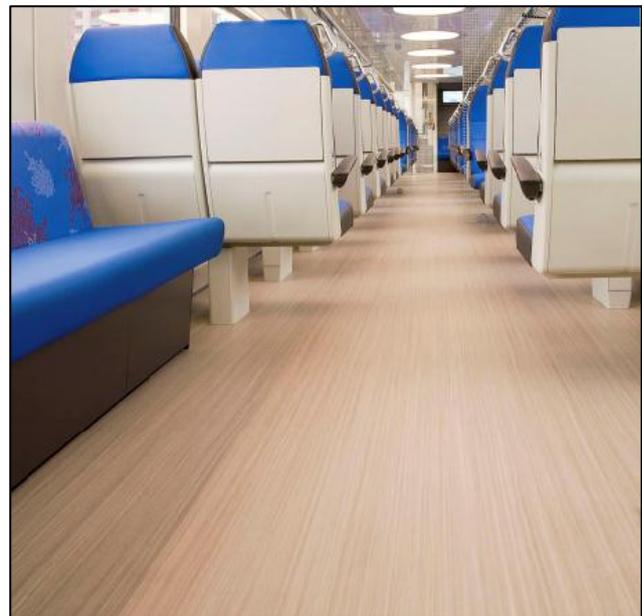
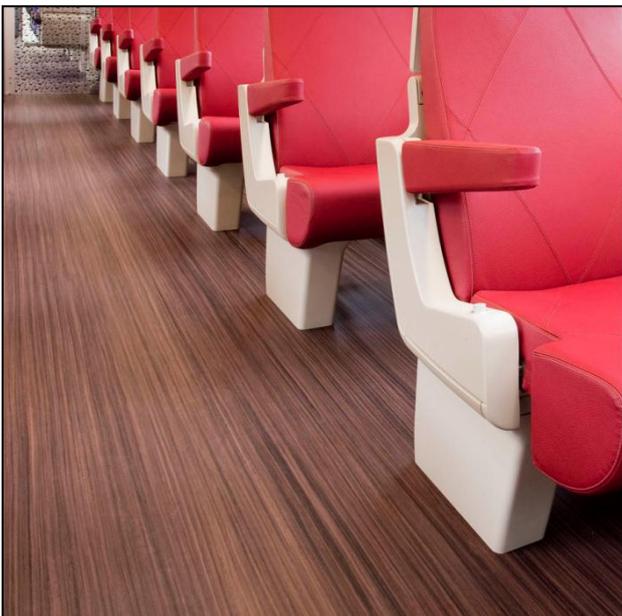


Dutch Railways modernise double-deckers with Marmoleum from Forbo

Dutch Railways (Nederlandse Spoorwegen), the principal passenger railway operator in the Netherlands, is currently undertaking a major fleet modernisation project. 250 intercity double decker trains are being stripped right back to their shells and all interior furnishings, fixtures and fittings are being replaced. Each one of the trains is being fitted with Artoleum Striato FR linoleum flooring, a recent addition to Forbo’s extensive linoleum collection, featuring a ‘modern yet retro’ linear design and natural colourways.



Product safety, quality and durability were critical to the flooring specification, as Dutch Railways train formula manager Brigitte Matheussen explains: “Following Maslow’s hierarchy of needs we started out with *safety*; an absolute must, and other *basic* customer and staff needs that had to be fulfilled. In relation to the flooring, this meant that it had to meet high legal safety requirements, be easy to clean and maintain and be very durable. On average, the lifespan of a train is approximately 30 years and half way through its life we will carry out this kind of full scale modernisation and refurbishment. We were therefore looking for flooring with a 15 year lifespan”.

“We then looked to create the ‘satisfiers’ that make travelling with Dutch railways enjoyable for customers and staff alike. Appearance and ambience in a train are very important to us. As in any other type of interior the floor is a critical area and the choice of floor coverings forms the basis for your entire design scheme. The new Artoleum Striato FR collection arrived at just the right time for us. It’s completely different from traditional linoleum and it fits precisely into the new concept which we devised for this modernisation programme”.

The rail operator also places a very high priority on the sustainability of the interior design. “Dutch trains predominantly have hard floors, and we have traditionally used a lot of linoleum and in some

rubber flooring in the past,” says Matheussen. “Linoleum is very environmentally friendly, made almost entirely from natural raw materials and we also know that Forbo are striving to make their manufacturing processes as sustainable as possible. Over the years we have become familiar with the quality and the ease of cleaning of their product and know that it is very durable. Now that Forbo have substantially modernised their linoleum designs we have opted to use them as they fit in very well with the contemporary look that we are aiming to achieve.”

To refurbish and upgrade 250 trains is a major project and is being undertaken as a collaborative process between Dutch Railways and industrial design agency Puur|Ruimte, an Eindhoven-based agency which Matheussen says has “become specialised in translating our ideas into a concrete design”.

Marion Rovers from Puur|Ruimte has been working on train carriage designs for Dutch Railways for about 15 years. She says: “For an industrial designer, designing a train is an incredible job. It covers everything to the very last detail. You first start with the rough outline in the brief, based on the wishes and demands of travellers and the staff and come up with two or three concept designs, which will eventually be developed into a final sketch design: rough layouts, colour combinations and product characteristics. We then proceed by sorting out all the individual details. How will we design the chairs? Which fabric, what stitching? This also applies to the ceiling, lighting, luggage racks, walls and floors.

“Where the flooring is concerned, quality and long lasting performance are critical. It’s relatively easy to replace the upholstery of a chair or table, but if something turned out to be wrong with the floor, we would have to redesign and refit the entire interior of the train... an enormously expensive undertaking.”

“We believe we have created a very attractive train for our client,” continues Rovers. “The lower floor is designed as a meeting space. Here the seats are larger. The top floor accommodates people who want to rest and work. It’s a light, quiet and intimate setting, where we have given things a bit of a twist. Take the silk screening on the glass partitions for instance. From a distance it appears classical, but on closer inspection turns out to be a design consisting of chicken legs, moths and Brussels sprouts! Very playful. Just like the art that is displayed in every NS train. It’s important to the operator and it makes their trains unique.”

Stephan Plomp, Forbo’s International Key Account Manager for Transport Flooring, says that the new Artoleum Striato FR range presents an ideal choice for operators looking for a highly sustainable, and attractive floor covering that will perform on all fronts in the most challenging passenger transport environments.

“Marmoleum is a very well established product but we are continuing to innovate,” he says. “We’re clearly innovating in aesthetic terms, and the subtle linear styling and natural colours of Artoleum Striato FR are perfectly suited to the railway carriage environment. In terms of functionality and performance, we have completely reformulated the surface finish to meet the demands of constant heavy traffic use. Topshield 2 has superior durability and improved resistance to scratches and stains, resulting in a floor that will deliver a lasting performance over time.”

“Environmental concerns are increasingly determining the product choices specifiers are making,” Stephan Plomp concludes, “and in Marmoleum and Artoleum we have products that have 97% natural raw material content (72% rapidly renewable) and 43% of the finished floor covering is

recycled material. It's arguably the most sustainable floor covering money can buy. Furthermore we are continuing to innovate and improve the products' environmental credentials all the time by adopting a Life Cycle Assessment approach and striving to reduce our impact on the environment in every way we can."

For more information and high resolution imagery please contact;

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