

Api-Additives for Paper Industry GmbH

**development and application
of speciality chemicals for
the paper industry**

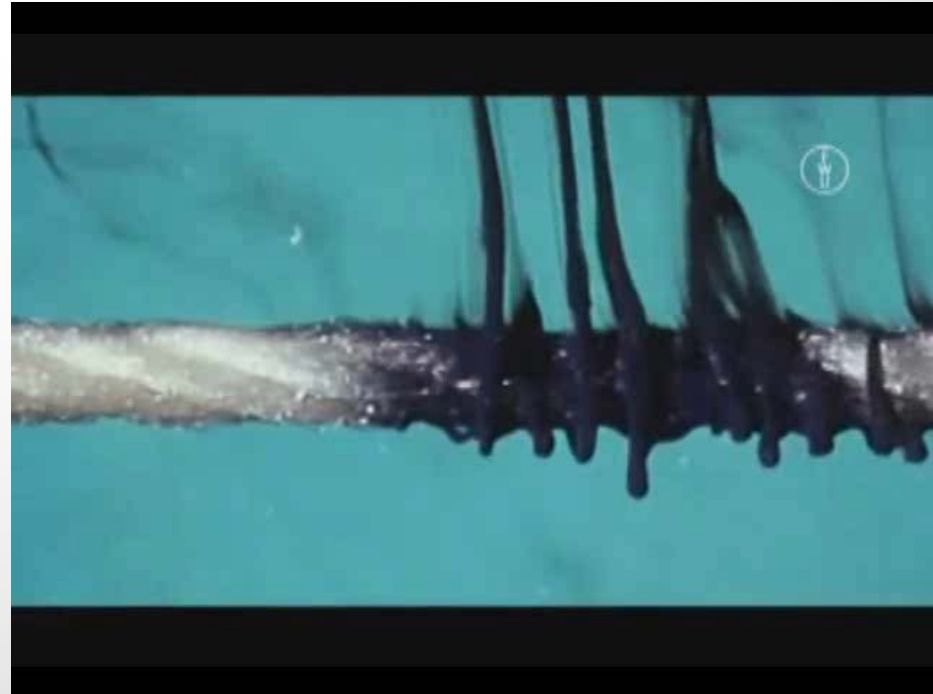
2012

- **online conditioning of wires, felts, fabrics, cylinders, rolls and dewatering elements**
- **discontinuous cleaning of circuits, wires, felts and fabrics**
- **industrial fresh water treatment**
- **scale inhibitors for paper machines and pulp mills**
- **elimination of stickies**
- **oxidative and conventional biocide systems**

Neutral products with tensides

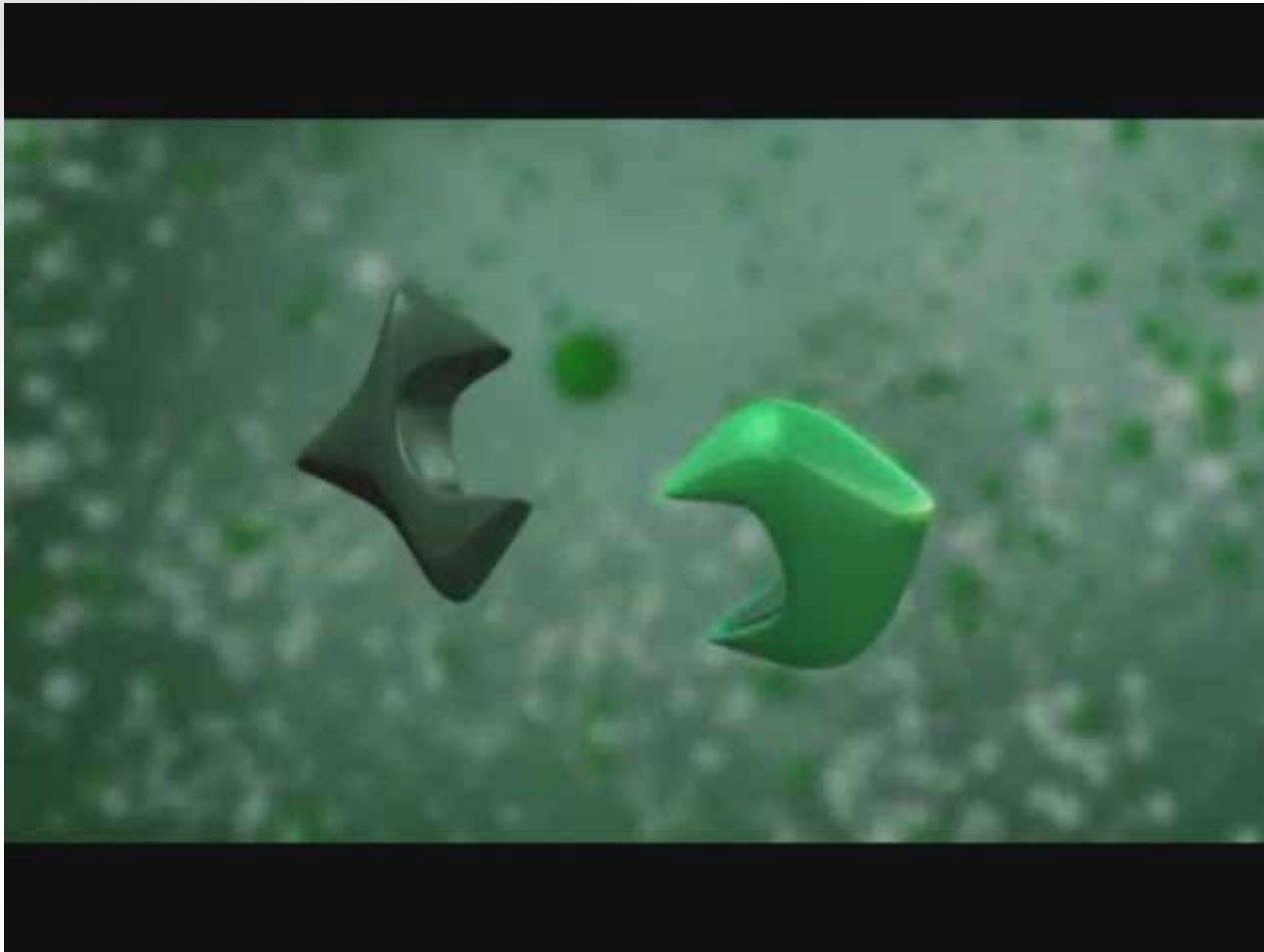
Tensides reduces deposits by

- **washing action (dispersing deposits)**
- **changing the surface characteristics from hydrophobic to hydrophilic**



Complexing agent

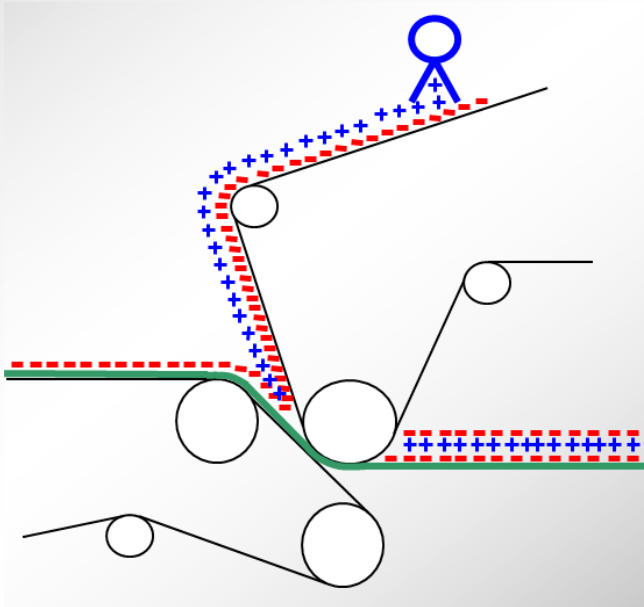
To avoid coagulating of deposits by complexing free ions of carbonate and heavy metals.



Cationic fixation agent

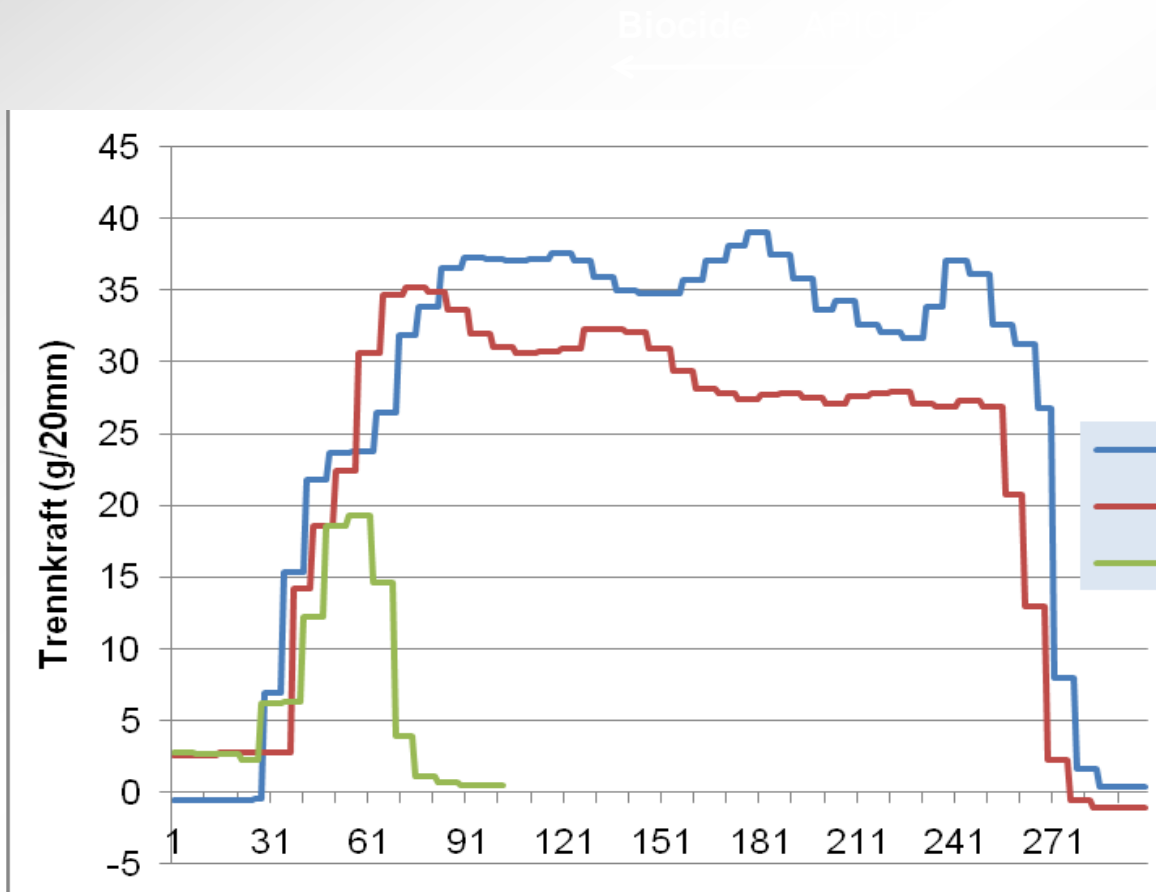
These products reduces pitch problems by transfer of cationic loading

- **to the paper sheet in order to fix pitch inside of the paper**
- **to the clothing in order to hydrophilise potential deposits on the surface of the clothing**



Silicon-based products

These products avoid pitch problems by reducing the adhesive forces between stickies and the clothing/ rolls/ dewatering elements



To avoid chemical deposits on forming fabrics, felts, dryer wires, dewatering elements, rolls

Besides classical acidic and alkaline discontinuous applications, we also provide continuous online applications.

example: forming fabric - fluting



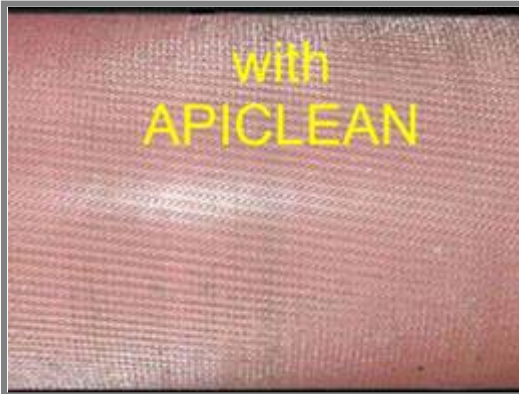
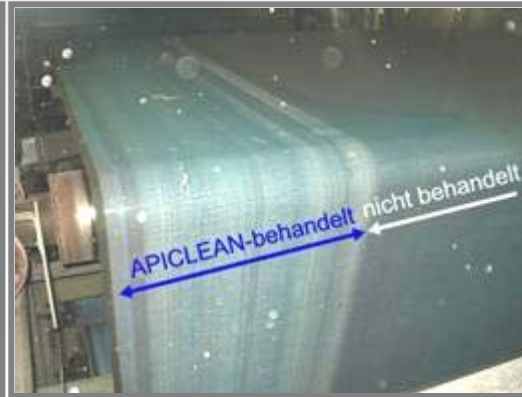
with API treatment



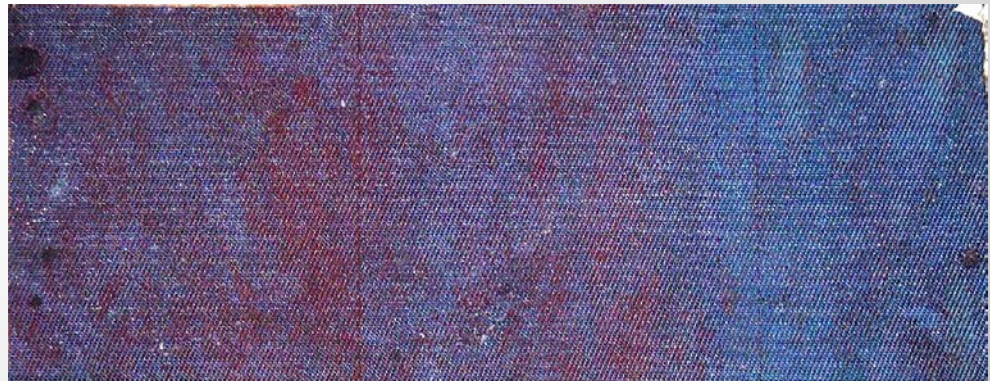
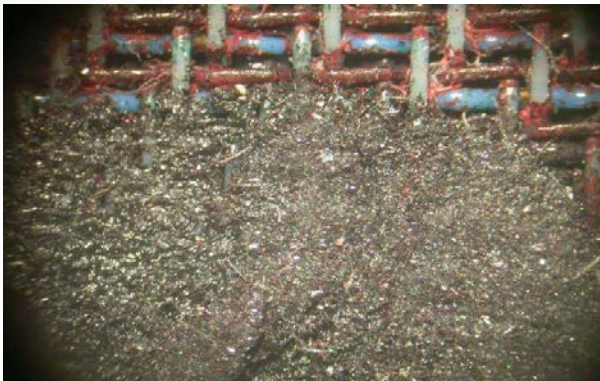
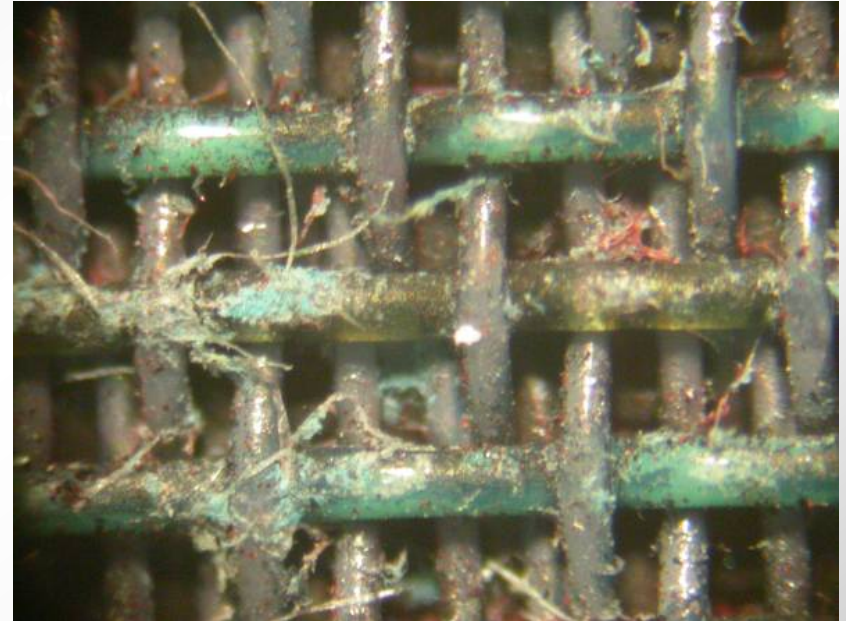
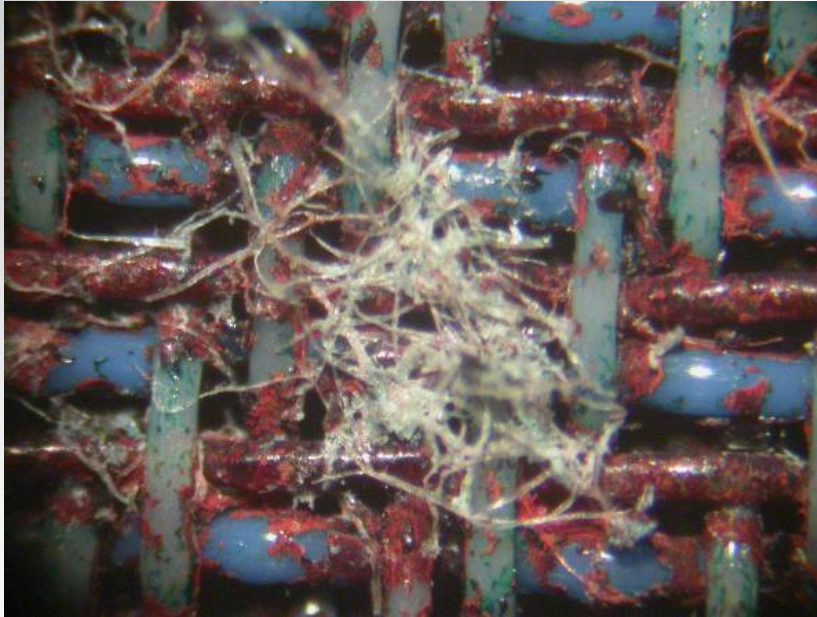
without API treatment

Example: drying fabric conditioning

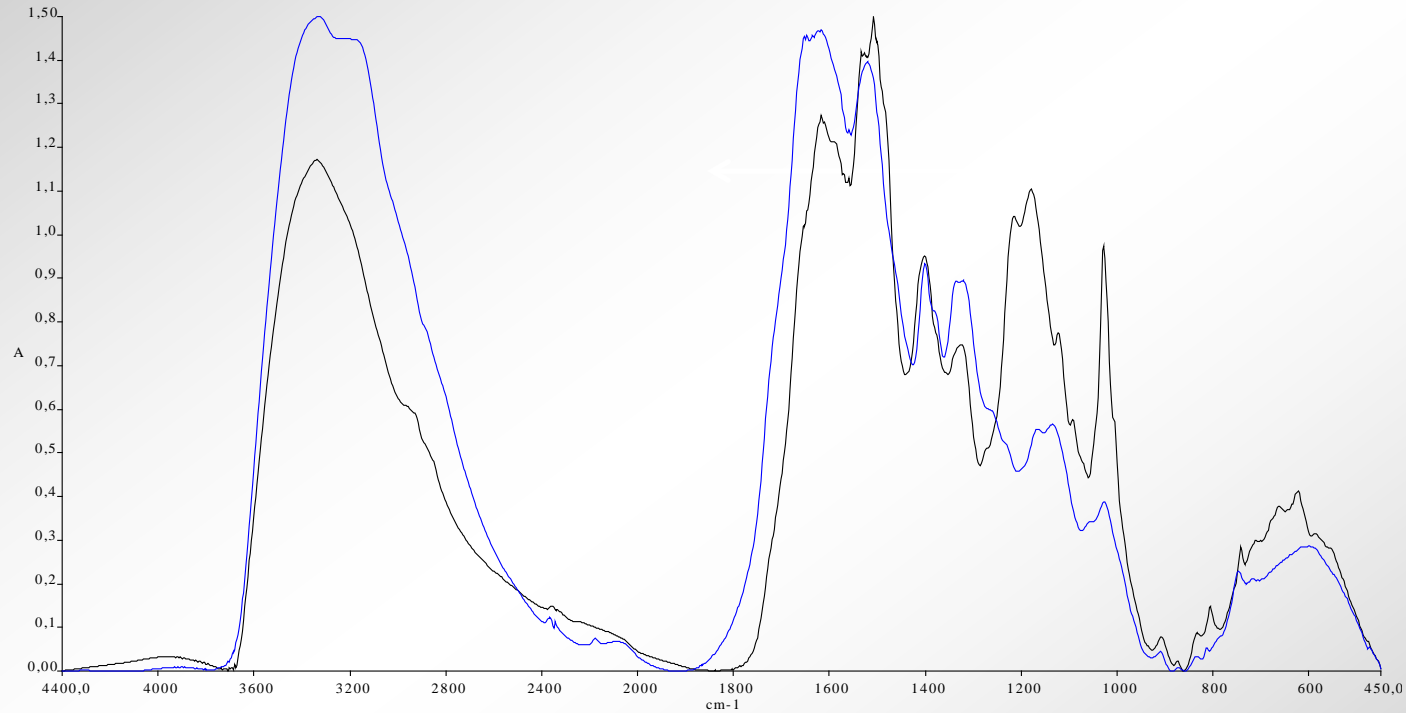
API : first company in Europe to introduce online drying fabric treatment



Analysis of forming fabric of hygiene paper machine

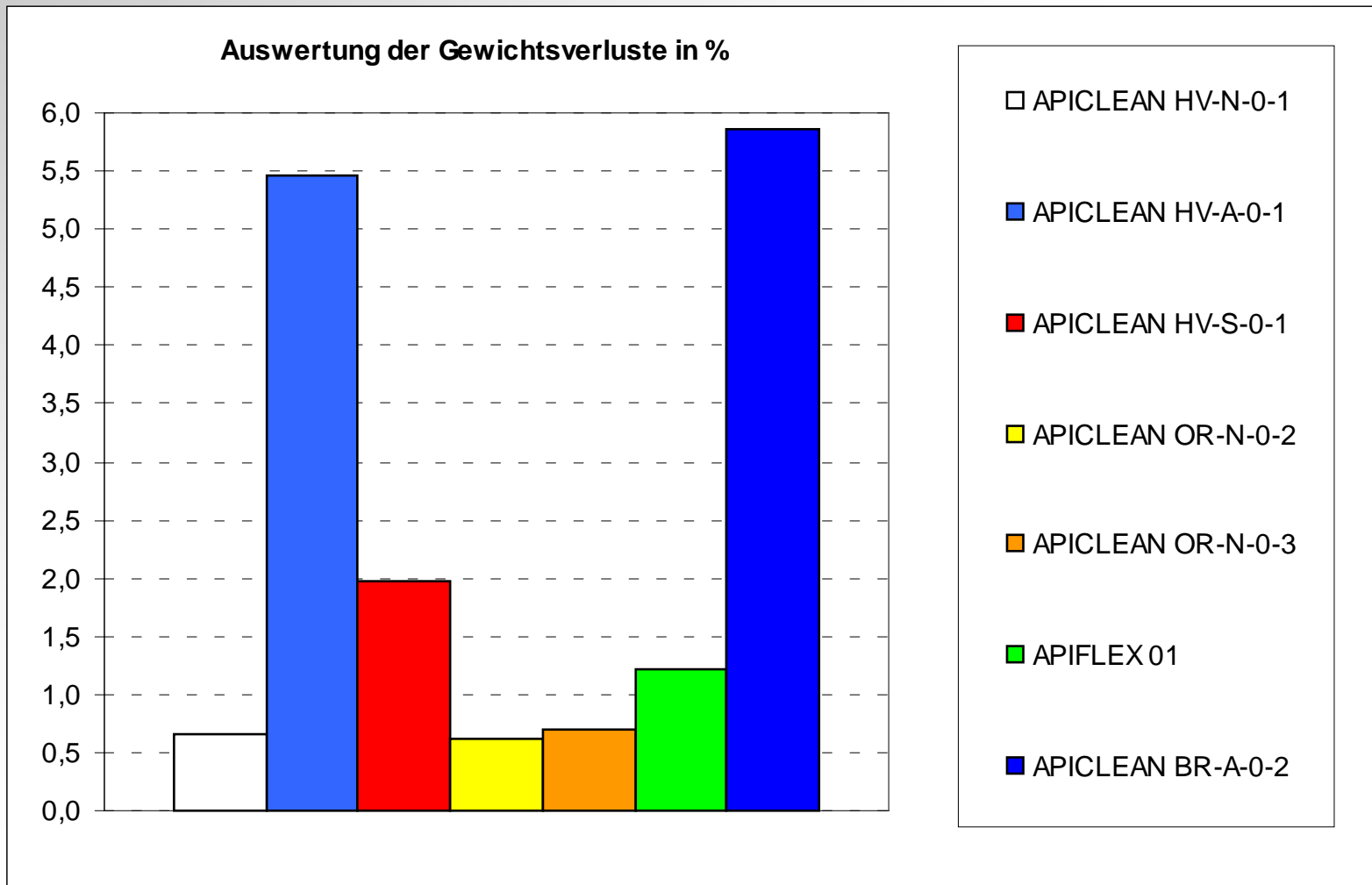


Analysis of forming fabric of hygiene paper machine



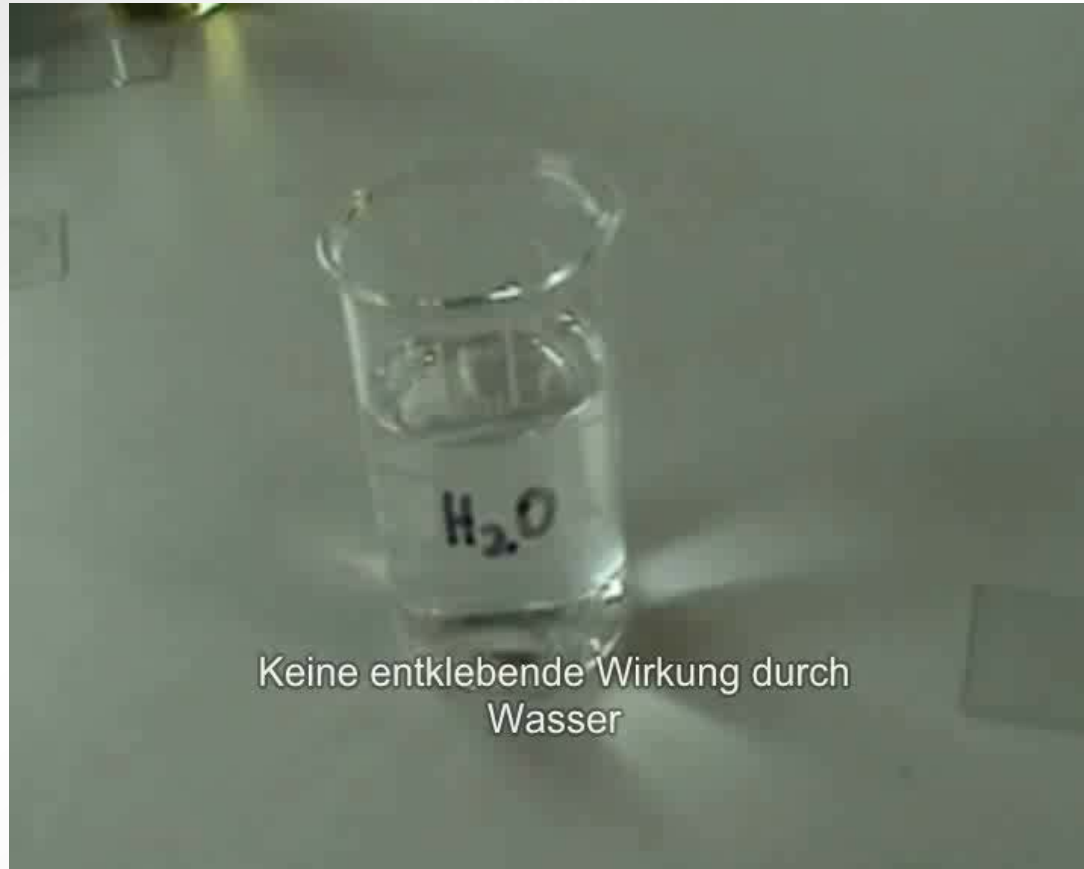
pitch, stickies , carbonate, colour, fibres, dicyan-diamide

Analysis of forming fabric of hygiene paper machine



Proposal 1: APICLEAN OR-N-O-3

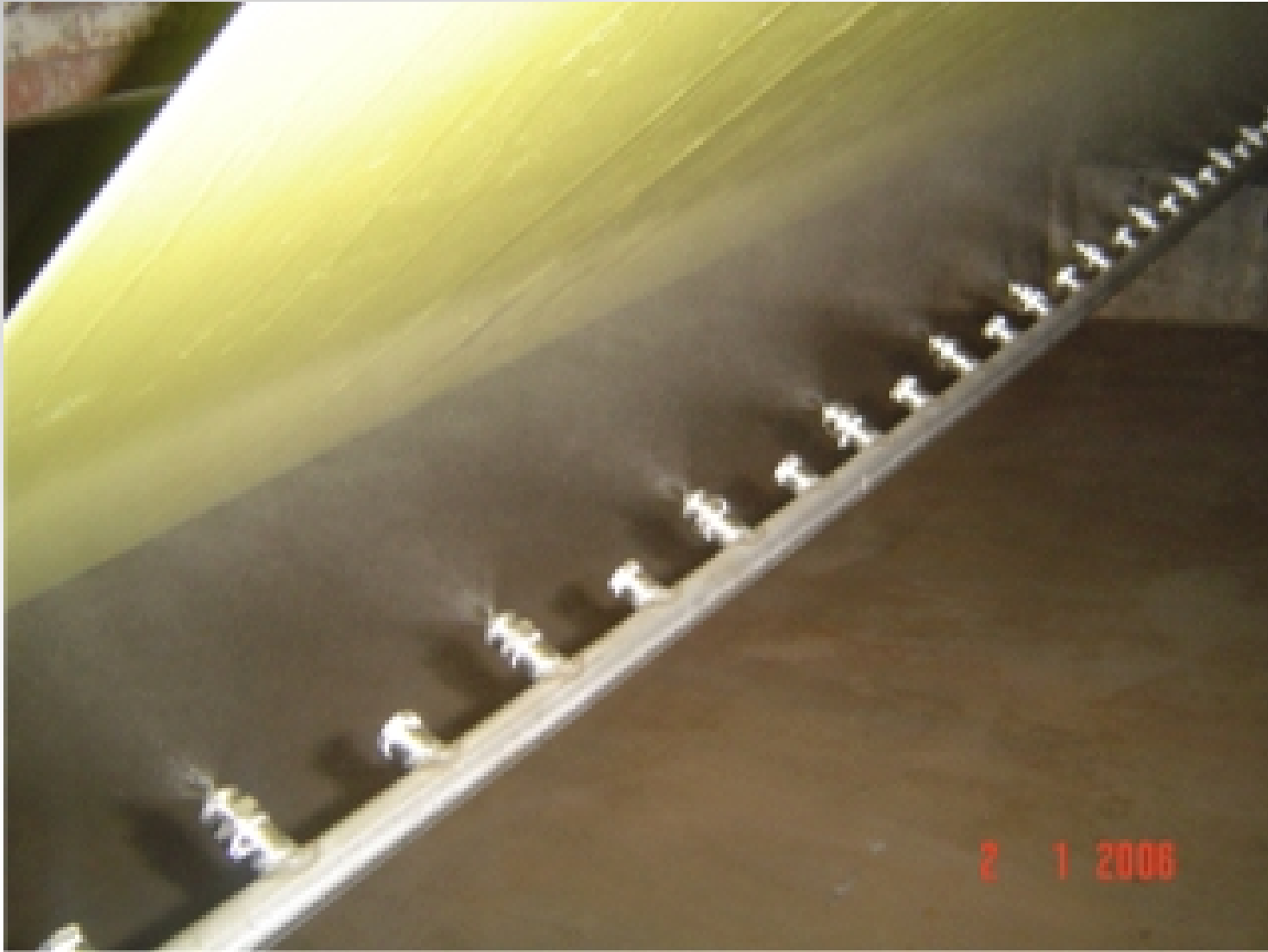
Beside the action of tensides this product mainly reduces pitch deposits by inhibition and de-tackifying of pitch which comes in contact with the product



Proposal 2: APIFLEX

These products mainly use the effect of tensides to avoid the contamination of the clothing. These products are good dispersing agents and also detackify the surface of the clothing.





Cleaners for boil-out

Alkaline and acidic foam cleaners

High viscosity cleaners for machine clothing

Application equipment (e.g. spray-bars, APIJET) + service



Application of BCDMH-tablets or granules via so-called brominators

flooded-bed brominators for big quantities



pressurised brominators



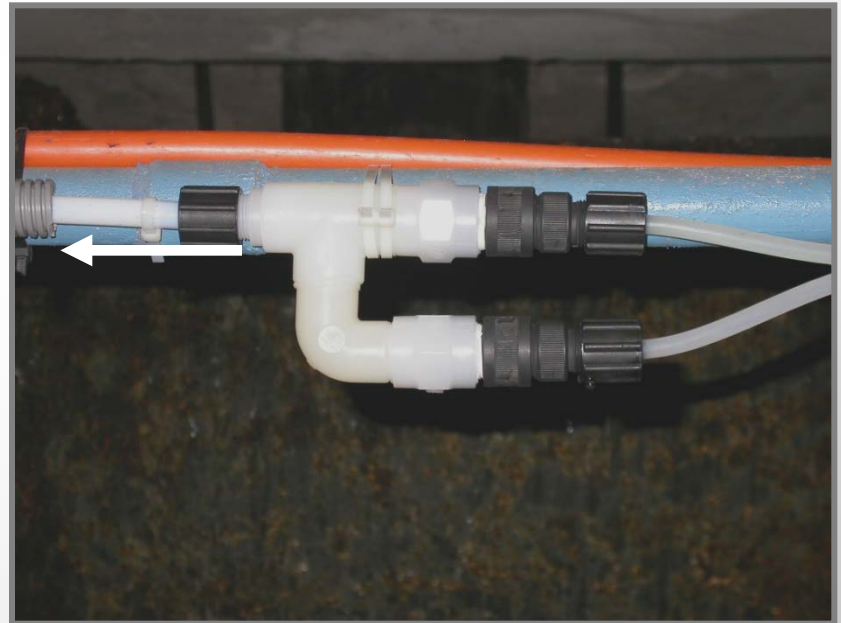
Application of hypochlorite combined with APINOX (halogen stabiliser)

- both products are pre-mixed on-line before dosing
- very low corrosion compared to other systems

All-liquid product dosing



mixed via simple T-piece



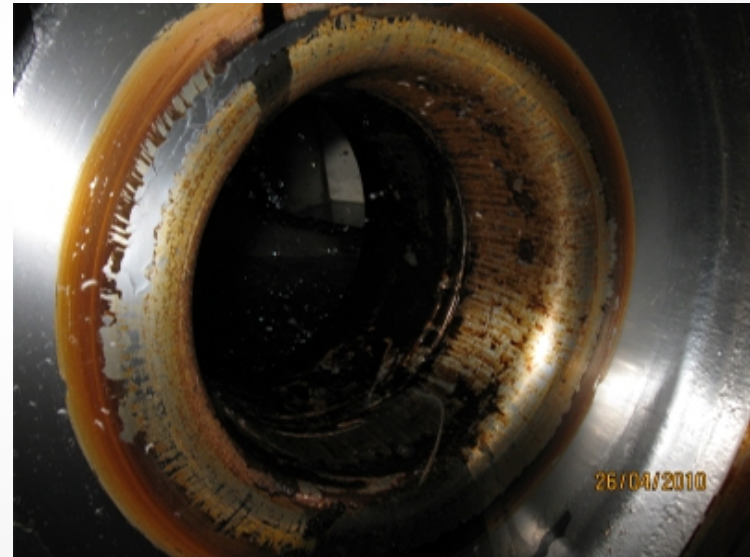
- Treatment against CaCO_3 , Ca-oxalate, Ca-sulphate...
 - Scale in vacuum pumps or heat exchanger
 - Scale in suction-rolls



- Scale in pulp mills



Without APISPERSE



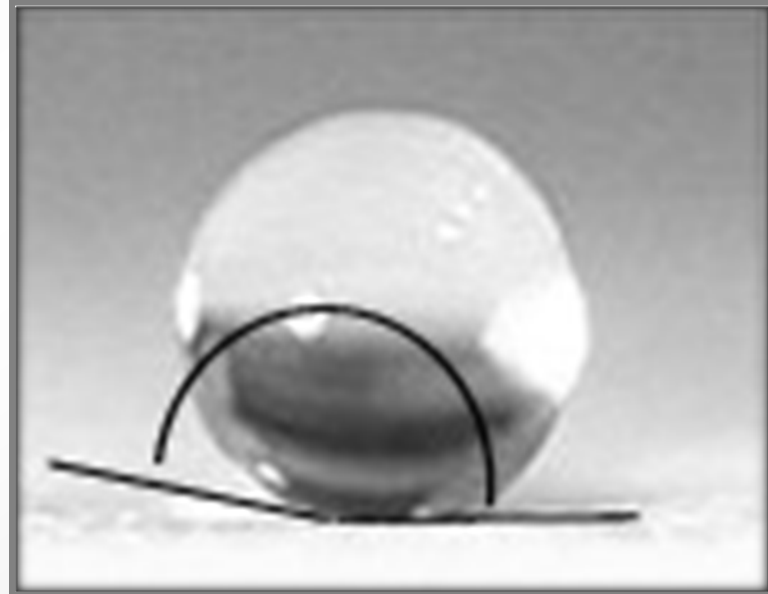
With APISPERSE

APIPHOB – hydrophobic mineral for collecting stickies during deinking

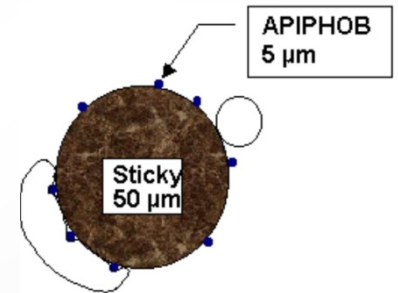
hydrophobic powder



water droplet on APIPHOB treated surface



Working principle comparable to bentonite but 100% active substance as it is completely hydrophobic



Continuous circuit treatment

- **biocide-free deposit control (technological leadership)**
- **halogen-based oxidative deposit control**
- **oxygen-based oxidative deposit control**
- **classical organic biocides**
- **Redox enhancement**

thank you for your attention!