

deconex® HPC

deconex® HPC - Line

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

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Product & Sales Manager Industrial Divisio



Borer Chemie 2023

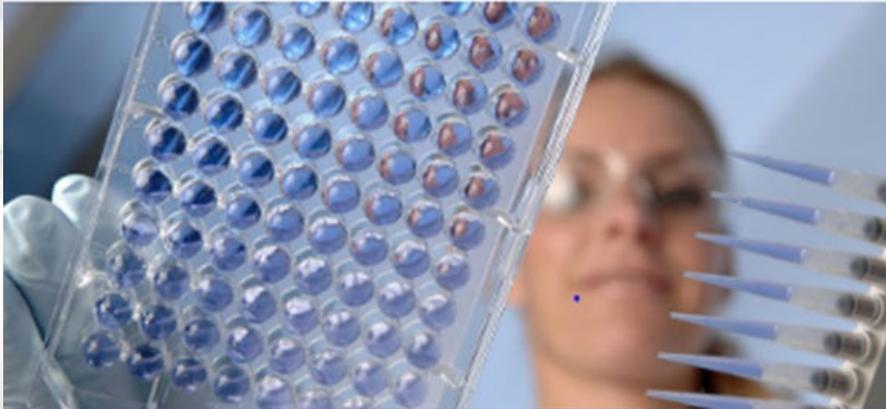
# Borer Chemie AG



 **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



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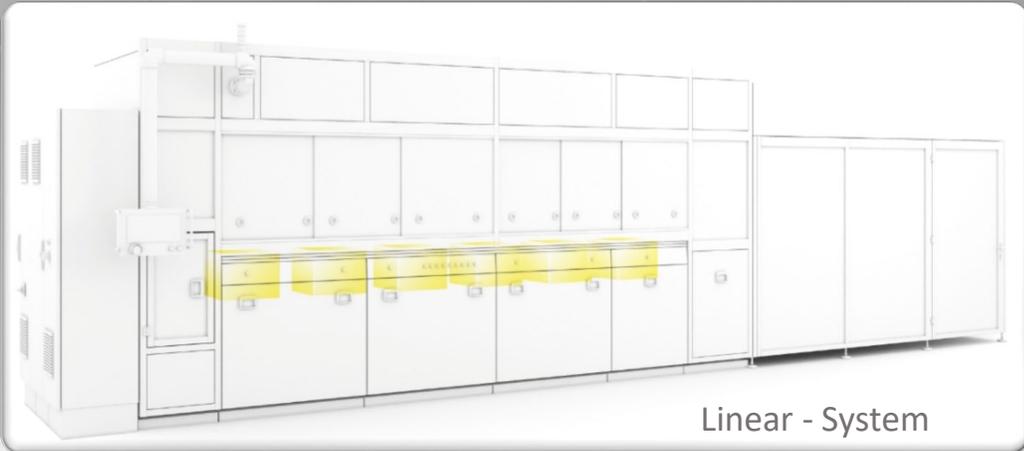


Ensuring success and maintaining quality together

# Design winning cleaning process



# Cleaning equipment's for modular production



Linear - System



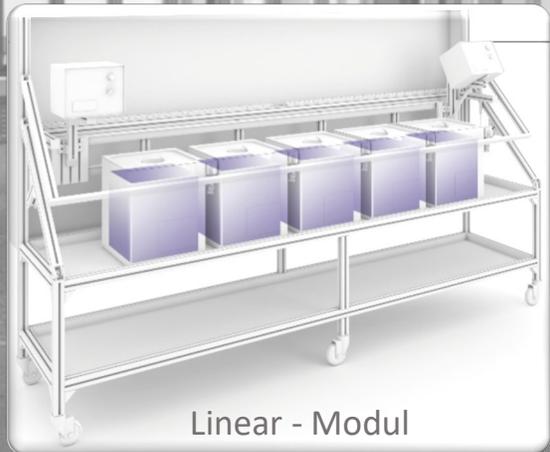
Single chamber - system



Single Bath - Module



Single-chamber module



Linear - Modul

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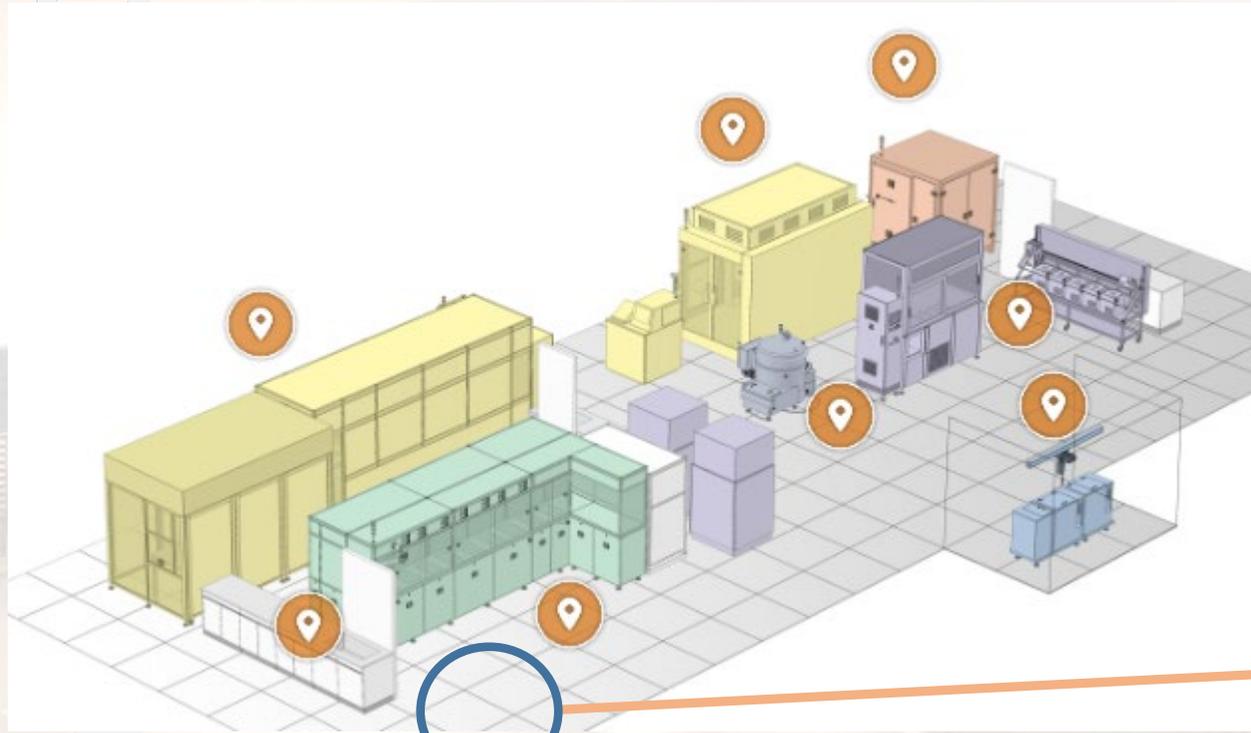
# Benefits of modular production

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

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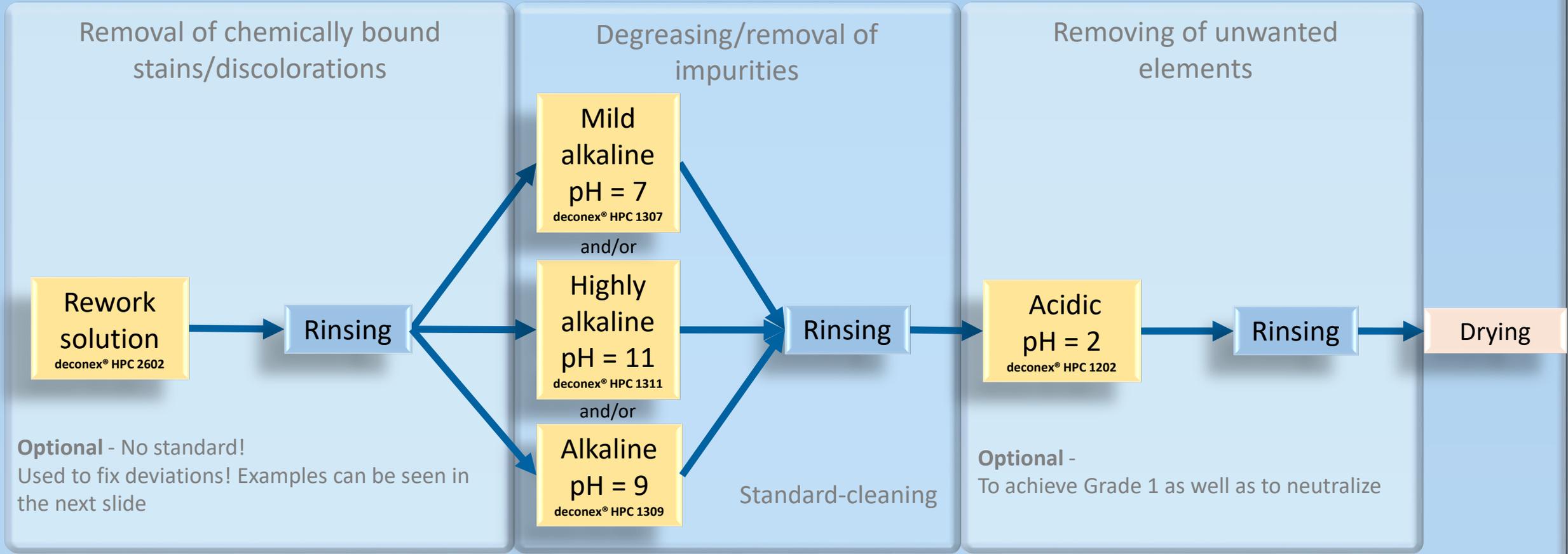
# Borer Chemie AG - Technical Centre



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

# What is the process and what are its functions!

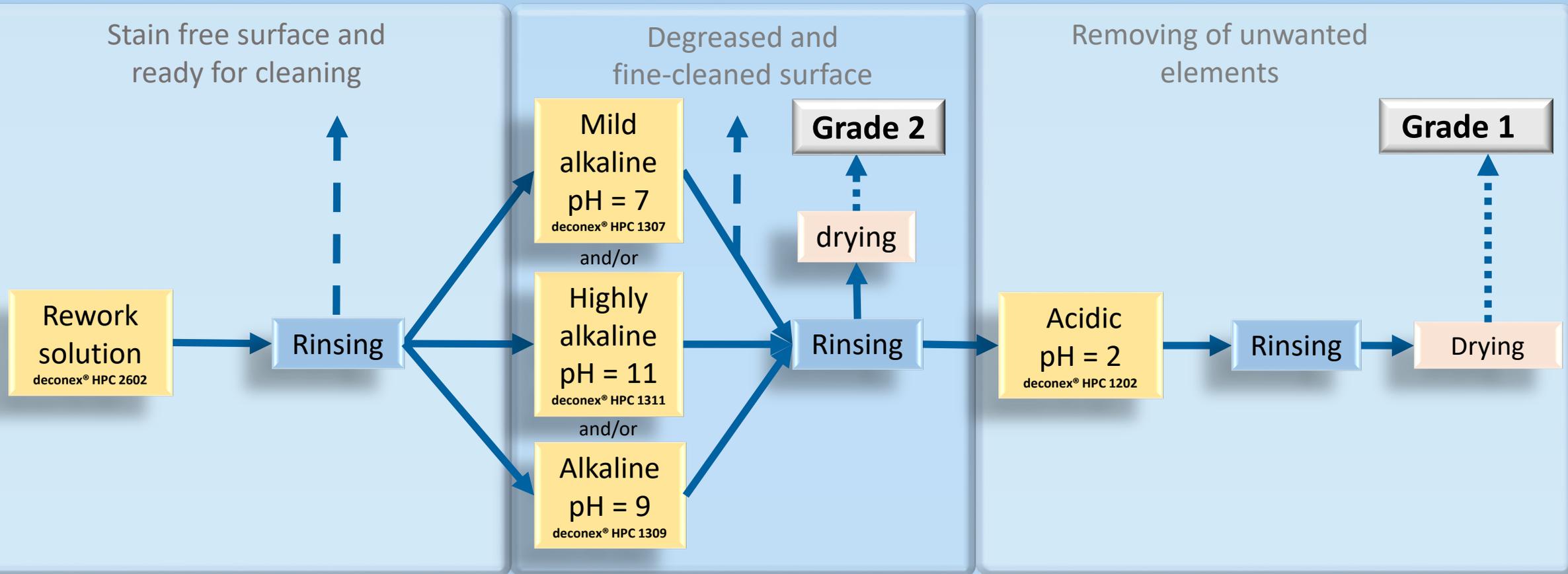
Ultrasonic, spray and vacuum process at different positions



Modular cleaning process

# 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

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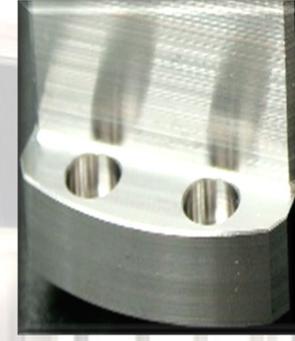
# Innovative solution for reworking

Surface discrepancies - what is it?

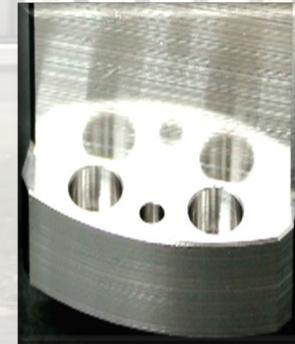
Do you know **deconex<sup>®</sup> HPC 2602** already?

Material - Aluminium

Before treatment



After treatment



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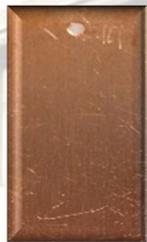
# Innovative solution for reworking

Surface discrepancies - what is it?

Do you know **deconex<sup>®</sup> HPC 2602** already?

Material - see below the pictures

Before treatment



After treatment



Brass

Copper

Aluminium

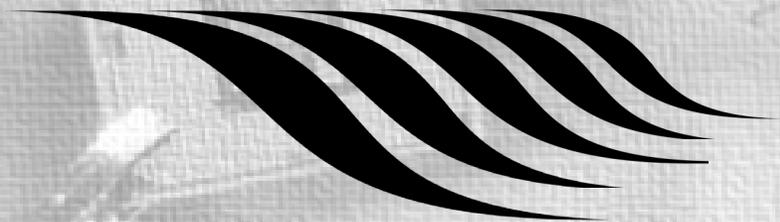
Steel

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# Thank you for your attention!



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  
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