



Deep Renovation Joint Workshop
Rome, 5th October 2018

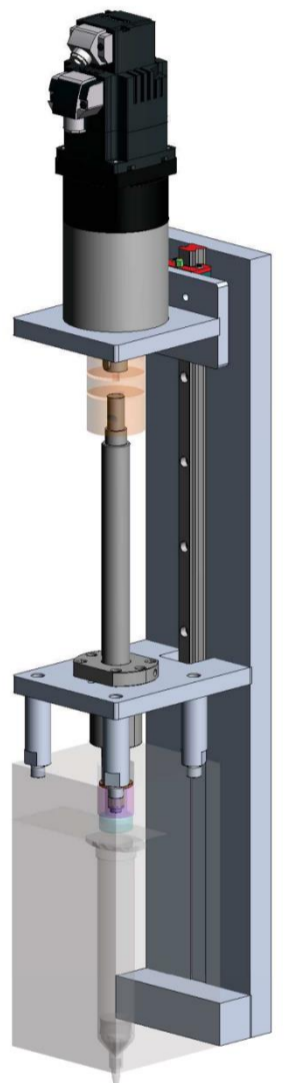
COMPANY NAME
SAES Getters S.p.A.

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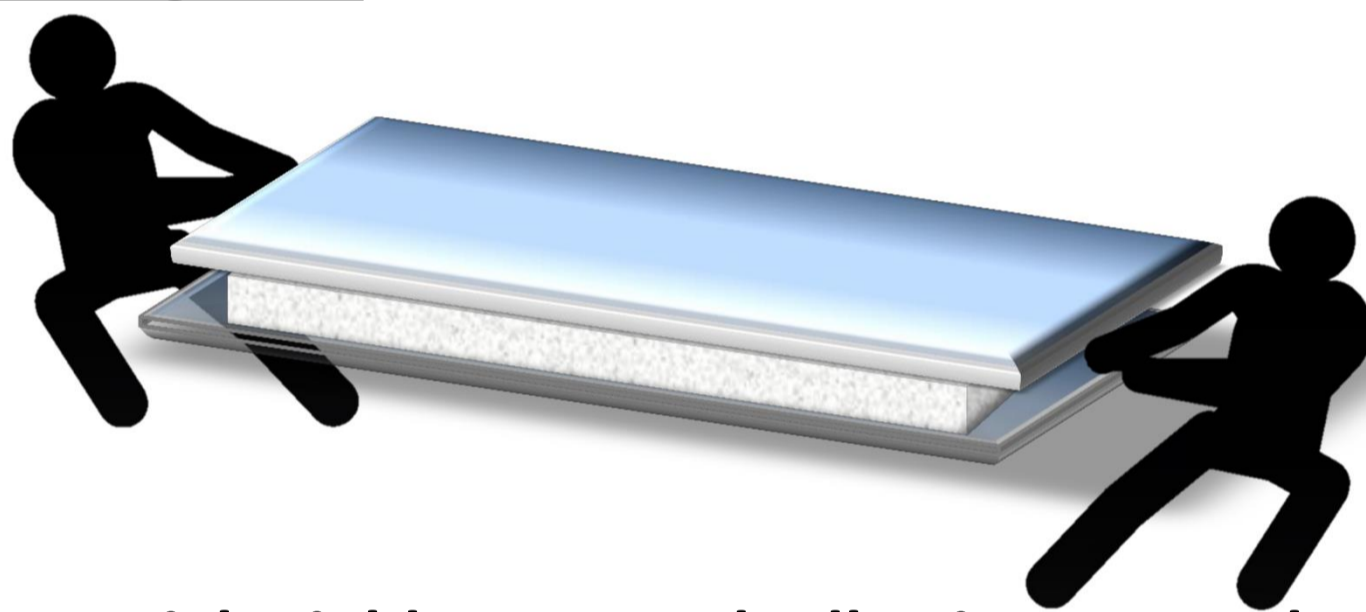
WEBSITE
<https://www.saesgroup.com>

Innovative sealant for EENSULATE vacuum insulated glass

- **Epoxy resin based** sealant for vacuum insulating glass
- **Thermal curing** allows low processing temperature (< 200°C)
- **Mono-component** resin dispensable in the range 60÷100°C
- **Extremely high barrier** performance for Ar, N₂, O₂
- **Active filler** for moisture absorption
- Processing in air

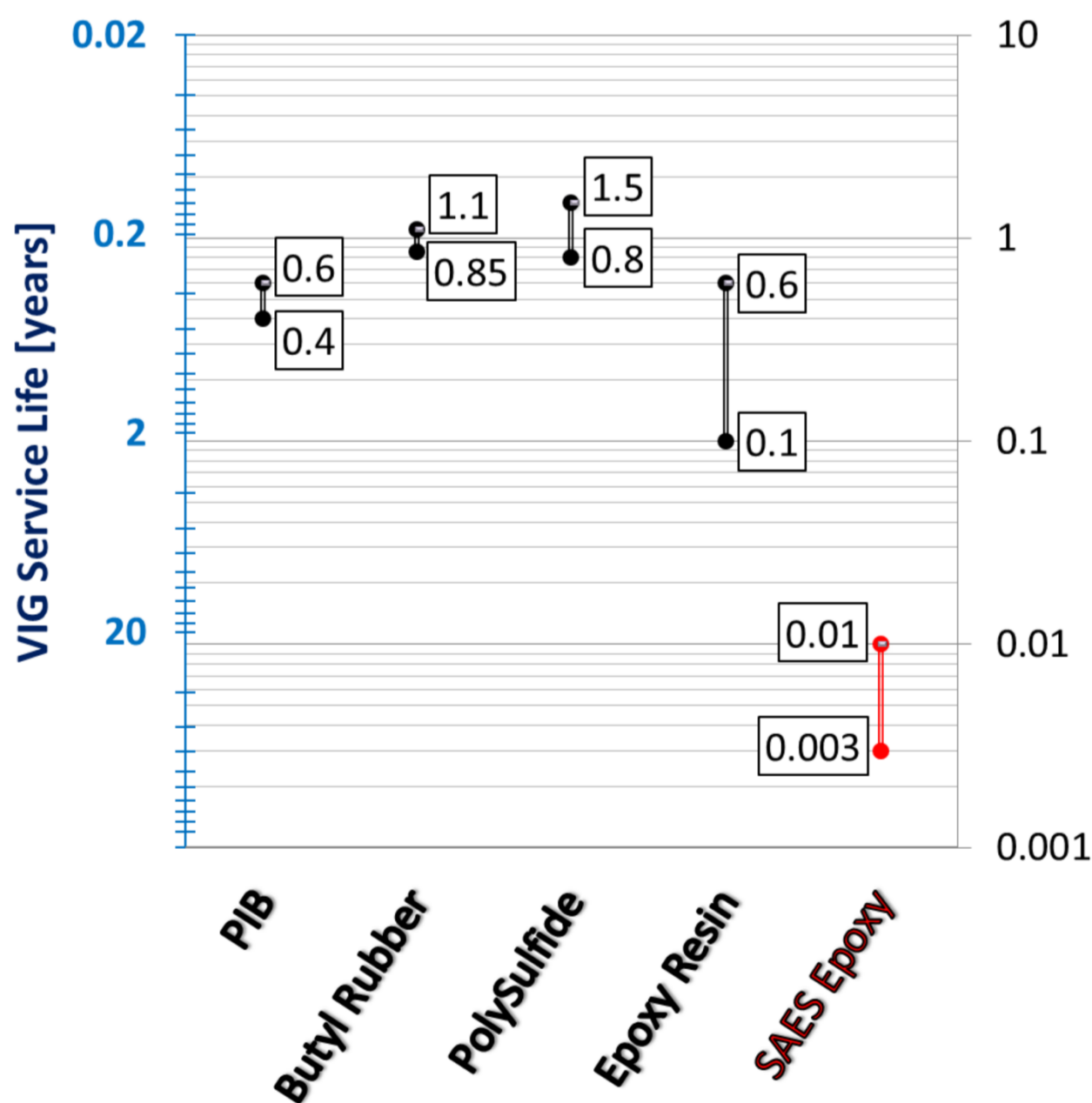


Resin deposition by:
automized system
working in
temperature and with
precise erogation



High yield stress and adhesion strength
(> 7MPa) on glass surfaces

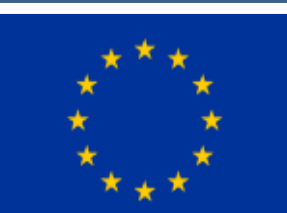
INNOVATION & ADVANTAGES



- Barrier properties till two orders of magnitude better than commercial sealants for insulating glasses
- Moisture barrier thanks to active fillers
- No VIG functional coatings degradation thanks to low processing temperature



Acknowledgments





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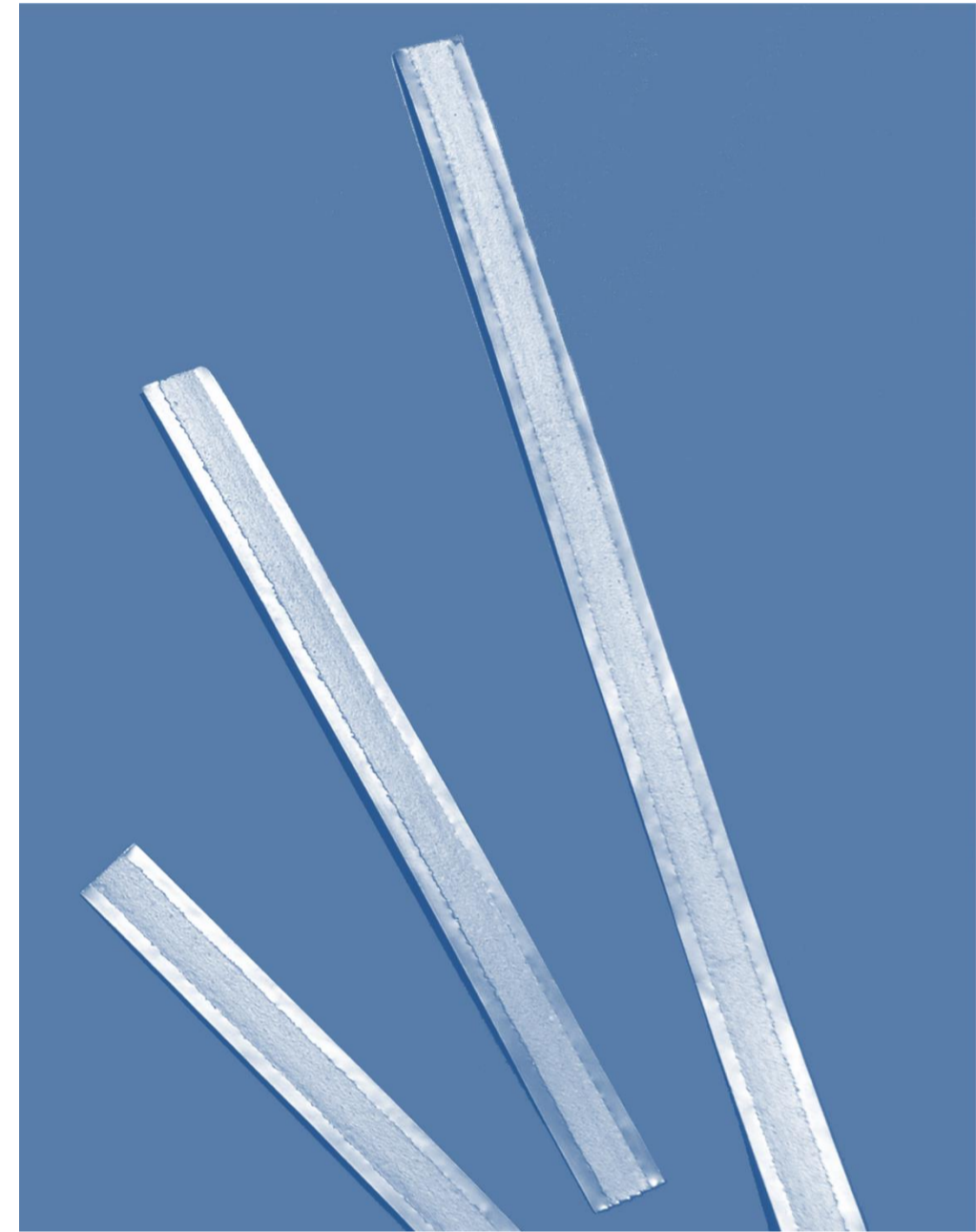
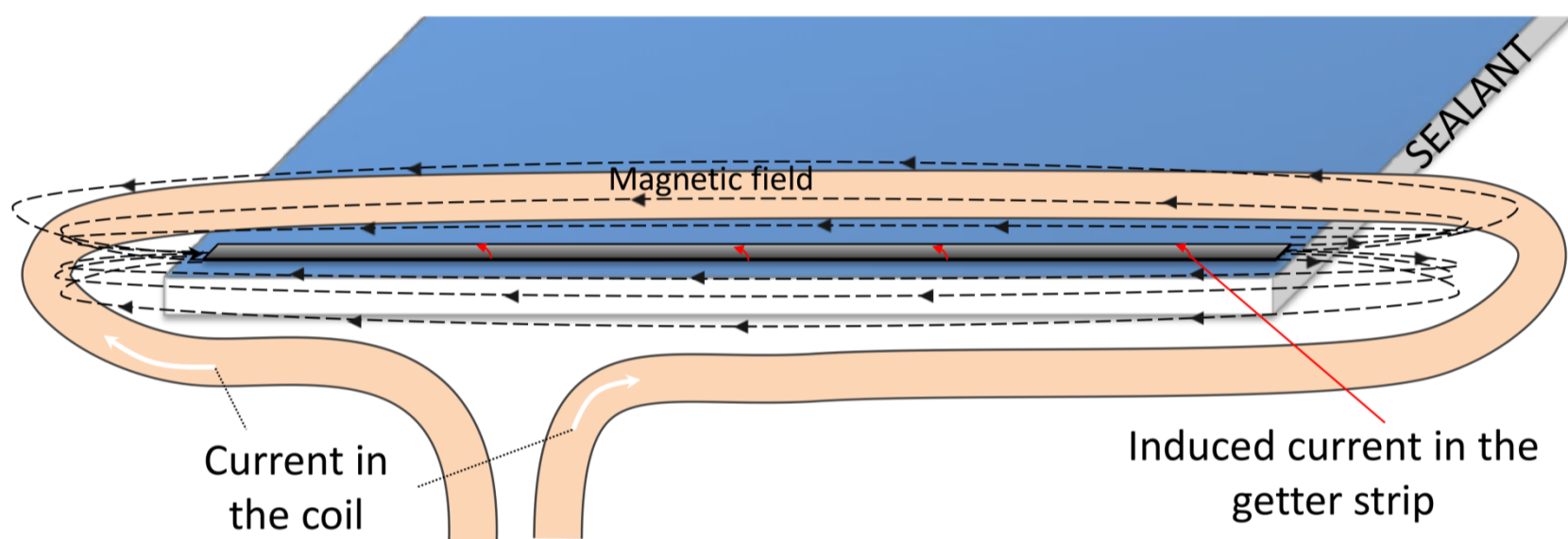
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Innovative getter for EENSULATE vacuum insulated glass

- **Distributed getter based on innovative Zr-based alloy ZAO[®]2** with extremely high N₂ capacity (0.1cc·torr/cm²)
- **Laminated double-side getter strips** 200µm thick and 8mm large
- Easy handling and positioning in air
- **Getter activation process** by RF heating under vacuum pumping



INNOVATION & ADVANTAGES

- Superior getter performance than state of art getter solutions for VIG
- Best configuration in terms of positioning and space hindrance

Getter comparison for VIG

| Getter Type | N ₂ Capacity [cc·torr/gr] | Format | Amount required by VIG |
|--------------------|--------------------------------------|--------------|------------------------|
| Ti-V-Fe-Al-Si | 2 | Pills 6:1mm | 8 |
| Zr-V-Fe-Mn-RE | 1.5 | Pills 6:1mm | 8 |
| ZAO [®] 2 | 4.5 | Strips 200µm | 3÷8m |

Sealant and Getter Configuration in VIG Design



Acknowledgments

