Customer interview
Siemens Mobility GmbH

"We strive to give our customers what they want before they even know that they want it."

For a project commissioned by Siemens Mobility GmbH, Fraunhofer IPM together with another industrial partner developed a thermoelectrically cooled trolley for use in on-board kitchens on trains. We spoke to Andreas Häußler, Head of the Sanitary Modules and Galley Department at Siemens Mobility, to discover more about the cooling trolley's requirements and the challenges involved in designing it.

What are Siemens Mobility GmbH's main products? How do you make your money?
Andreas Häußler: Siemens Mobility is an independent member of the Siemens Group. We are based in Germany and provide transport solutions and related services around the world. Our core products are rolling stock, rail automation and electrification solutions, software, turnkey rail systems and services, such as railroad depots.

What is your position at Siemens Mobility?
I work in engineering. My small department of 20 people focuses exclusively on developing complete systems in two areas: galleys, which are the on-board kitchens, and sanitary modules. This may sound straightforward, but it's a surprisingly complex task. It's easy to understand how toilet facilities and on-board kitchens work, but fitting them optimally into a railroad car is another matter.

Andreas Häußler is Head of the Sanitary Modules and Galley Department at Siemens Mobility GmbH. His team is responsible for developing on-board kitchens (galleys) and sanitary modules for regional and long-distance trains.

What makes integrating a kitchen into a railroad car so challenging?
The complexity stems from the rail industry itself. Systems need to meet very specific requirements to gain approval. On-board kitchens and toilets are actually very straightforward products, but they still feature a few hidden elements. You could also perhaps say that we do things a bit differently than our competitors. We offer specially developed additional components that we've validated and, in some cases, even invented in our own labs. You won't necessarily find these extra elements elsewhere.

Who decides what innovations your company will develop and bring to the market?
We usually receive a list of overriding requirements from the sales team, but often these don't go into much detail. After all, customers tend to look at the bigger picture. For example, they might say that they want inexpensive, comfortable, hygienic trains. But the idea to develop a self-cooling trolley didn't come from a customer or the sales team. Our department likes to think up and develop innovations like this ourselves. And in this case, we successfully did so in partnership with Fraunhofer IPM. With new ideas like this, we strive to give our customers what they want before they even know that they want it. We thought to ourselves that surely there would be a demand for a cooling trolley. We developed the product together with Fraunhofer IPM as our external R&D partner so that we could benefit from the Institute's expertise in cooling technology.

from: Fraunhofer IPM: Measuring, Monitoring, Optimizing. Annual report 2022/2023, Freiburg i.Br. 2023. pp 20-21

"We try to fulfill our customer's wishes. Sometimes we even present the customer with innovations that they themselves haven't thought of yet, like, for example, the thermoelectrically cooled trolley," says Andreas Häußler.

Siemens Mobility GmbH

As a leader in intelligent transport solutions for more than 175 years, Siemens Mobility GmbH is constantly innovating its portfolio. Its core areas include rolling stock, rail automation and electrification, a comprehensive software portfolio, turnkey systems as well as related services. In fiscal year 2022, which ended on September 30, 2022, Siemens Mobility posted revenue of 9.7 billion euros and had around 38,200 employees worldwide.

Further information is available at: www.siemens.com/mobility

When designing the cooling trolley, did you have requirements that still demanded innovative solutions even given the current level of technology?
Of course. This was due to the need for it to be integrated into a railroad car. By definition, a cooling trolley needs an additional refrigeration system – and this takes up space and requires a source of energy. When installing an active refrigeration system in a trolley, you have two options: Firstly, you could keep the trolley's dimensions the same so that it still fits into the existing infrastructure. But to do this, you would have to reduce the useable space inside the trolley. Or secondly, instead of reducing the useable space, you could set about finding an innovative refrigeration system that is very compact and requires very little energy. And this is exactly what we decided to do. What's more, we also wanted to avoid using standard refrigerants. These three criteria – an innovative refrigerant, compact size and low energy demand – were vital when developing the cooling trolley. And, together, we managed to meet them all!

Finally, what does the future hold for rail travel?

Due to climate change, it's essential that we stop using our cars so much. Despite faster connections, this means we'll be spending more time on trains in the future. We want to make train travel an enjoyable experience. This is the challenge we've set ourselves – and it will require us to continue developing both train technology and all the interior components.

Thank you very much for talking to us, Mr. Häußler!

Andreas Häußler: "The positive feedback from customers at the InnoTrans trade fair showed us that our cooling trolley is an innovation we can sell."

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