

TTC TECHNOLOGY TRAINING CENTER

Workshop 239

HANDS ON: CONTINUOUS OSD PHARMA PROCESSING

A forward looking approach for the production of oral solid dosage forms. 13 – 15 March 2018

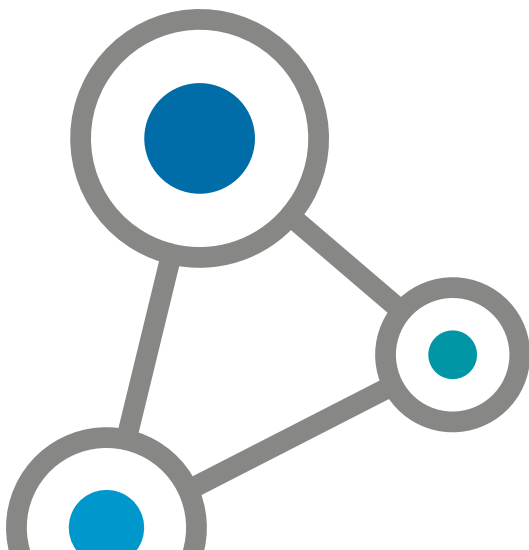


WHY PARTICIPATING?

- This workshop is giving a brief theoretical introduction with main focus on hands-on introduction, training, and live demonstration on CONTINUOUS MANUFACTURING of ORAL SOLID DOSAGE within the Pharmaceutical Industry:
- Participants will take active part operating the following processes
 - Continuous Wet Granulation: a twin screw granulator/extruder integrated with a continuous wet granulation and drying processor, pneumatic conveying, and dry milling (calibrating), all integrated to a supervising control system
 - Continuous Direct Compression: feeding, dry mixing, and compression based on a MUPS (Multiple Unit Pellet System) formulation
- This workshop is the perfect investment for those who wish to acquire practical knowledge of continuous manufacturing processes for the pharmaceutical industry.

WHO SHOULD PARTICIPATE?

- Typically, researchers, engineers and operators from the pharmaceutical and related industries will get the most out of this workshop. However, the workshop is also perfectly suitable for those who are operating in batch today and will, intend, or consider in the future producing products on continuous processors.



PROGRAM

TUESDAY, 13 MARCH 2018

12:00	Transfer from hotel to TTC
12:15	Reception and registration
12:50	Introduction. Andreas Gottschalk
13:00	General experience and the way forward in continuous manufacturing. Background, challenges and first experience presented by an end user. Outlook where the continuous manufacturing journey will bring the pharmaceutical industry. Martin Maus
13:45	Basic approaches to continuous manufacturing. Introducing to specific processing and equipment considerations: „batch goes conti“ - a major difference or a minor change? Includes residence time considerations and their impact on product traceability. Jochen Thies
14:30	Continuous wet granulation and drying & continuous dry mixing with direct compaction. Detailed introduction of the wet granulation by twin screw extruder followed by continuous fluid bed technology for drying and final homogenisation in a dry mill. Similar overview is provided for direct compression: feeding, dry mixing, and tableting. This chapter is the preparation for the practical session. Andreas Gottschalk
15:15	Coffee break
15:30	Granulation by Twin-Screw-Granulator. Many companies know the TSG for hot melt application. For continuous wet granulation there are several design and operational considerations to be taken to use the very versatile extruder for this process. Margarethe Richter
16:00	Inline particle size monitoring by 3D imaging technology. Continuous on-line measurement of particle size and distribution. Mike Mulcahy
16:30	Inline moisture measurement with microwave technology. Moisture measurement in fluid bed drying and other pharmaceutical applications by the microwave resonance technology. Carmen Diáz
17:00	PAT in a Continuous Direct Compression Line. Tablet quality control in a Direct Compression line can be achieved by an at-line NIR sensor implemented in a tablet tester and an inline NIR probe directly attached to the turret of a press. Both systems will be explained in detail. Marten Klukkert
17:45	Transfer to hotel
19:30	Workshop dinner

WEDNESDAY, 14 MARCH 2018

08:40 **Transfer from hotel to TTC**

09:00 **Practical demonstrations 1:**

Continuous wet granulation and drying. Group 1: Practical work including assembly, start-up, controlling steady state, learning the effects of various operating process parameters to the final product. Sampling, and shut-down of the complete processing line. Tracing the feed material through the complete continuous line. Monitoring the process and collecting operating data online for creating the manufacturing report. (Group 2 will have this session in the afternoon).

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12:30 **Lunch**

13:30 **Practical demonstrations 2:**

Continuous feeding, dry mixing and direct compression.

Group 2: Practical work including assembly, start-up, controlling steady state, learning the effects of various operating process parameters on the final product, sampling, and shut-down of the complete processing line. Both, the in-line and at-line PAT for Tablet Quality will be demonstrated. (Group 1 will have this session in the afternoon).

[Lilia Sprich & Team Innovation Center](#)

17:30 **Transfer to hotel**

19:00 **Workshop dinner**



THURSDAY, 15 MARCH 2018

08:40 Check-out from hotel and transfer to TTC

09:00 **Intro wash-down of continuous Fluid Bed Processor.**
Concept of cleaning, setting-up the equipment for the wash cycle including wash-recipe, and starting the wash-down.
[Lilia Sprich & Team Innovation Center](#)

09:30 **Particle measurement (Parsum) incl Practical Test on a Fluid Bed Processor.** Inline particle size monitoring by spatial filter technology (SFT). [Stefan Dietrich](#)

10:30 **Sentronic NIR (interpretation of practical test).**
Infrared spectroscopy by fast diode array technology.
[Uwe Kirschner](#)

11:15 Coffee Break

11:30 **Investigation of wash-down followed by plenum discussion.**
[Lilia Sprich & Team Innovation Center](#)

12:30 **Summary and snack buffet**

13:00 Transfer to Basel, German Railway Station (Badischer Bahnhof), Swiss Railway Station (SBB) and EuroAirport

SPEAKERS

Carmen Díaz	TEWS ELEKTRONIK GmbH & Co. KG, Germany
Stefan Dietrich	Parsum GmbH, Germany
Andreas Gottschalk	Glatt GmbH, Germany
Dr. Marten Klukkert	Fette Compacting GmbH, Germany
Uwe Kirschner	Sentronic GmbH, Germany
Dr. Margarethe Richter	ThermoFisher Scientific, Germany
Dr. Martin Maus	Boehringer Ingelheim Pharma GmbH & Co. KG, Germany
Mike Mulcahy	Innopharma Labs, Ireland
Dr. Anna Novikova	Fette Compacting GmbH, Germany
Lilia Sprich	Glatt GmbH, Germany
Dr. Jochen Thies	Glatt AG, Switzerland

MODERATION

Andreas Gottschalk, Technology Training Center, Germany

DETAILS

- >> The participation fee is € 1490,- (exclusive of VAT).
- >> This fee includes participation, accompanying course notes, daytime catering and dinner. Any other expenses are to be borne by the attendee.
- >> Free attendance granted to a limited number of students.
- >> Participation is limited. Registrations will be confirmed on a first come first serve basis.
- >> Courses taking place in Germany are subject to Value Added Tax (VAT).
- >> Each participant will receive a certificate of attendance at the end of the course.
- >> Registration deadline: 25 January 2018

ORGANIZATON AND LOCATION

TTC - Technology Training Center

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For further information or online registration please visit us on

www.ttc-binzen.de

REGISTRATION

Workshop 239:

CONTINUOUS MANUFACTURING IN PHARMA

13 – 15 March 2018

Name

Company

Dept.

Function

Address

Phone

Fax

E-mail

Yes, I want to receive information about future TTC workshops.

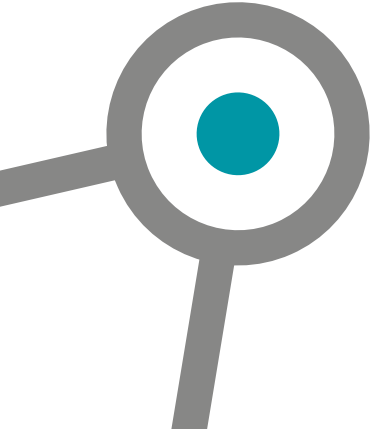
Signature

Accomodation required from

Check-in day:

Check-out day: _____ = _____ nights

(Approx. 100,00 €/night incl. breakfast)



Technology Training Center

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Germany

