

Future of the general washer-disinfector?

Dr. Winfried Michels

„If you want to see into the future, take a good look at the past“

André Malraux

First European Dish Washer - 1929

3

WD's with mechanical/electronic control 1960 – 1990
In 1980 WDs were included in the disinfection list of the BGA for the first time, according to the legislation for epidemic disease.

Current washer/disinfectors

- electronic controls
- separate electronics for control-independent monitoring of temperature, water inlet, dosage etc.
- Interface, printer for documentation
- WD complies with EN ISO 15883 standard series

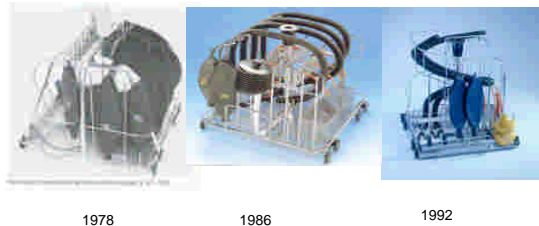
Cleaning processes have to become

- More efficient and any pre- or subsequent cleaning has to become superfluous
- More reproducible
- Better monitored (more sensor technology) and documented
- Faster processes and with lower consumption
- Cleaning should become so efficient that contamination is reduced in a manner that makes a separate disinfection stage redundant
- Cleaning progress or result could be monitored during process by a TRR-System

Multi chamber WDs processing instruments sets in short time intervals covering the mentioned features is imaginable



In the final decade of the last century, load carriers have improved overall cleaning of inner and outer surfaces of load



1978

1986

1992

MIS mobile unit – developed with increasing minimally invasive surgical procedures



The need for high pressure injection (> 2 bar) for lumen instruments is obvious




But future development of WD and equipment will also be dependent on advances in surgery (Da Vinci – System)



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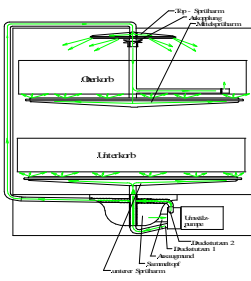

Correct Load Recognition System could prevent noncompliance with specified reference load



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For more than 30 years technicalities of washing, i.e. spraying, haven't changed


What about homogeneous spray distribution?

Improvements are sorely needed.

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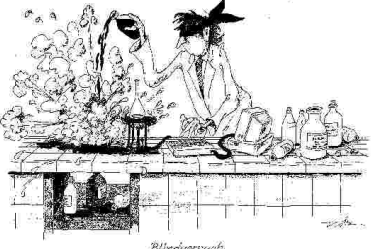
Circulation pumps still function in the same way with regard to throughput and pressure.



Changes made here could result in saving water, energy, process chemicals etc.

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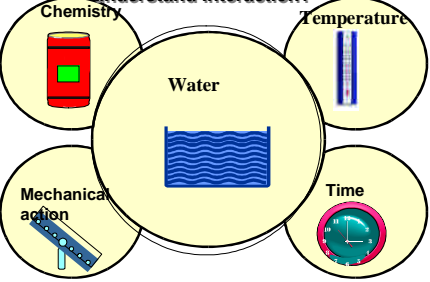
The available explanations of cleaning mechanisms and efficiency of detergents are often questionable and no real advances have been made in the last few years. Which type and how much chemistry will be needed in the future?



Dr. Winfried Michels
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Factors influencing the process of machine based cleaning according to Sinner - but do we really understand interaction?

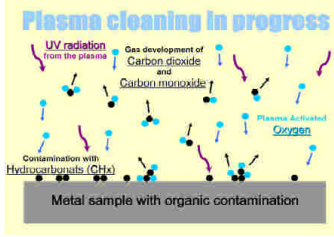


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Will we still be using water for instrument reprocessing in the future? Or could we possibly be using

■ Plasma cleaning

Plasma cleaning in progress



Or

- Supercritical carbon dioxide cleaning (30 – 50 °C / 60 – 200 bar)



We don't want to be taken by surprise by what the future brings – we want actively create it.

