



SAMES Technologies
Electrostatic **innovative solutions**

WAMAS WORKSHOP

Advanced Materials and Surfaces
19th, 20th November 2013



SAMES an EXEL Industries company



Industry: 29% of turnover

Farming and Consumer: 71% of turnover



3600 employees

775 M€

Quotation on NYSE – Euronext Paris

www.sames.com

EXEL Industries: N°1 worldwide in plants protection



Farming



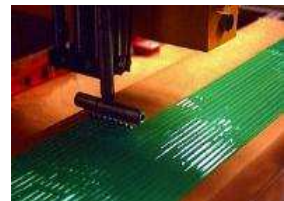
Consumer



EXEL Industries: N°3 worldwide in materials protection



- Non electrostatic application of paints, glues and adhesive



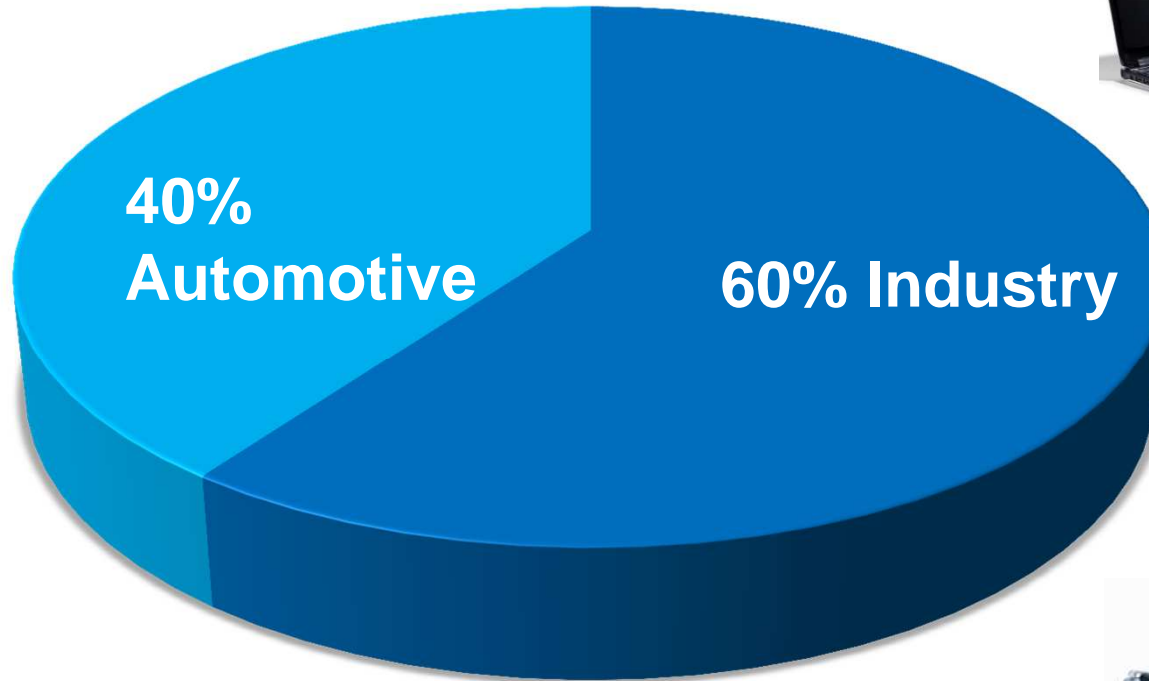
- Electrostatic application of powder and liquid paints



- 751 employees
- 16 subsidiaries



Materials protection Division : Automotive and General Industry



Our customers – Car manufacturers



Our customers – General Industry



The SAMES company

Know-how & people



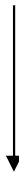
- **235** employees.
- Research & Innovation : **48** pers. (20% of total workforce)
- Mechanical engineering, automation, fluids mechanics, electrical engineering, electronics, robotics... all these skills are available at SAMES Technologies
- R&I, test labs, engineering, assembly, training... brought together on the same location covering 9000 m², in Meylan (Grenoble)



Approved solutions in automotive



**Car
manufacturers**



OEM



... that fits in all kind of industry



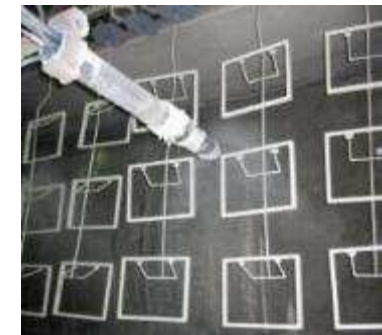
Construction
PVDF, Aluminium ...



Metal
Gas bottles, Drums ...



Wood
Furniture, Exteriors



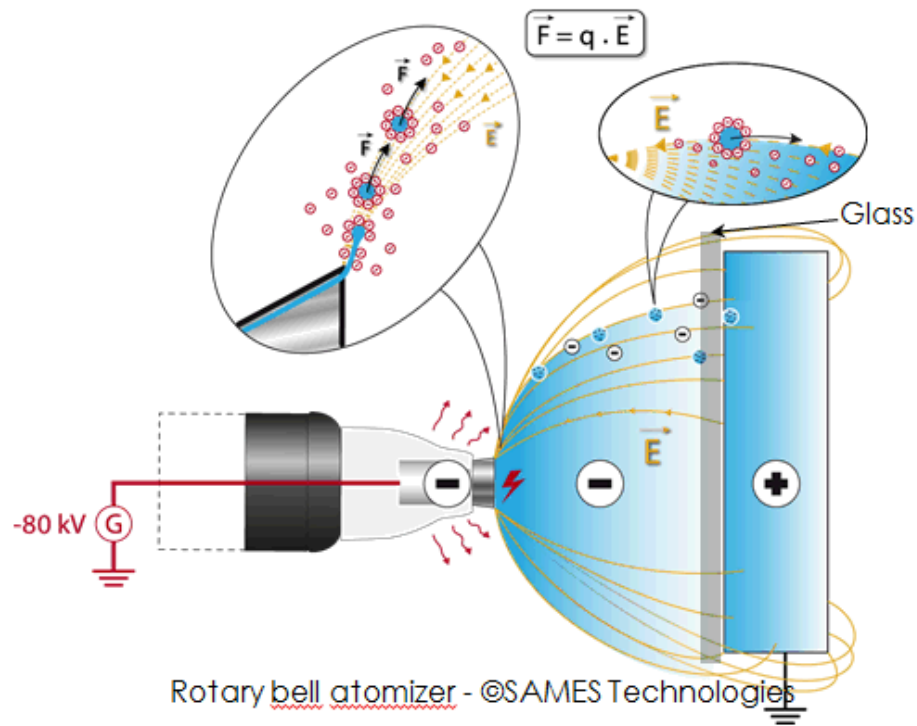
Plastic, Glass
*Cosmetic , TV
frames, cellfones
...*



Electrostatic spraying : how does it work?



- Thanks to electrical forces, the full surface of the part will attract the product

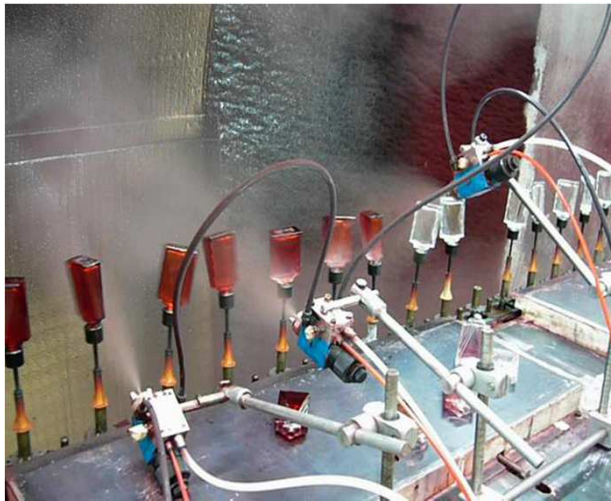


Industrial application examples



● Bottling industry

Before



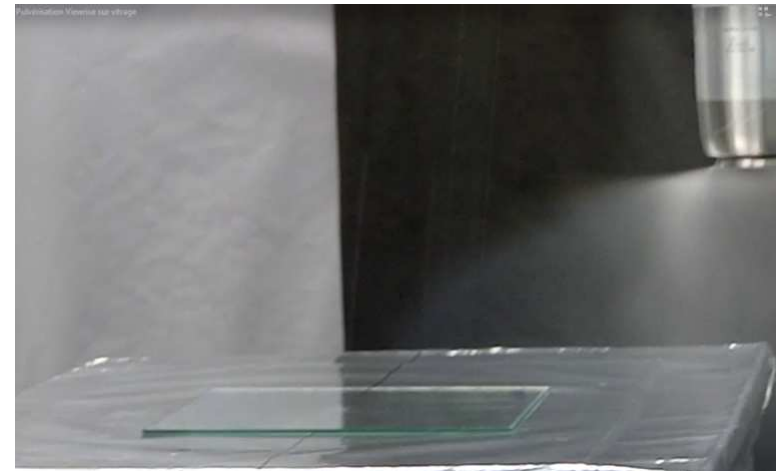
After



What are the benefits?



- High transfer efficiency
 - Less product consumptions (Sol-gel : 10-1000 €/kg)
 - Environmentally friendly
- Coating performance
 - Wrap around effect
 - Homogeneous spray density
- Process Optimization
 - High productivity lines
 - Process speed about 1 m/s
 - Important thickness ranges 50 – 800 cc/min
 - Product changing delay time : 20 seconds
 - Multi-components product management
 - Application on 3D shapes



Sol-gel functionalization of surfaces

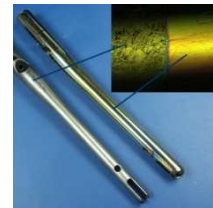
High potential applications in diverse industries



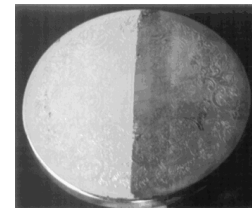
Self-cleaning glass



Electrochromic glass



Medical devices



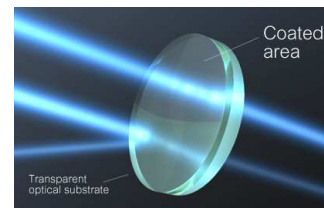
Metals (corrosion-proof...)



Thermal solar components (reflectors, receptor tube)



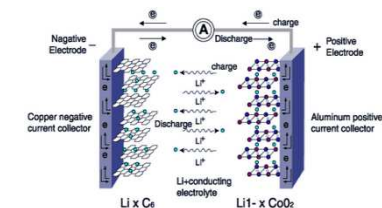
PV solar modules (ARCoatings, anti-soiling...)



Optical components



Bipolar plates



Electrodes



Anti-adhesive coatings



Friction free surfaces



Anti-soiling

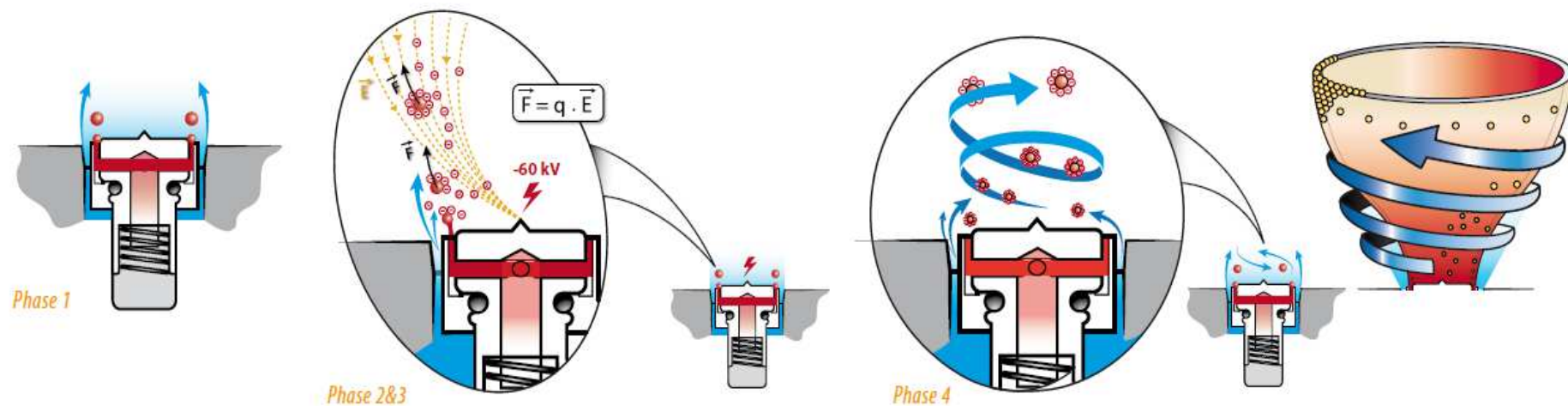


Anti-frost

Sames Lub

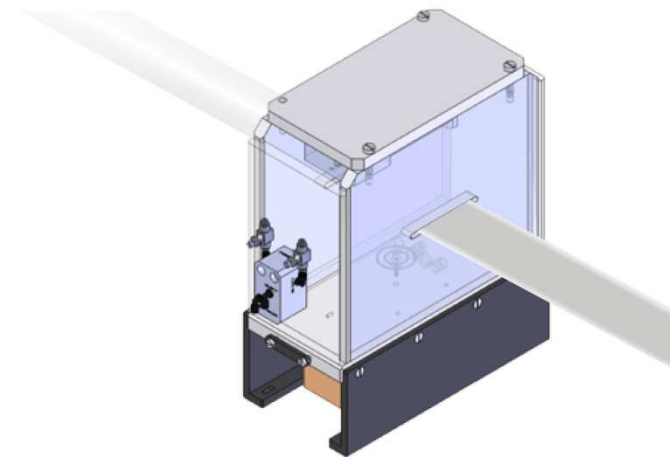
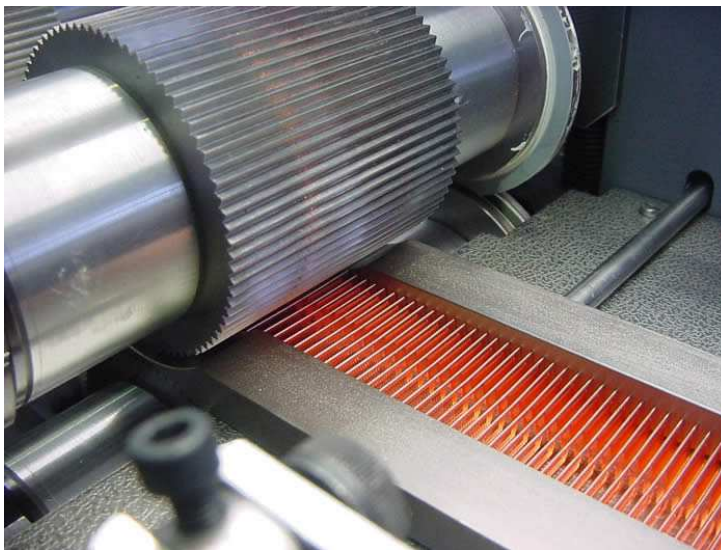
Micro lubrication electrospaying

- High transfer efficiency (>98%)
- Accurate flow control < 1 cc/min
- Minimum space required
- Easy integration / use



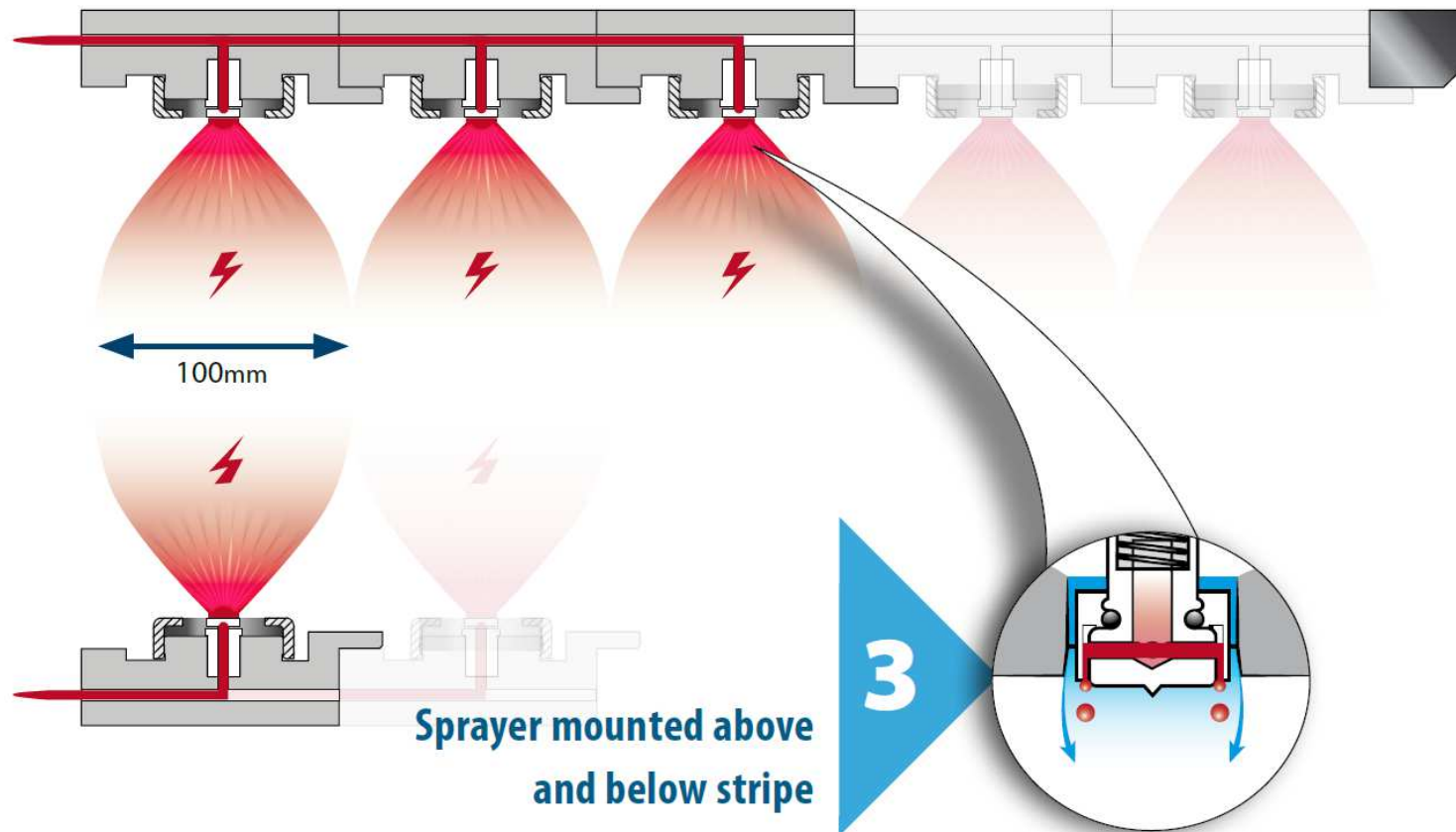
Sames Lub : technical features

Caractéristiques	nominal	mini	maxi
High Voltage (kV)	40 - 50	25	70
Oil flow (cc/min)	2	0.1	25
Target distance (mm)	70	70	120
Impact width (mm)	100	80	150

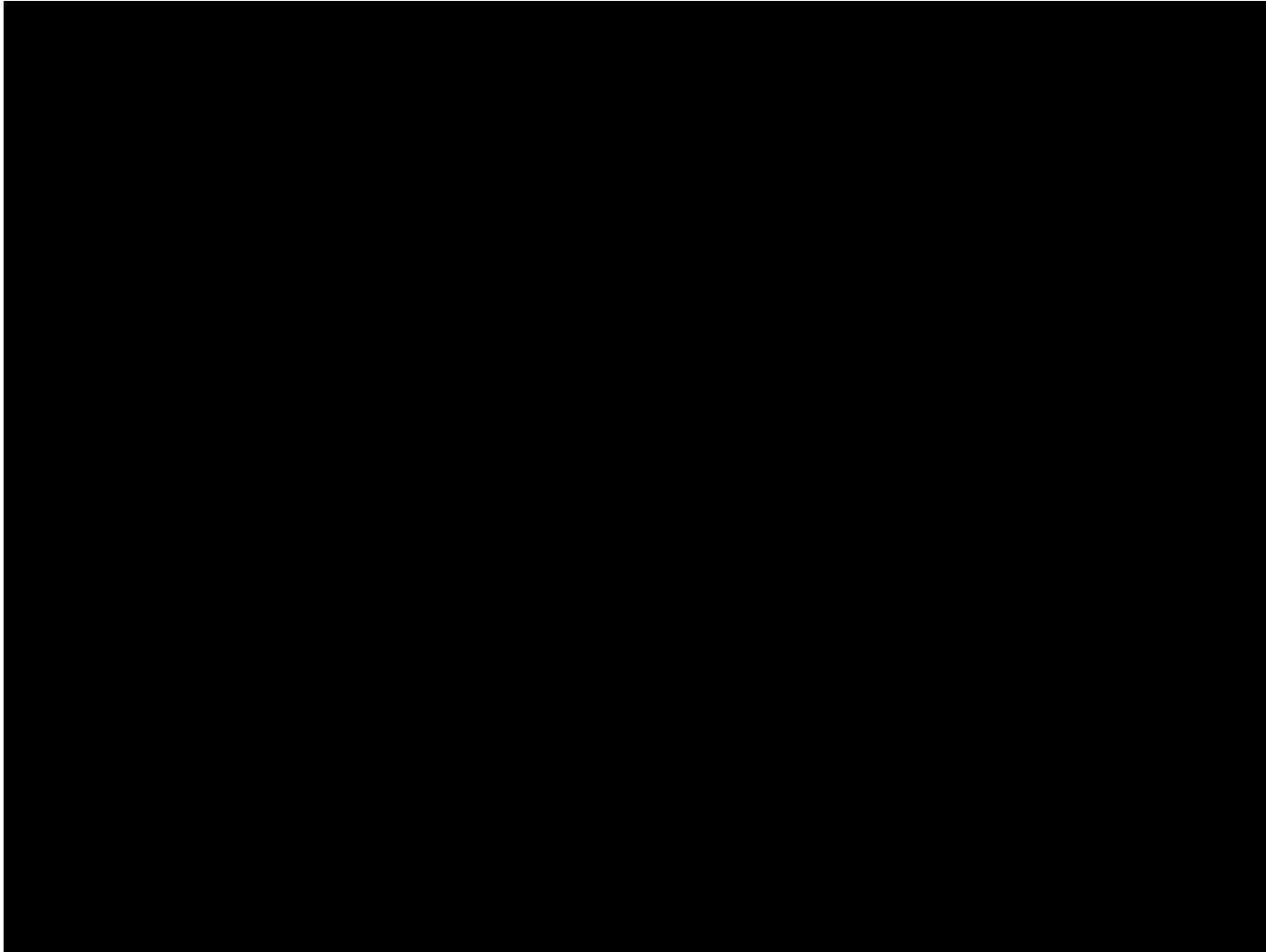


Sames Lub : a modular design

- Suitable for strip width from 100 to 2,000 mm



Comparison: Before & After





Thank you