

PIMC - Powder InMould Coating

SMC/BMC powder coating in the pressing tool



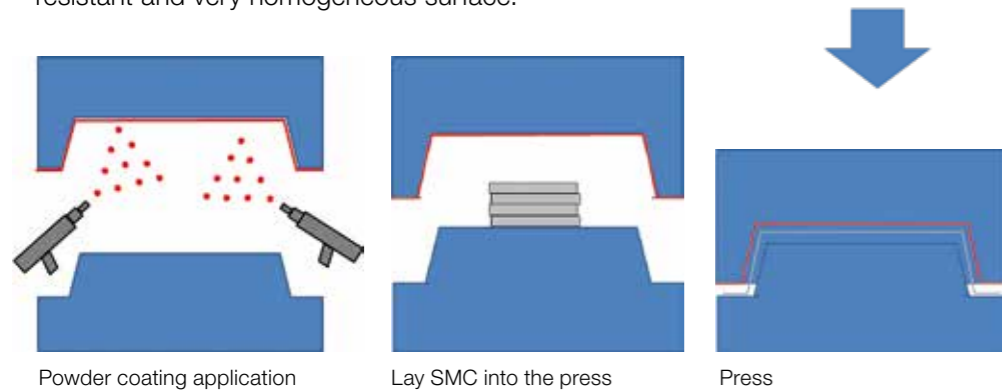
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SMC/BMC powder coating in the pressing tool

By pressing and coating in a single step, costly subsequent coating is no longer necessary. Your added value is increased, the total costs for your customers are decreased and the quality of the SMC/BMC components is improved. The expense for technical retrofitting is low.

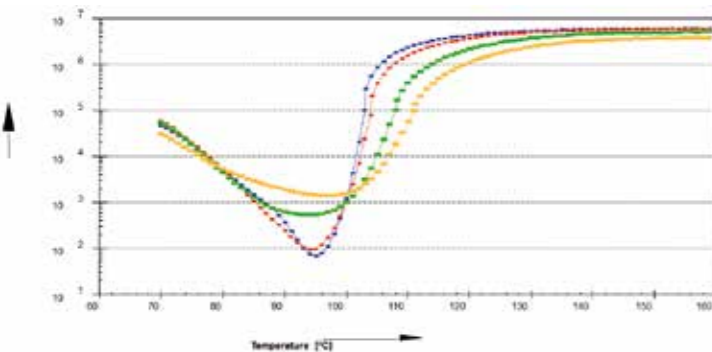
PIMC procedure

The powder coating of SMC/BMC can be easily integrated in the pressing process. The powder coating is sprayed into the pressing mould manually or automatically. The highly reactive coating hardens in a few seconds so the SMC/BMC can be laid in immediately and pressed. The cycle time is only extended by the duration of the powder coating application (depending on the component, approx. 30 sec.). After pressing, the finished, coated component can be demoulded as usual. The typical fibre marking is completely levelled out by the PIMC process, the parts are given a highly resistant and very homogeneous surface.



PIMC powder coating

The powder coatings suitable for PIMC are based on unsaturated polyester resins. The melting behaviour is set in such a way that the coating initially has extremely low viscosity when heat is applied and then gains hardness and resistance very quickly. This ensures optimal wetting and excellent properties of the finished product.



Surface properties

The surfaces created in the PIMC process have excellent chemical and mechanical resistances and are ideally suited for permanent outdoor use:

High surface hardness	✓
Scratch-constancy	✓
Chemical constancy	✓
Moisture barrier	✓
Shade / Gloss	✓
Resistant to light (GSB/Qualicoat)	✓
Stone-chipping resistant	✓
Anti graffiti / Easy to clean	✓
Easy to clean	✓
Flame-retardant	✓

Application example „Electrical junction“

From a purely mechanical aspect, an SMC junction box lasts for at least 25 years. During this time, UV radiation attacks the surface and creates „fibre blooming“, i.e. the surface fibres expand. Not only does this look unattractive, it also harbours a risk of injury, e.g. for playing children.

Up to now only separate wet coating with elaborate filling, grinding and priming work has been available prior to the topcoat layer being applied to prevent this shortcoming and to permanently cover the glass fibre structure.

Many process steps, high rework and failure rates. With the PIMC process, the components have their homogeneous, coated final surface directly after the pressing process – without fibre marking.

No additional separating agent is required for the demoulding. The coating system is environmentally friendly, solvent-free and styrene-free. Additional handling and logistical effort – for the internal coating system, for example, or for an external contract coater – is no longer necessary.



“Blooming” and heavy contamination after several years



Continuous protection of the SMC components due to PIMC coating

Application examples for PIMC-solutions



Kitchen sinks



Shower trays



Facade



Lights



Sports equipment



Vehicle construction



- Räder
Wheels
- Fahrzeugbau
Vehicle construction
- Maschinen- und Apparatebau
Mechanical engineering
- Lohnbeschichter
Job coaters
- Funktionsmöbel und Lagertechnik
Functional furniture and storage technology
- Bau und Sanitär
Construction and sanitary



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