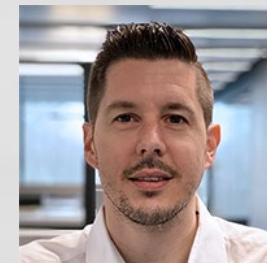


deconex® HPC - Line

***Mastering High Purity Cleaning Techniques:
Achieving Qualified Cleanliness***

Martin Leuenberger

Product & Sales Manager Industrial Divisio




Borer Chemie AG



 **borer medical** ISO 13485 - Medical devices — QM - Systems



 **borer industry** ISO 9001 — QM - Systems



 **borer life sciences** - GMP Regulators



 **borer hygiene** - Biocidal products - Directive (EC) No. 528/2012
- VAH Certified

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How to realize a winning cleaning process



Challenges of the specifications
Assumptions



Set focus on the goal – “achieving the specification”



Design successful processes that meet
the specifications



Successful process implementation
and validation



deconex®



Ensuring success and maintaining
quality together

Design winning cleaning process



Challenges of the specifications
Assumptions



Set focus on the goal - "achieving the specification"



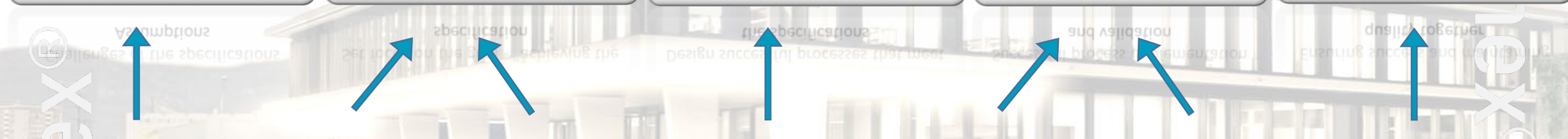
Design successful processes that meet the specifications



Successful process implementation and validation



Ensuring success and maintaining quality together



Quality specification

Worst case condition

Analytics

Development

Installation

Qualification

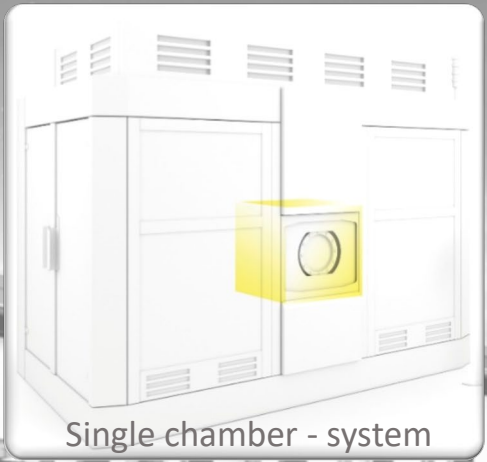
Monitoring



Cleaning equipment's for modular production



Linear - System



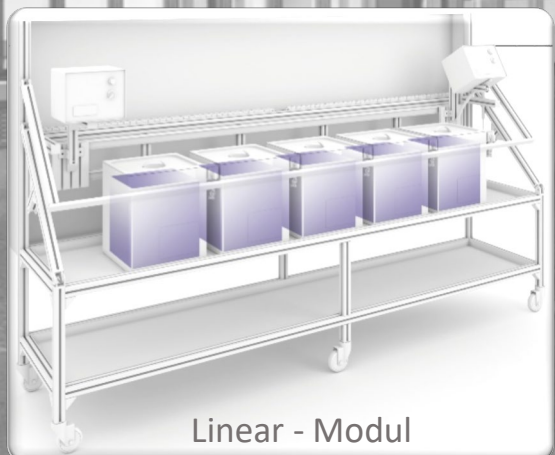
Single chamber - system



Single Bath - Module



Single-chamber module



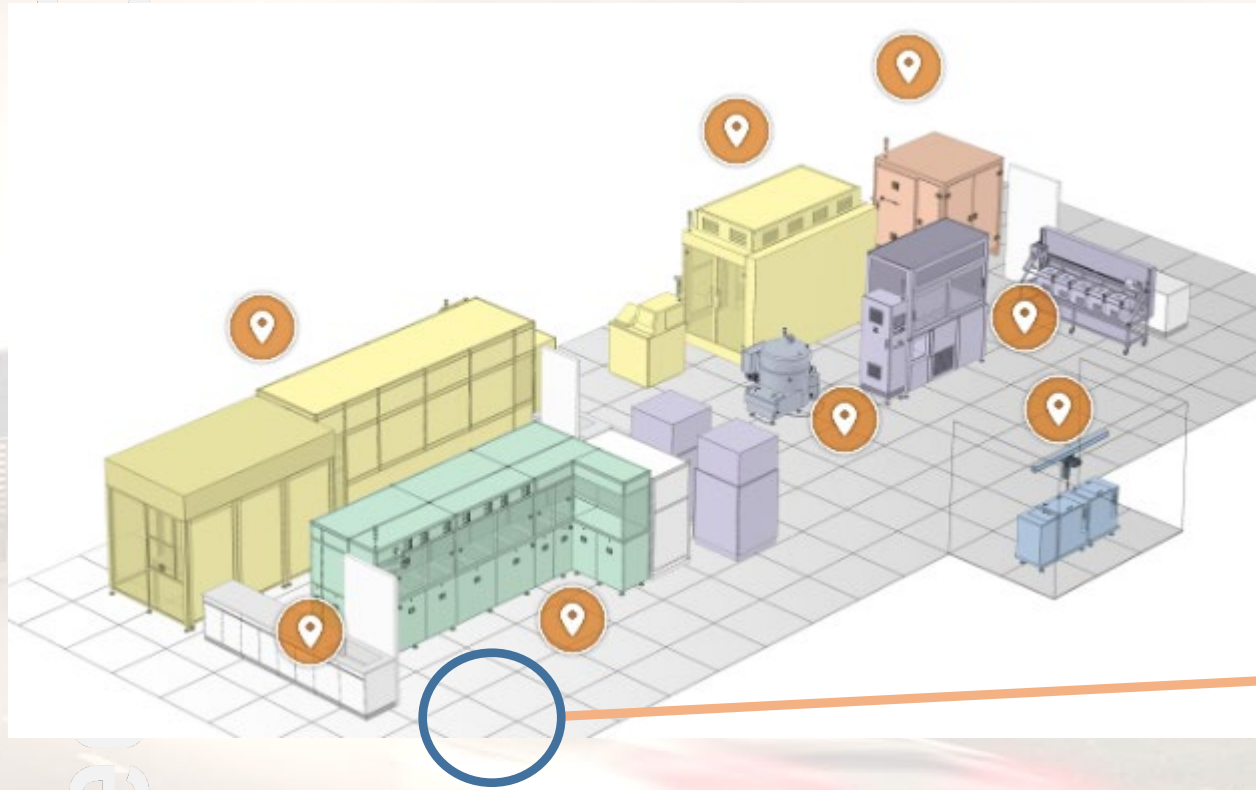
Linear - Modul

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Benefits of modular production

Action	Added value
Small cleaning equipment / modules	<ul style="list-style-type: none"> - optimal use of space - Smaller tank volume - Maintenance costs - Designing an optimal process flow
Cleaning equipment according to cleanliness requirements	<ul style="list-style-type: none"> - Minimise validation effort - Acquisition costs - Faster Time to Market
Economic efficiency	<ul style="list-style-type: none"> - Responsiveness - Short cycle time - high output - Individual process design
Independence	<ul style="list-style-type: none"> - High material variability - Modules can be operated independently of each other - High flexibility - Individual process selection

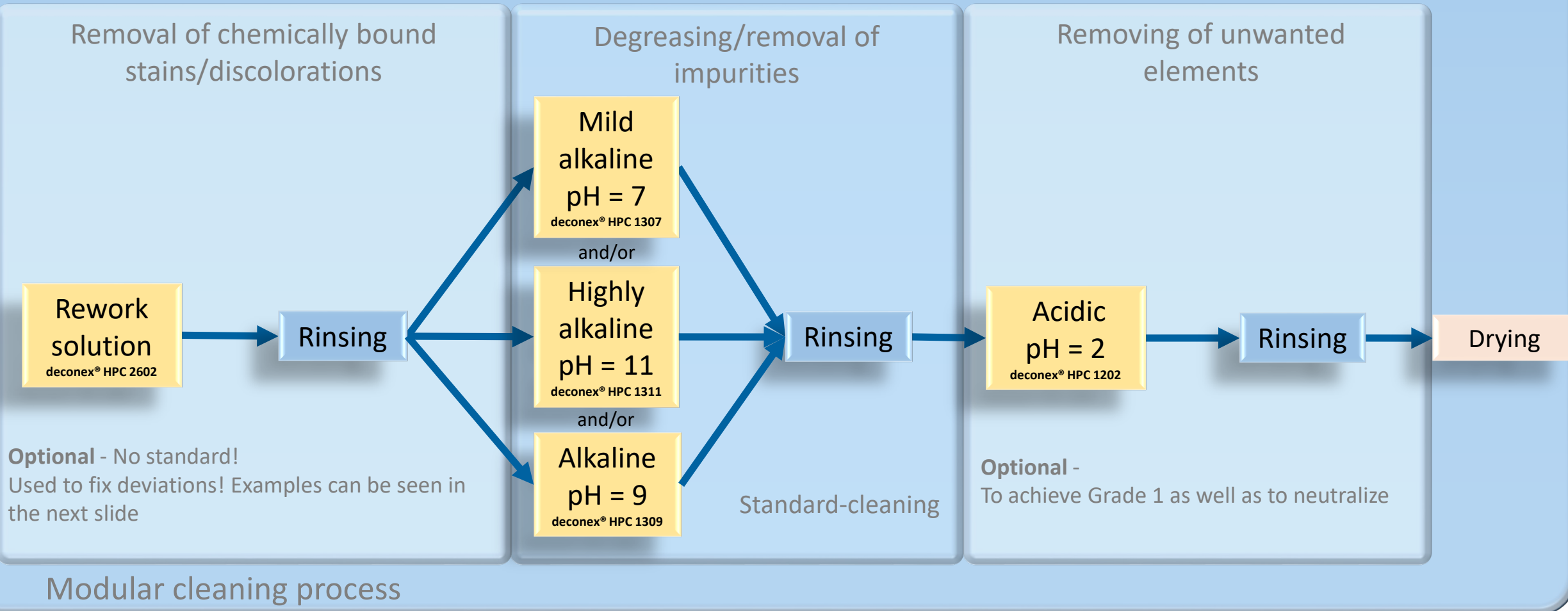
Borer Chemie AG - Technical Centre



<https://borer.3dnow.ch/>

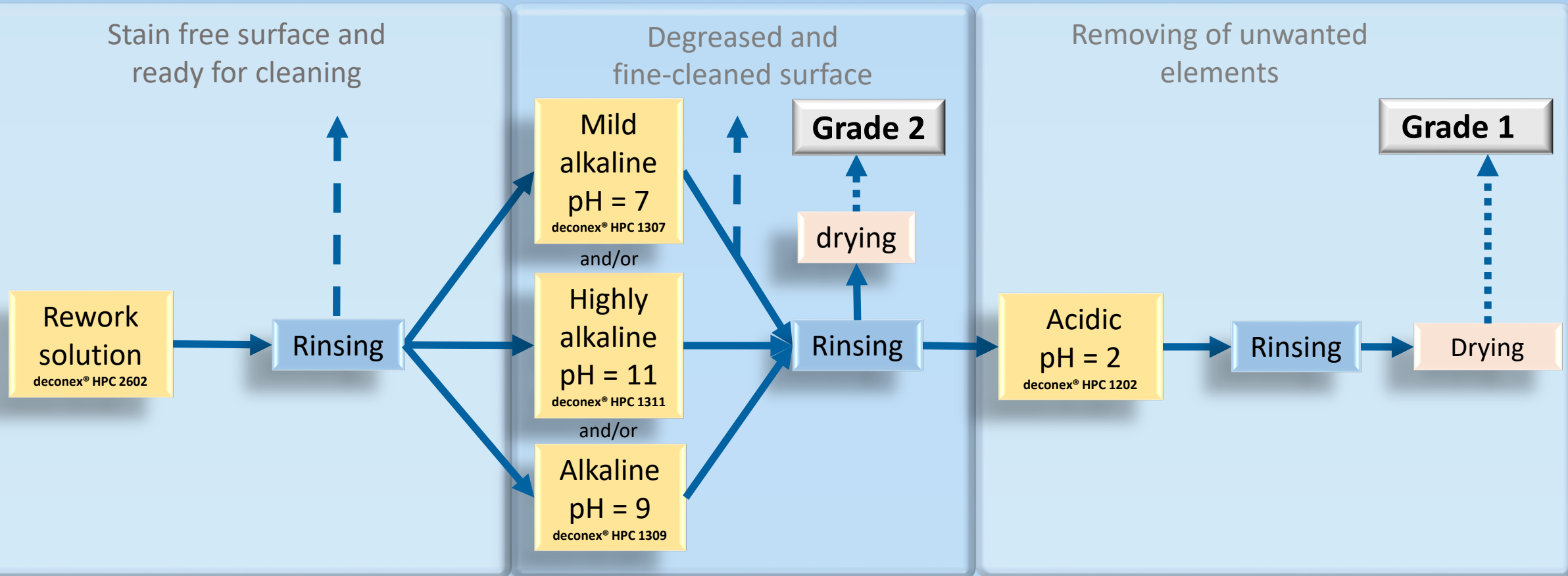
What is the process and what are its functions!

Ultrasonic, spray and vacuum process at different positions



Cleaning chemistry according to specifications

Ultrasonic, spray and vacuum process at different positions



Modular cleaning process

Cleaning process according to specifications

Applicable up to grade 3

deconex®	Step 1	Step 2	Step 3	Step 4
Process	Clean	Rinse	Rinse	Drying
Concentration	1.5% - 2.5%	-	-	-
Temperatur	RT - 60°	RT	50°C	-
Process time	2 - 5 min.	2 - 4 min.	2 - 4 min.	N/A

Applicable up to grade 2

deconex®	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6
Process	Clean	Rinse	Rinse	Rinse	Rinse	Drying
Concentration	1.0% - 2.0%	-	-	-	-	-
Temperatur	RT - 60°	RT	RT	50°C	50°C	-
Process time	2 - 5 min.	2 - 4 min.	2 - 4 min.	2 - 4 min.	2 - 4 min.	N/A
				optional		

Applicable up to grade 1

deconex®	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7	Step 8	Step 9
Process	Clean	Rinse	Rinse	Clean	Rinse	Rinse	Rinse	Rinse	Drying
Concentration	1.0% - 2.0%	-	-	1.0% - 2.0%	-	-	-	-	-
Temperatur	RT - 60°	RT	RT	RT - 60°	RT	RT	50°C	50°C	-
Process time	2 - 5 min.	2 - 4 min.	2 - 4 min.	2 - 5 min.	2 - 4 min.	2 - 4 min.	2 - 4 min.	2 - 4 min.	N/A

Innovative solution for reworking

Surface discrepancies - what is it?

Do you know **deconex[®] HPC 2602** already?

Material - Aluminium

Before treatment



After treatment



deconex[®] HPC

deconex[®] HPC

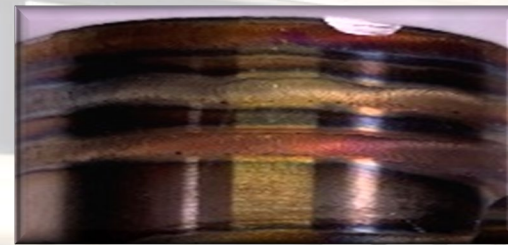
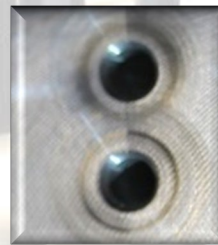
Innovative solution for reworking

Surface discrepancies - what is it?

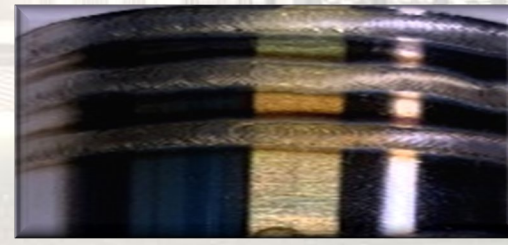
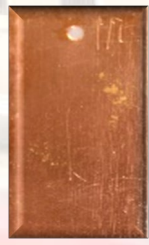
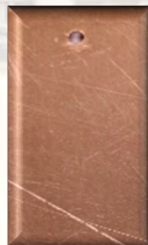
Do you know **deconex[®] HPC 2602** already?

Material - see below the pictures

Before treatment



After treatment



Brass

Copper

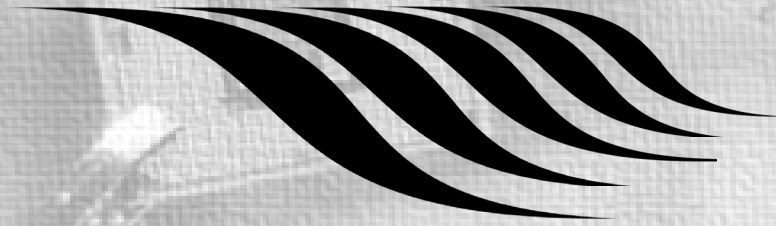
Aluminium

Steel

deconex[®] HPC

deconex[®] HPC

Thank you for your attention!

A banner for Borer Industry. The background shows a person in a cleanroom environment, wearing a blue lab coat and gloves, holding a semiconductor chip. The banner includes the Borer Industry logo, distributor information, and event details.

Don't miss the Borer lecture on
«Mastering High Purity Cleaning Techniques»
2 pm / Zaal 1

Clean Visit us at
Clean Event 2023
Booth no. 11

18. April 2023

Mikrocentrum Veldhoven
Booth no. 11

 **borer industry**

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