

Mankiewicz

Powerful Design on Track

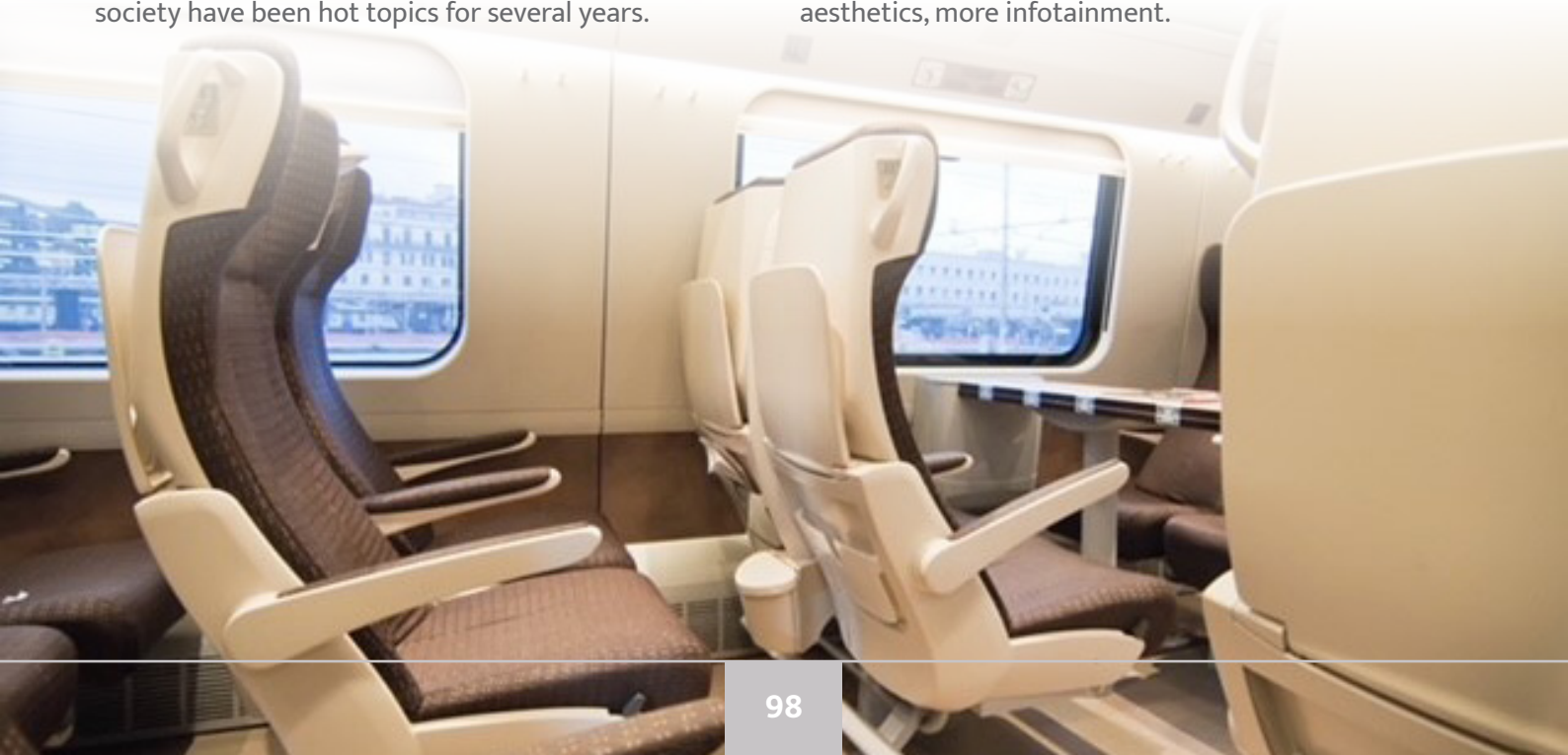
Mankiewicz, the Global Coatings Manufacturer, Puts Its Design Expertise on Rails

Covid has made permanent changes to travel and its effects will reach far into the future. Local and long-distance public transport became much less attractive during the pandemic.

Not only due to the possibility of infection, but also due to changes in the working world with home working and the like. According to the German Federal Statistical Office (**Destatis**), the Covid pandemic in 2021 prompted fewer passengers to use regular bus and rail services than the already reduced count in 2020. The number of passengers fell to the lowest level since recording of them began in 2004. Destatis reported passenger numbers of around 7.9 billion for 2021, which is 4% lower than for 2020 and 34% below the level of pre-crisis 2019. A similar picture is evident in other countries. Nonetheless, passengers are expected to return after the pandemic. At the same time, the mobility revolution and the desirability of a sustainable society have been hot topics for several years.

All are reasons enough to refocus the awareness of potential passengers on public transport, such as trains and buses. In addition to the obvious advantages like shorter travel times and better safety, key inducements for passengers are comfort and ambience. It is important that passengers feel at ease, avoiding any impression they are being carried to their destination in a purely functional means of transport that was solely designed to carry the greatest numbers of passengers.

The interiors of trains play a particularly important role in making the rail experience as pleasant as possible for travellers, whether they are commuters, families or tourists. Interior designing requires creative approaches in terms of colour and design language as well as the technology increasingly expected by passengers. If we take a look at the Deutsche Bahn's model project **IdeenZug** or the **Avelia Horizon** concept of French train maker Alstom, they certainly show where the journey is headed: more comfort, more aesthetics, more infotainment.



Despite all this concern for design, it should not be forgotten that the surfaces in public transport vehicles are exposed to enormous stresses and have to withstand a service life of around 15 years. In addition to statutory requirements, such as fire protection, they have to cope with a lot of mechanical stress, such as the impact and abrasion caused by luggage. Furthermore, they must have a high chemical resistance to aggressive cleaning agents so that, among other things, graffiti can be removed from surfaces without damaging them.

Design Expertise at Mankiewicz

Unlike in other industries, such as automotive, the main focus of coatings for trains is on technical aspects such as fire protection, abrasion resistance and cleanability. This is highly understandable, given the long service life of trains: a timeless design is needed that is as suitable as possible for the public and will still look modern many years from now. That's why, unless you're touring with the Orient Express or Rocky Mountaineer, trains are predominantly characterised by restrained colours and a simple design language. In many trains, the design focuses on 'producing calm and not appearing stressful'. This could change somewhat in the future, as seen in the projects already mentioned and with some other striking designs, particularly those for private operators. While they remain discreet, more unusual designs for mass passenger transportation could gain traction in the near future.

This is where the global paint manufacturer Mankiewicz comes in. Thanks to experience gained in developing coating solutions for a wide range of industries, Mankiewicz products are able to satisfy all the requirements of the rail industry, including robustness and long service life as well as for design and ambience. After all, much of the interior of a railcar is painted: from the seat shell and armrests to panelling, doors, and trim, right through to the buttons and display holders. Coatings therefore play a central design role in the interior of trains, both visually and haptically by way of roughened or particularly smooth surfaces.

Mankiewicz looks back on many years of supplying products to the rail sector and is also able to leverage synergies from other industries where design aspects also play a major role, such as automotive, aviation and yachting. These equally call for meaningful



Timeless design and durability must go hand in hand for high-touch areas

ways to tackle a combination of stringent safety requirements, durability and design needs. To ensure that functionality and design go hand in hand, at its in-house design department Mankiewicz develops colour trends for the world of tomorrow to accompany its technologically innovative coating solutions. For example, the Hamburg-based coatings manufacturer publishes its 'Colours of the Year', picking up on contemporary social moods and influences each year and compiling them into three shades of colour. Naturally, its customers in the rail industry also benefit from this design expertise: *"We make it possible to reproduce simple register colour shades, such as from the RAL or Pantone colour charts, as well as to adapt colour shades so they appear correctly on specific substrates, such as powder-coated or Formica surfaces. We also consider the rough design ideas of customers and develop design proposals for them, which are then further optimised together with the customer. Of course, it is particularly exciting for us when we are allowed to develop a complete design proposal from a blank sheet of paper. That's when the know-how of our design team really comes into its own,"* says Thorben Bahrenburg, Sales Director Rail Coatings at Mankiewicz.

Advantages of Our SelfTex Coatings

The notion that the needs of functionality and design will inevitably conflict has already been disproven time and again in the automotive industry. With its innovative coating products, Mankiewicz is a leading light in this respect. In the rail industry, for example, the coatings manufacturer manages to do this with its ALEXIT® micro-effect coatings. These are SelfTex



With its Colours of the Year, Mankiewicz regularly gives impetus to colour trends

paints that meet the stringent requirements of the rail vehicle industry and are certified by many systems houses (OEMs) and large vehicle operators, as well as being compliant with DBS 918 300 and NF F. The coatings also make numerous design ideas possible, thanks to the almost unlimited range of colour shades and variety of surface finishes such as gloss, metallic, matte and textured. Particularly in the case of metallic paints, the ALEXIT® micro-effect coating scores highly with a textured surface that has a significantly greater brilliance than conventional textured paints.

The Mankiewicz micro-effect paint also has a number of other advantages that have a positive impact on efficiency and quality. Conventionally, textured surfaces are applied in two stages: a smooth coat is applied first and then the texture is speckled into it. Since the ALEXIT® micro-effect coating is self-texturing, it saves a complete process step. Although primarily desired for design reasons, the textured surface offers an added benefit: its matte and textured surface is able to conceal many of the irregularities in the substrate, often eliminating the need for pretreatment.

The coating produces a highly homogeneous structural appearance, which means that greater process reliability can be ensured. This is particularly important when, as is often the case when constructing a rail vehicle, a large number of suppliers from all over the world have to deliver the various components and these are painted under widely different conditions, but all of which have to look identical in terms of their colour and structural characteristics. This is where Mankiewicz's comprehensive consulting approach scores: with the arrangements of local Mankiewicz affiliates on site, in the form of visiting technicians or the specialised training of painters, the component suppliers receive global support to ensure consistent

surface quality. Equally, the testing effort to maintain consistent standards remains high, and many different substrates must be tested under varying conditions. These are all challenges that Mankiewicz is well placed to meet, with its own state-of-the-art technology and training centres worldwide.

Will the Future Be Futuristic?

What will the design-oriented future of rail travel look like? Will it be more colourful and eye-catching, or will we continue to see many more shades of quiet grey, blue, green and burgundy? No massive revolution is likely to occur, but there are certainly some new approaches that could augment the tried-and-tested design language of the rail sector in a sensible and refreshing way.

There is probably scope for a new development known as ShyTech, which is already causing a stir in the automotive sector. With ShyTech an otherwise plain surface can be designed to light up on demand. When switched on, the background lighting reveals areas lasered on to a substrate before it was covered with a layer of paint, often with a mixture of striking patterns, delicate lines and symbols. Such technologies, developed by Mankiewicz together with partners, could conceivably be used for the ceiling lighting in night trains, or for the control panels of future passenger technology, for example.

Wherever the journey leads us, Mankiewicz will stand at the side of manufacturers and operators of the rail industry as their reliable partner to help develop the design ideas of the future.

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MANKIEWICZ
Coating Concepts of the Future





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As an experienced partner, we help you to simplify your coating process and increase efficiency to achieve significant competitive advantages.

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- **Benefit from our cross-industry experience**
in highly demanding markets such as Automotive, Aviation and Yacht Coatings
- **Global availability, local service**
our experts support your projects worldwide to help you fulfill technical requirements and quality standards