

Advancements in Coil Coating Pretreatment Technologies

*By Mr. Msc. Collin Balemans and Mr. Ganesh AS
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About the speakers



- Collin Balemans
 - Business Unit Manager
 - Msc. Chemistry
 - Global sales coil industry



- Ganesh AS
 - Managing Director
 - Distribution coil products India

Official distributor in India



INDIA PRIVATE LIMITED

" TOGETHER WE MAKE THE DIFFERENCE "

Coil Coating Technologies B.V.

- AD= Advanced Development
 - Innovation is in our DNA!
- 50+ years of experience in metal surface treatment
- Holding AD International
 - Strategic location in Europe
 - ISO 9001, ISO 14001, Responsible Care certified
- Global frontrunner in REACH/ RoHS compliant products
 - Leader in Chromium(VI)-free chemistry
 - Global network, local presence 



Product groups

- **Passivations for galvanizing lines**
- **Passivations for aluminium lines**
- **Thin Organic Coatings (TOC's)**
- **Pretreatments for CCL**
- **PrimeLube / PLT Technology:**
 - **TATA – Coil Coating Technologies**
 - Lubrication and forming
- **Insulation coating / Silicon steel**
- **Cleaners for coil coating processes**



Market challenges for CCL

- Challenges in the market?
 - Chromium free
 - Solvents (VOC's)
 - Formaldehyde
 - UV/EB
 - Higher recycled content
 - EU Green Deal

 - PrimeCoat® Cr(VI)-free pretreatments:
 - REACH and RoHS compliant
 - Formaldehyde and VOC free
 - Designed to be future proof
- **Chemical solutions tailored to your needs!**



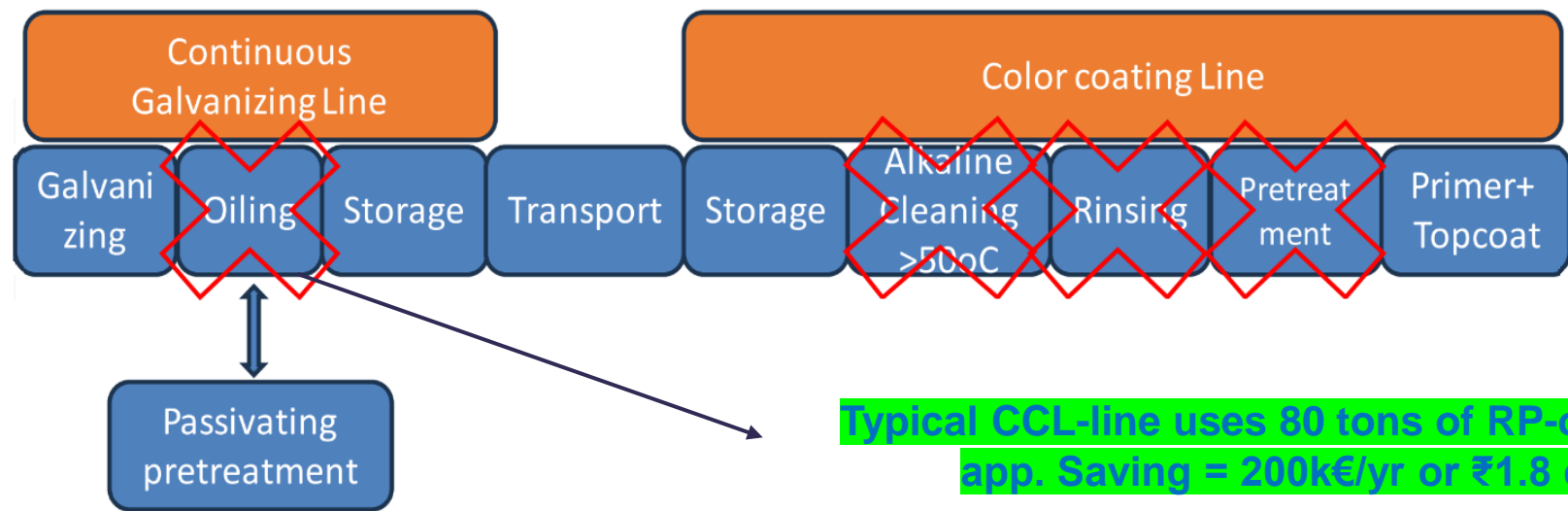
Latest developments



Value proposition and savings TOC

PrimeCoat® Thin Organic Coatings

- Suitable for all Zinc-alloys
- Low PMT (>40 °C) → energy saving
- Direct paintable, no cleaning and pretreatment requirements*
- Reduction of waste
- Multi metal applicable → less diversity in chemical portfolio required, easy warehousing, easy qualification process
- Anti-fingerprint properties



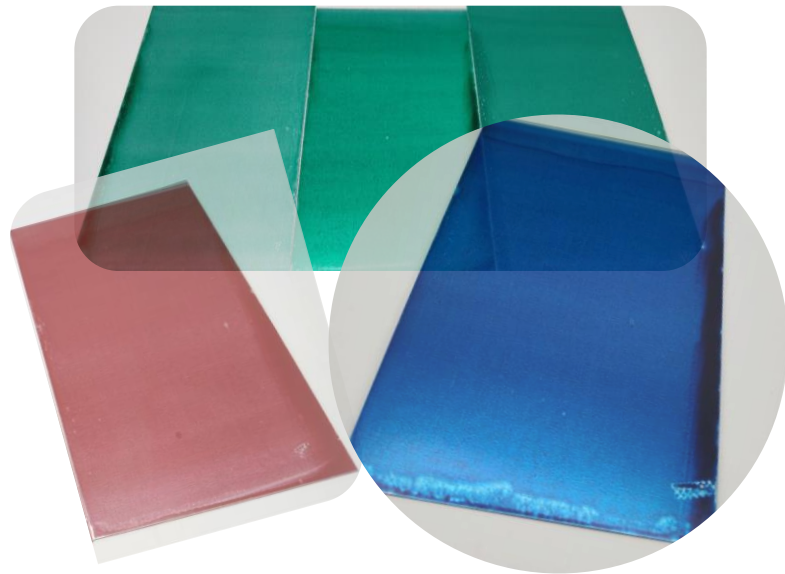
*To be evaluated per paint system

Colored TOC

TOC for Zinc-coated steel and Galvalume

PrimeCoat® can be mixed with different color dispersions:

- Chrome(VI)-free, water-based, REACH/RoHS compliant
- Different Color dispersions are available to obtain transparent to semi transparent colored TOC's
- Flexible preparation of small volume orders (low stocks)
- No removal of color by water
- Application for roofing, low cost color coating alternative, applicable in most CCL lines



UV-condensation cycle resistance (1750 hrs)



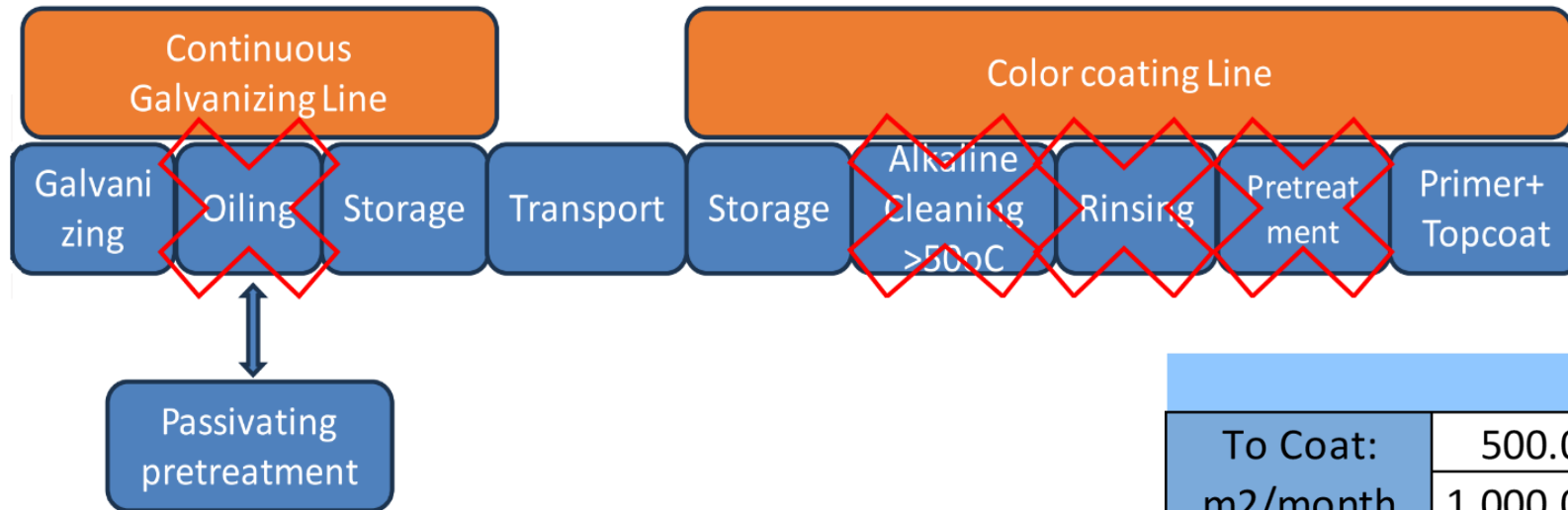
PrimeCoat® with Color



Competitor blue TOC

Insulated sandwich panels

- Sandwich panels, without backcoat, saving
 - Adhesion promotor



		Kg/Month	Cost/ Month
To Coat: m2/month	500.000	15.833	63.333
	1.000.000	31.667	126.667
	2.000.000	63.333	253.333
	3.000.000	95.000	380.000
	4.000.000	126.667	506.667
	5.000.000	158.333	633.333
	6.000.000	190.000	760.000

ZM experience

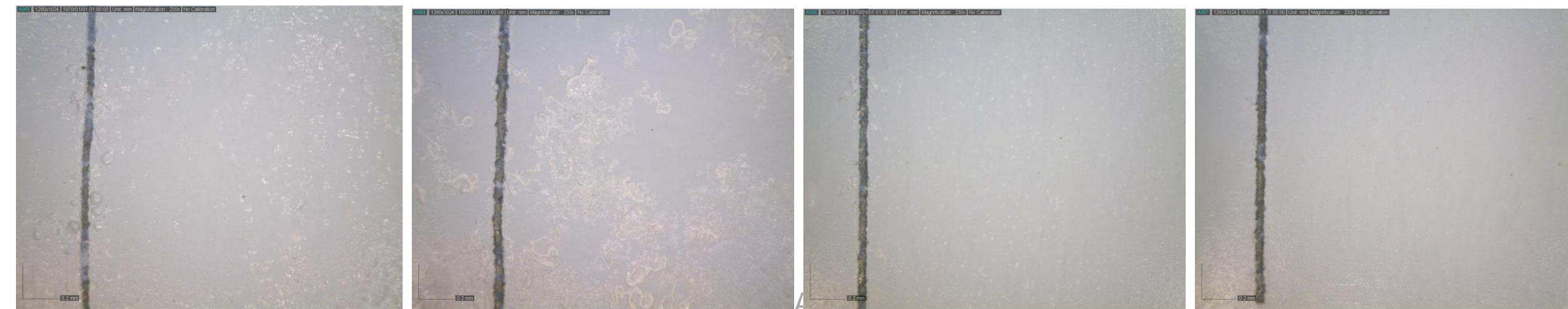
- Aging pre-treated samples stacked before applying color coating for 1 week.
- Color coating applied manually before exposure to continuous humidity for 4 weeks.

No pretreatment

Conventional pretreatment

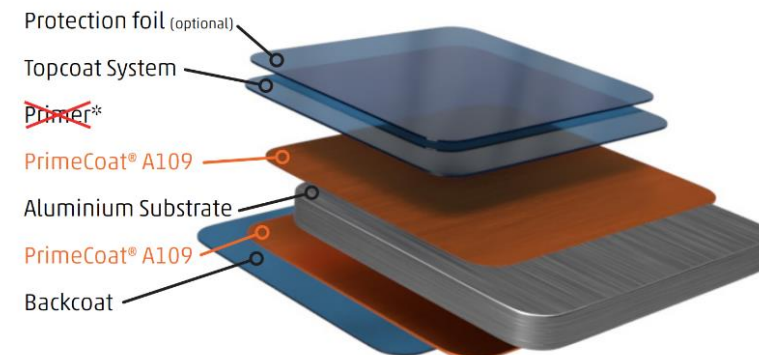
Passivating-pretreatment @60

Passivating-pretreatment @100



Primer replacing technologies for aluminum

- Chrome(VI)-free, waterbased, fluoride free, REACH/RoHS compliant
- PrimeCoat® provides **excellent corrosion resistance and adhesion properties**
- PrimeCoat® **can be used without primer** being needed
- Similar acidic salt spray resistance compared to conventional primer/topcoat systems
- Acidic salt spray resistances from **1000 hours up to 2000 hours** with less than 1 mm corrosion are reached
- Adhesion properties reach perfect adhesion on the T-bend, cross-hatch and impact test
- Example (3000 alloy), AAST, ASTM B117, 1000 hours:



* PrimeCoat® A109 is also effective in a traditional primer/topcoat operation

Partnerships

- Development of products based on specific customer needs:
 - Tailored to specific markets
 - Or (production) challenges
- Development trajectories, contribution to R&D roadmap?
 - Where can AD and Flowchar support?





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