INDUX center
IBA Industrial User eXperience

INDux Training Course
Advanced Level
Modules 1 and 2

GENERAL INFORMATION ON TRAINING COURSE

GOALS	- Get trained for safe and reliable operation of the equipment. - Acquire an advanced theoretical understanding of the different elements of the Rhodotron® and its components. - Follow advanced exercises on troubleshooting of major systems. - Gain autonomy with IBA equipment.
LOCATION	INDux center - Belgium
PROGRAM	See table below
DURATION	5 full days for each module
ATTENDANCE	3 -4 persons
TRAINEE'S PRE-REQUIREMENT	The trainees should be fluent in English, having an adequate degree of experience and technical expertise corresponding to the responsibilities involved. To take the Advanced Level module 1 and 2, participants must have followed the Basic Modules 1 and 2.

Certificate of participation will be issued to the trainees at the end of the training week.

ADVANCED 1

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
TROUBLESHOOTING PROCESS & BEST PRACTICES	TROUBLESHOOTING OF THE RF CHAIN	UNDERSTANDING THE RF CHAIN - LLRF	E-SOURCE FILAMENT GRID PS & BEAM REGULATION	MONITORING & DAILY USE OF THE MACHINE
- Practical exercise on power supplies.	- Being autonomous with RF specifics tools (as the network analyzer & oscilloscope). - Practical exercise on RF failure.	- Understanding of the key parameters. - Being autonomous with specific tools.	- Calibration of a new E-source filament Grid power pupply & dedicated E-source power supplies.	- Troubleshooting through the information on the HMI. - Impact of maintenance tasks on product validation.

ADVANCED 2

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
TROUBLESHOOTING OF THE RF CHAIN - FINAL POWER AMPLIFIER	UNDERTANDING THE E-SOURCE & BEAM SYNCHRONIZATION	FOCUSING ON MAGNETIC SYSTEM	FOCUSING ON BEAM OPTICS	UNDERSTANDING THE PREU & PMEU
- Focusing on the Final Power Amplifier of the RF chain: structure, RF path, troubleshooting exercises.	- RF pick-up for E-source. - RF pick-up for LLRF. - Beam synchronization between E-source & RF.	- Theoretical overview - Magnetism. - Replacing a magnet coil. - Replacing a vacuum box.	- Visualization of the impact of the different magnets on the beam optics. - Alumina tuning explanation.	- Architecture. - Key parameters. - Impact on the scanning system.