

Insulating Glass with RFID Glass as Data Carrier

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Saint-Gobain is about to launch a digital service that enables its customers and their customers to track the glazing units before delivery, on the construction site and after installation.

Each insulating glass unit is equipped with a passive RFID transponder, which is written with an identification number (ID) and can be read with commercial RFID readers. This ID is stored in a database where customers can retrieve information about the product; e.g. glass build-up or coating, but also order and shipping details. The digital service thus becomes the link between the digital twin (the data) and its analog counterpart (the product) - a product-integrated, digital delivery bill!

The database can be accessed via a web browser, an app or directly via an API, so that the information is accessible from anywhere. This way, the customer gets a detailed overview of each project and the status of the corresponding orders. Customers can also edit information themselves, e.g. on the frame or the installation locations to reduce the amount of paper on construction sites. On the other hand, the targeted upload of product data supplied by the digital service into the BIM model enables a quick target/actual comparison of the data (from planning and tendering versus production and delivery). And if an insulating glass is damaged or needs to be repaired after years, it can be scanned and reordered via its ID in the digital service - all data (who has what, where, and when produced) is stored in the database.

Glasses with the ability to store the access to data and the provision of a database linked to the glass units is a missing piece of the puzzle towards the digitalization of the entire construction industry. With this digital service, it is therefore possible for the first time to clearly identify building components for years to come - a self-recognizing description that makes documentation easier for all involved, from architects to general contractors to facility managers.

