



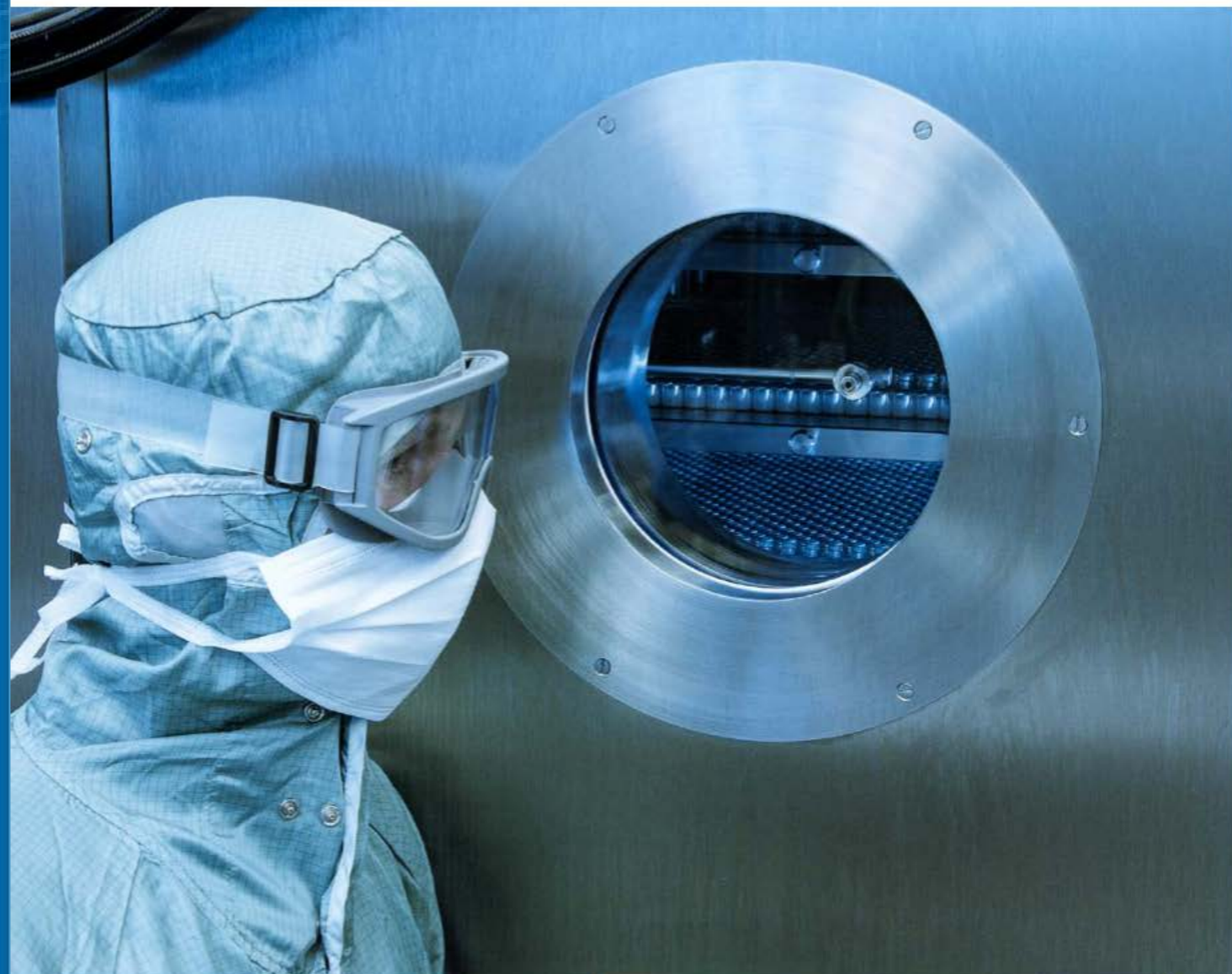
Connecting People, Science and Regulation



pda.org/eu/fdp2019

2019 PDA EUROPE TRAINING

Freeze Drying in Practice



25-29 MARCH 2019
OSTERODE (HARZ), GERMANY

CONNECTING
PEOPLE
SCIENCE AND
REGULATION®

REGISTER BEFORE 16 DECEMBER 2018 AND SAVE!



Company portrait

Lyo Engineering is your partner in pharmaceutical industry and medical engineering in the areas of management / quality assurance / engineering with more than 10 years of experience in pharmaceutical plant engineering and construction in the fields of project handling and quality assurance.

Among other things our business activities include project management for international freeze drying projects in pharmaceutical industry, planning and monitoring of technical transfer projects of fill- / finish areas and all aspects of GMP quality assurance, for instance classification of equipment components in accordance with GMP risk analysis as qualification basis, GMP-based employee training, performance of external and internal audits, planning and monitoring of acceptance tests (FAT / SAT) and qualification phases (DQ / IQ / OQ / PQ), as well as the creation of the pharmaceutical technical documentation.

We gladly support you in the successful implementation of projects in regulated environments from the URS to the handover to the production.



Lyo Engineering
GMP is our passion!



Loading / unloading

Theory 8:

loading and unloading systems

- type of loading (RR, Frame, Batch)
- design loading and unloading systems in existing lines
- examples for loading and unloading systems



Loading / unloading

Row by Row loading

- installation in clean rooms class B in a RABS system
- installation in rooms class C with isolator
- Vial Transfer over a loading table into the FD





Loading / unloading

Batch loading



- Loading of a hole shelf at once
- Assembly of the Vials in HEX
- Cooling Table for filled Vials
- Loading with e. g. loading car or loading handlings
- Complete loading in clean room class A including LF
- No operator activities in loading rooms



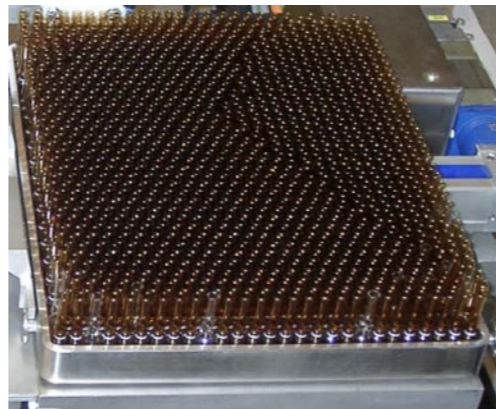
Loading / unloading

Frame loading

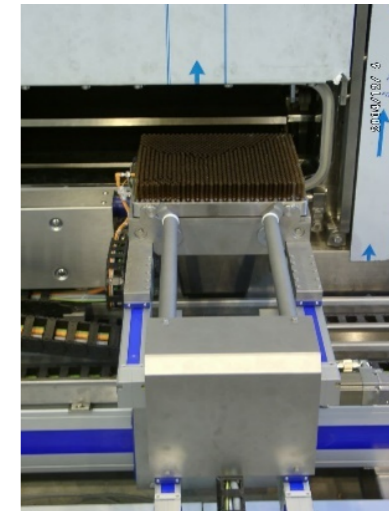
Frames are stored in a magazine



Assembly of Ampules in HEX



loading frames into the Freeze Dryer





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