



THE STAINLESS SOLUTIONS GROUP

YOUR PARTNER IN EXCELLENT QUALITY AND FLEXIBILITY!



Verbeterde reinigbaarheid RVS oppervlak dmv SUBLIMATION-process®

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ONTMOET ONS OP STANDNUMMER 680

SURFACE 2016

Dé vakbeurs voor oppervlaktetechniek

4 t/m 6 oktober Brabanthallen 's-Hertogenbosch



UNLIMITED STAINLESS
HIGH LEVEL WELDING / CONSTRUCTION



PERFECT FINISHING
FOR SUPERIOR QUALITY



HYGIENIC SURFACE TREATMENTS
POWERED BY SUBLIMATION-PROCESS*



CUSTOMIZED ADVISORS
FOR YOUR TOTAL CONCEPT SUPPORT



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UNLIMITED STAINLESS

HIGH LEVEL WELDING / CONSTRUCTION

- Hygienic design
- Engineering
- Production
- High level welding
- Well experienced professionals



04-10-2016



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HvR - 2

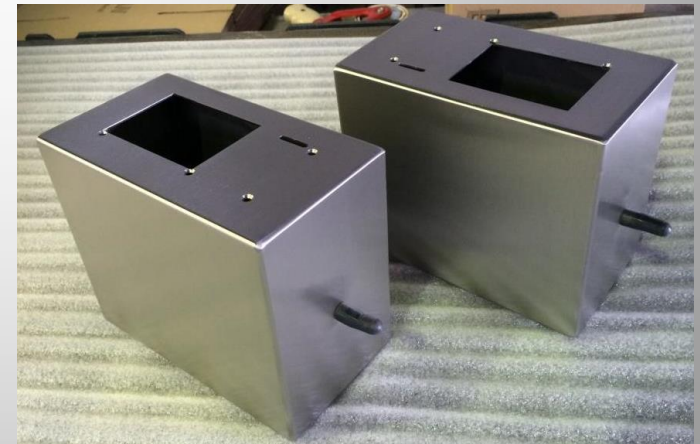
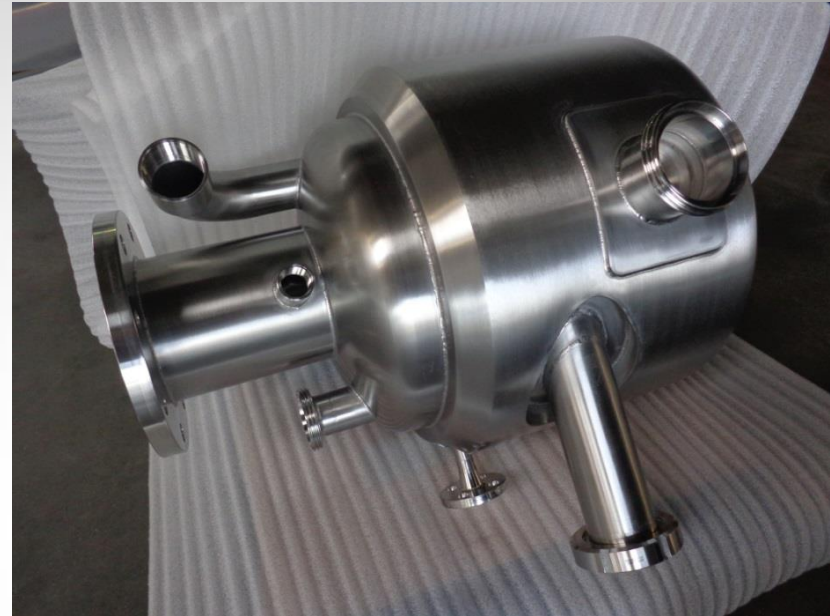


PERFECT FINISHING

FOR SUPERIOR QUALITY

Quality in finishing, grinding,
polishing to achieve customers
requirements:

- Ra < 0,8 µm
- Finish K320
- Polishing

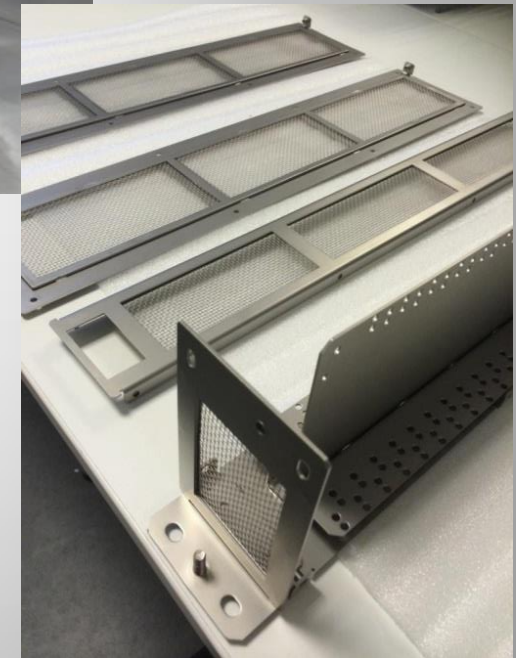




HYGIENIC SURFACE TREATMENTS

POWERED BY SUBLIMOTION-PROCESS®

- Increase cleanability
- Optimal hygienic characteristics
- Drastical reduce adhesion
- Improve surface topography
- **SUBLIMOTION-process®**





CUSTOMIZED ADVISORS

FOR YOUR TOTAL CONCEPT SUPPORT

- Support and advice in (hygienic) design, engineering, production
- Support in measurement documents, process and product certificates





HYGIENIC SURFACE TREATMENTS

POWERED BY SUBLIMATION-PROCESS®

SUBLIMATION-process®

Wet- en regelgeving t.a.v. hygiëne:

- 2006/42/EG Machine richtlijn (CE)
- EN1672-2 Hygiëne eisen machine tbv voedingsmiddelen
- EC1935/2004 Europese verordening food contact delen
- EHEDG Guidelines Hygienic Equipment Design
- ISO14159:2008 Hygiene eisen bij design machines
- EC/EG 2023/2006 GMP (Good Manufacturing Practice)





HYGIENIC SURFACE TREATMENTS

POWERED BY SUBLIMOTION-PROCESS®

SUBLIMOTION-process®

Borging van deze wet- en regelgeving:

- ISO 9001/2015 Kwaliteitsysteem tbv borging organisatie
- HDN Borging voor alle regelgevingen





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HYGIENIC SURFACE TREATMENTS

POWERED BY SUBLIMOTION-PROCESS®

SUBLIMOTION-process®

1. Improved surface topography
 2. Optimal corrosion resistance
 3. Restrictive surface peening
 4. Hydrophobic surface
- *Increase cleanability*
 - *Optimal hygienic characteristics*
 - *Drastical reduce bacterial adhesion*
 - *ONE step process!*

04-10-2016



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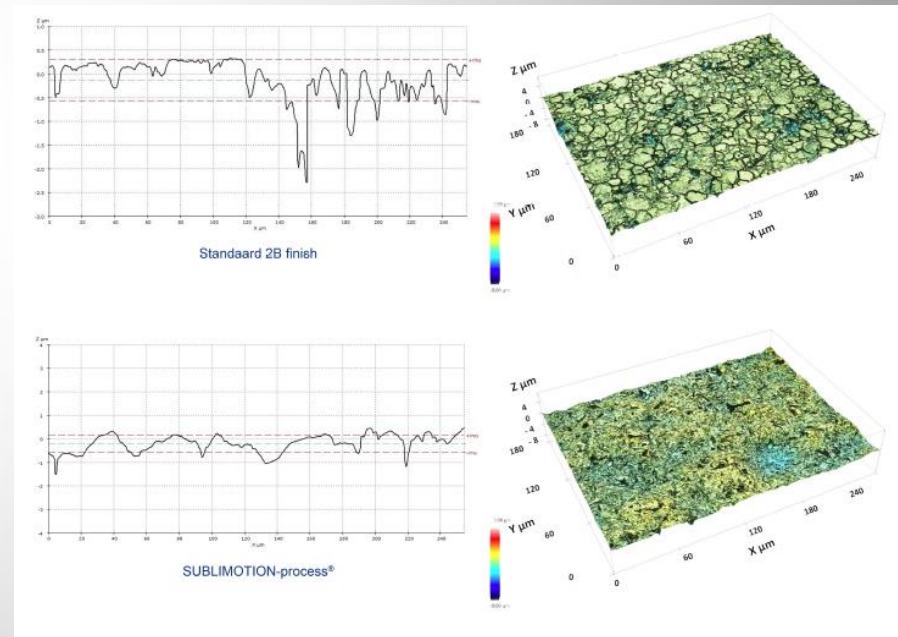


HYGIENIC SURFACE TREATMENTS

POWERED BY SUBLIMATION-PROCESS®

1. Improved surface topography

- Removal of welding discoloration and micro scratches
- Open topography
- Optimal surface roughness ($R_a < 0,6$)
- No contamination
- No adhesion



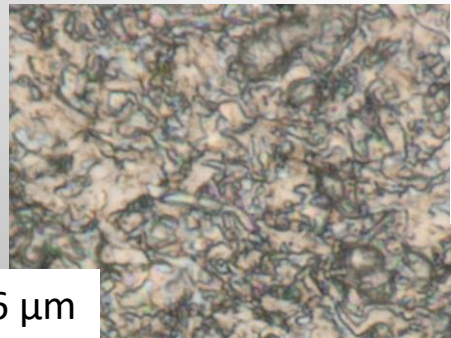
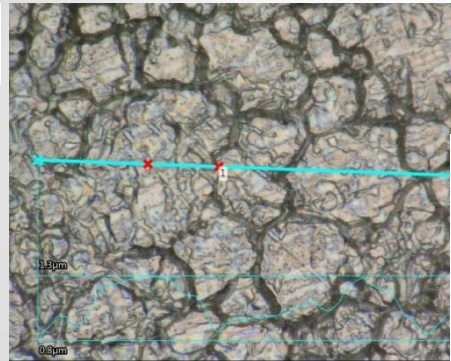


HYGIENIC SURFACE TREATMENTS

POWERED BY SUBLIMATION-PROCESS*

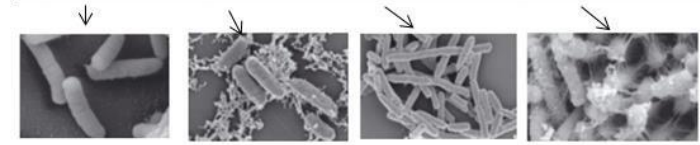
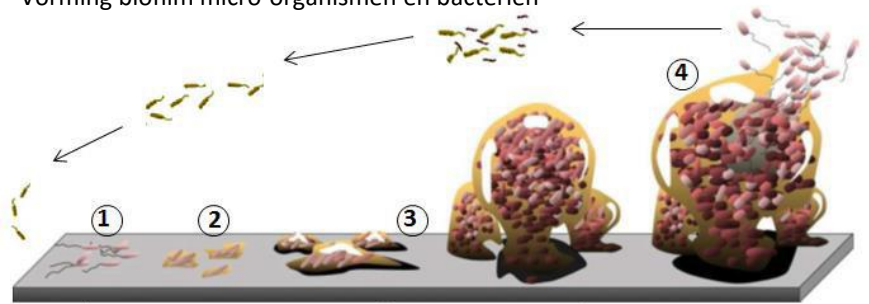
1. Improved surface topography

Ra ≈ 0,25 μm



Ra ≈ 0,4 μm <> 0,6 μm

Vorming biofilm micro-organismen en bacteriën



- Vorming van een biofilm
1. Initiële, reversibele hechting
 2. Irreversibele hechting
 3. Maturatie
 4. Dispersie



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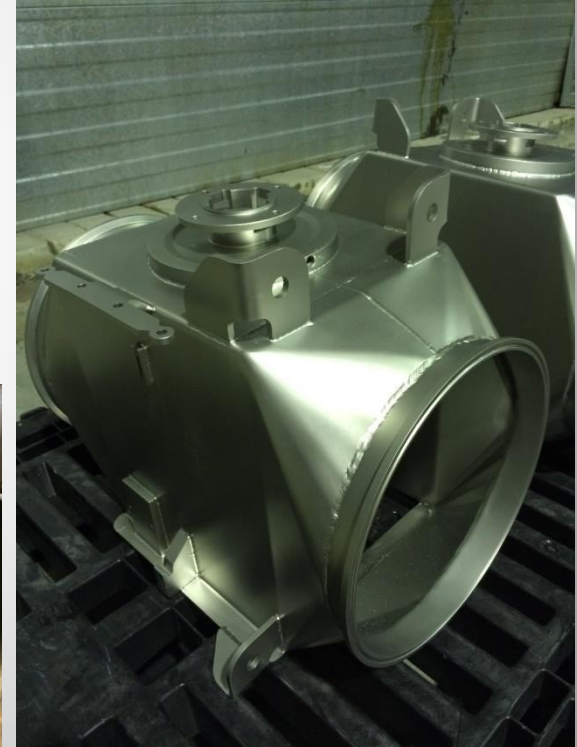


Ra < 0,8 µm

Ra < 0,6 µm

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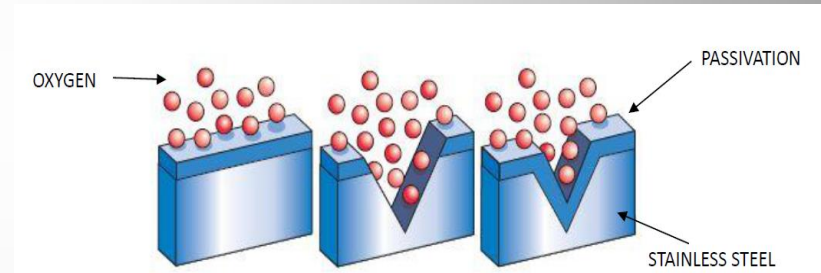


HYGIENIC SURFACE TREATMENTS

POWERED BY SUBLIMATION-PROCESS®

2. Optimal corrosion resistance

- Increase passivation value of the chromium-rich oxide layer
- Auto passivation in clean area for restoring optimal corrosion resistance



Gemeten passiviteitswaarde (= corrosiebestendigheid):

RVS 316 finish 2B plaat	74,9
Glasparelstralen	69,4
SUBLIMATION process®	79,1

Passivatiewaarde			Resultaat
0% Mo (RVS 304)	2% Mo (RVS 316)	6% Mo (Duplex)	
< 30	< 35	< 40	Slecht
30 - 55	35 - 60	40 - 65	Redelijk
> 55	> 60	> 65	Goed



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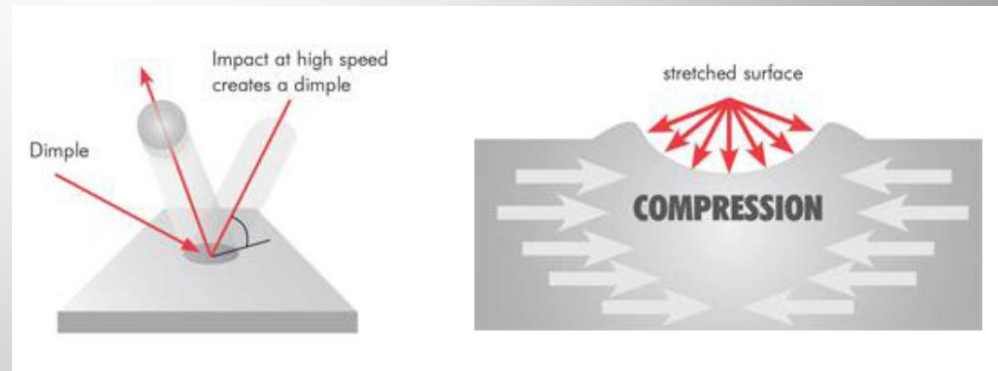


HYGIENIC SURFACE TREATMENTS

POWERED BY SUBLIMATION-PROCESS*

3. Restrictive surface peening

- Micro cracks are closed by building up pressure / tension (peening)
- Residual stress in surface
- Stress free peening intensities
- No risk of distortion and deformation





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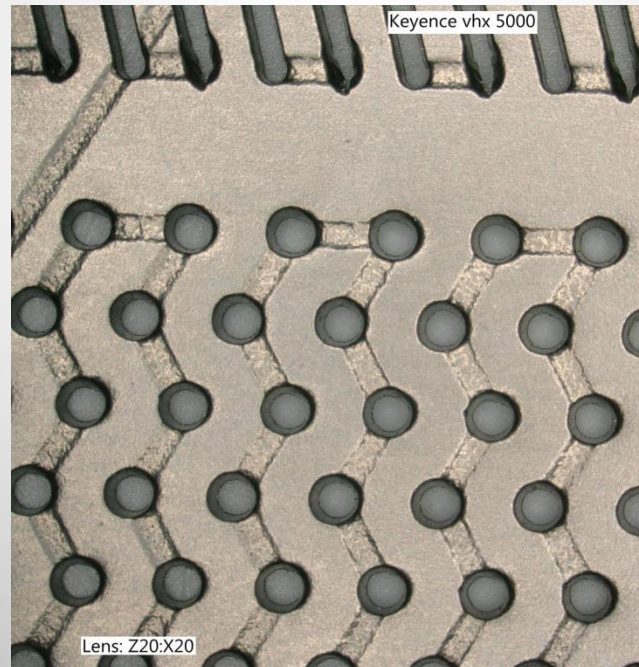
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HYGIENIC SURFACE TREATMENTS

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3. Restrictive surface peening



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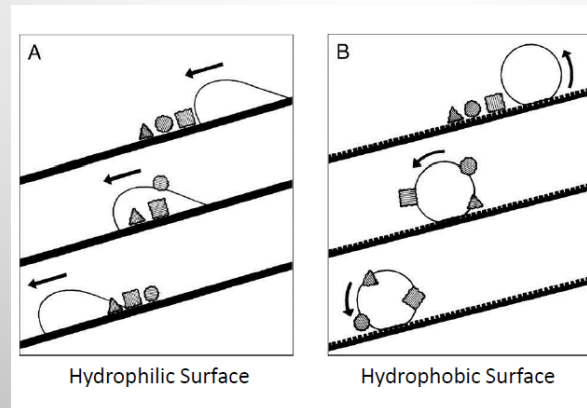
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POWERED BY SUBLIMATION-PROCESS®

4. Hydrophobic surface

- No adhesion of water, bacteria or any other materials
- Low wettability
- 'Lotus' effect

→ Optimal cleanability!



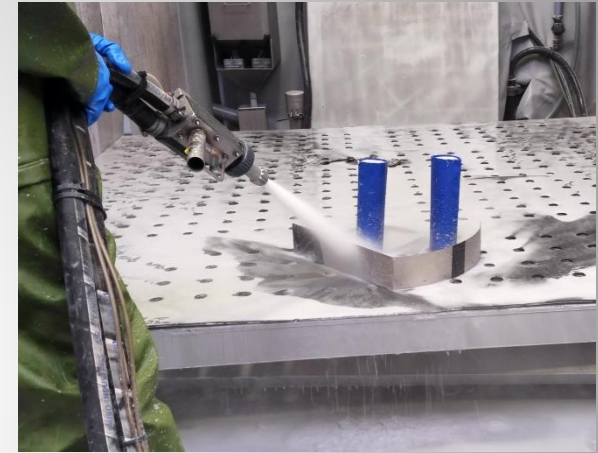


HYGIENIC SURFACE TREATMENTS

POWERED BY SUBLIMOTION-PROCESS®

SUBLIMOTION- process®

- ONE-step process on micro level
- Inert cleaning suspension (micro particles)
- No chemicals or environmental issues
- Dust free and comfortable during operating
- **GREEN PROCESS:**
 - Safe
 - Ecological
 - Sustainable



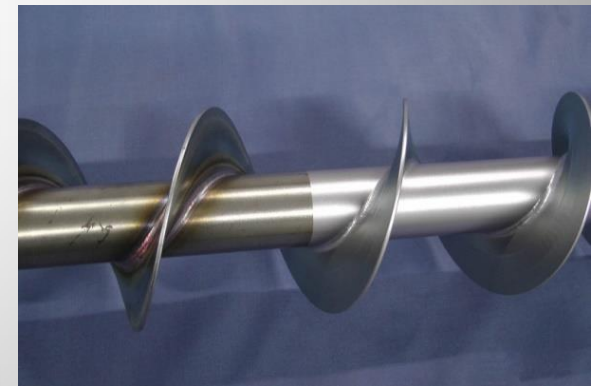


SUBLIMOTION-process® - benefits

HYGIENIC SURFACE TREATMENTS

POWERED BY SUBLIMOTION-PROCESS®

- Optimal cleanability, efficient and effective cleaning:
 - Shorter cleaning / shorter production stops
 - More production hours
 - Less maintenance
- No adhesion or contamination from:
 - Bacterials
 - Microbiologicals
- High-end product with added value:
 - RGA analyse
 - Cleanness





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Questions?

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