

The next generation pharma skills you will need in view of continuous manufacturing

Exclusive 3-day training
by leading academic, industry and regulatory experts

11-13 SEPTEMBER, 2018
BINZEN, GERMANY

Demo's and case studies each day

"Entire picture covered: (flow sheet) modelling, PAT, control, regulatory"
Feedback fully booked event 2017

LIMITED TO 50 SEATS

REGISTER HERE
(early bird)

Day 1

Introduction to continuous manufacturing platforms and material characterisation

Day 2

Modelling and simulation towards design space definition

Day 3

PAT for process monitoring and control of continuous manufacturing processes



Venue:

TTC TECHNOLOGY TRAINING CENTER

Organised by:



Prof. Thomas De Beer

BIOMATH

Prof. Ingmar Nopens



www.AM-TEAM.com/training



Great to see theory practically implemented during the DEMO sessions.
 Good combination of presentations and demonstrations.

Participant feedback 2017

Demo at training event 2017, Belgium

Tuesday, Sep 11th

Introduction to continuous manufacturing platforms and material characterisation

12.30-13.00 Registration and lunch buffet

13.00-13.20 Welcome and introduction - Prof. Thomas De Beer and Prof. Ingmar Nopens (Ghent University)

13.20-14.50 Importance of raw material and formulation blend characterisation (raw materials and blends) (Jens Dhondt and Prof. Thomas De Beer (Ghent University)

- Relevant raw material and blend properties and characterisation
- Material property data bases: overview, predictive use, maintenance and challenges
- Material variability and blend selection
- Impact of material properties on the behaviour, performance and residence time of screw feeding systems in a continuous manufacturing platform

14.50-15.20 Coffee break

15.20-16.00 **Case study:** design space determination of a continuous tablet manufacturing process via wet granulation through empirical process models - Prof. Thomas De Beer (Ghent University)

16.00-16.45 Empirical versus mechanistic modelling of continuous manufacturing processes. Fundamentals - their complementarity - importance of proper data collection - Prof. Ingmar Nopens (Ghent University)

16.45-17.30 PAT in practice - Christian Knopf (Glatt)

17.30-17.45 Take home messages of the day

19.00 Dinner

Speakers

- Prof. Thomas De Beer (Ghent University)
- Prof. Ingmar Nopens (Ghent University)
- Ir. Jan Verelst (Siemens)
- Dr. David Slade (PSE)
- Dr. Anna Novikova (Fette Compacting)
- MSc. Christian Knopf (Glatt)
- Scientists with hands-on expertise (Ghent University)

Demo's include:

- Continuous process lines in action
- Impact of material properties on CM unit operations
- Flow sheet modelling of continuous manufacturing
- Mechanistic modelling of twin-screw granulation, drying and milling

Organisers



Venue

TTC - Technology Training Center,
 Meitner Ring 1, 79589 Binzen, Germany



www.AM-TEAM.com/training

Wednesday, Sep 12th

Modelling and simulation towards design space definition

8.00-8.30 Transfer from hotel to TTC + coffee

8.30-8.45 Introduction to Day 2 - Prof. Thomas De Beer (Ghent University)

8.45-12.30 Modelling of CM unit operations - Prof. Thomas De Beer, Daan Van Hauwermeiren, Michael Ghijs (Ghent University)

8.45-9.15 Twin-screw granulation: collection of high quality data for model development, calibration and validation

9.15-10.00 Twin screw granulation: model development, calibration and validation + **DEMO**

10.00-10.30 Coffee break

10.30-11.30 Data collection and modelling of drying and milling in a continuous manufacturing platform + **DEMO**

11.30-12.30 Flow sheet modelling - Generic model + **DEMO**

12.30-13.30 Lunch break

13.30-14.15 Holistic systems view of drug product manufacture and in-vitro/ in-vivo performance - Flowsheet modelling - Dr. David Slade (PSE)

14.15-15.00 Optimal experimental design (OED) - OED vs

Design of Experiments (DoE) - OED for efficient model calibration and process optimisation for new formulations - Uncertainty analysis as essential step in the establishment of the model-based Design Space determination for continuous manufacturing processes - Prof. Ingmar Nopens (Ghent University)

15.00-15.45 PAT in continuous manufacturing: case studies - Dr. Anna Novikova (Fette Compacting)

15.45-16.35 Coffee break and transfer to innovation center

16.35-18.00 **LIVE DEMOS** with continuous process lines including feeding, blending, wet granulation, fluid bed drying, dry milling (Glatt)

19.00 Wine tasting and dinner

Thursday, Sep 13th

PAT for monitoring and control of continuous manufacturing processes

8.00-8.30 Transfer from hotel to TTC + coffee

8.30-8.45 Introduction to Day 3 - Prof. Thomas De Beer (Ghent University)

8.45-9.15 PAT for monitoring and control of continuous manufacturing processes for drug products - SPC - traceability - F-test - Prof. Thomas De Beer (Ghent University)

9.15-9.45 3D modelling of liquid mixing for pharma applications - Daan Van Hauwermeiren (Ghent University)

9.45-10.30 Importance of data management systems for continuous manufacturing - Jan Verelst (Siemens)

10.30-11.00 Coffee break

11.00-12.00 Advanced process control of CM processes for drug products - Niels Nicolaï (Ghent University)

12.00-13.00 Lunch

Register here

Rates (EUR, excl. VAT)

Industry	1,700
Government/academia	1,200
Student	1,000

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TO 50
SEATS

AM-TEAM.com/training
training@AM-TEAM.com

Sponsoring and exhibition

Ample exhibition space in the direct vicinity of the lectures is foreseen. Breaks will be organised in the exhibition hall.

Application and info: training@AM-TEAM.com