizing of Polyolefin
  - Compounding of Bimodal Polyethylene
  - Pelletizing of Polymer Melts
  - Devolization of Polymer Solutions

## DAY 2

- Process variables
  - Specific energy influence of rate and screw speed
  - Motor load (torque)
  - Temperature profile: influence of the various operating parameters
- Latest Coperion developments and insights in the field of polyolefin compounding
- Interlocks
  - Interlock sequences
  - Start up sequences
- Scale-up
  - Methods to design a compounding line
  - Product properties
  - Interlock sequence
  - Specific energy
  - Melt temperature
- Trouble shooting
  - Operating window
  - Analysis of rate limitations
  - Torque limitations
  - Melting limitations
  - Vent limitations
  - Feed limitations
  - Pressure limitations

## 2 UG-Pelletizing system (Day 3)

### DAY 3

- General overview of the discharge equipment
  - What parts belong to the discharge?
  - Function of the start-up valve
  - Function of the screen pack changer
  - Short introduction for the die plate
  - Function of the pelletizer
  - Docking procedure
  - Knife rotor
  - Hydraulic system
- Installation of the die plate
  - Alignment of the pelletizer
  - Grinding in procedure for the knives
  - die plate installation, regrinding, insulating.
  - fitting of pelletizer knives and the knives rotor.
  - thickness tolerance of the pelletizer knives.
  - fitting knives rotor.
  - adjusting pelletizer locking system
  - function of manual pelletizer undocking.
- commissioning tests of startup and shut down sequence pelletizer equipment
- safety function and requirements pelletizer equipment
- interlocks pelletizer equipment
- trouble shooting pelletizer equipment

#### CONTACT INFORMATION

For more information about Coperion's seminars please contact:

**Udo Bode**

Phone: +49 (0) 711 / 897-2379

udo.bode@coperion.com

**Coperion GmbH, Theodorstrasse 10, 70469 Stuttgart, Germany, [info@coperion.com](mailto:info@coperion.com), [www.coperion.com](http://www.coperion.com)**