



REMODELLING DURING ONGOING OPERATION

Deutsches Museum, Munich

After 120 years, many things could certainly do with a refurbishment. One of the most traditional, largest and most important science and technology museums in the world - the Deutsches Museum in Munich - is no different. A particular challenge: the renovation is taking place while the museum is still open. The first step has been taken: the first part of the building has been renovated and brought up to the latest technical standards. The second phase should be completed by the 125th anniversary of the museum's founding in 2028. There are also some challenges to overcome in terms of fire protection and doors.

The task

It is an ambitious project to renovate a museum with the world's largest collection of technology and natural science with some gigantic exhibits. However, significant fire safety problems made a complete refurbishment unavoidable. The project reached the halfway point in summer 2022 with the realisation of the first construction phase. In addition to the necessary fire safety modifications to the buildings, structural adjustments and the construction of a flood-proof wall around the museum were also required. Numerous large corporations took part in the measures, which were largely financed by the federal and state governments and have been carried out since 2019 under the direction of RKW Architektur+. The fire safety upgrade of the museum also required the installation of numerous new fire doors.



In a public building with a lot of public traffic, fire protection and the associated requirements are extremely important. The Deutsches Museum and the planning team were able to rely on the many years of expertise and experience of Teckentrup and the contractor Dunkel.



The solution

Building in existing structures is a challenge for everyone involved: different existing walls, supplemented by new masonry, reinforced concrete and lightweight construction walls as well as steel structures are presenting also the door planers with a variety of installation situations. Jens Dunkel Glas- und Bauelemente GmbH, a Teckentrup partner with experience in the property business and museum construction, has risen to these challenges. 200 steel doors - mostly in the non-public areas of the building - were installed in the completed construction phase. During the construction phase, project manager Ute Fiedler was repeatedly confronted with special cases, for which she and door manufacturer Teckentrup had to find solutions on site at short notice and provide the architects with expert advice.



With Teckentrup, we have an excellent and reliable partner at our side, who provides us with outstanding support in all aspects of handling such construction projects. This includes help with technical clarification, in particular expert support in planning the execution and innovative problem solving. This extends to reliable cooperation with the logistics department: restricted delivery zones and tightly defined delivery times are always a challenge for the drivers on such tightly scheduled projects.

Ute Fiedler | Project management doors, Jens Dunkel Glas- und Bauelemente GmbH, Burg (Germany).



Another challenge for everyone involved: various exhibits could not be removed from the construction site due to their size, weight or instability. In addition, the museum continued to operate in the neighbouring part of the building during the construction work. In the final phase of the renovation, the exhibits and exhibitions were set up at the same time as the doors and other technical equipment were completed, along with test runs, in order to meet the opening date announced by the client. As the work could only be carried out in conjunction with additional security measures parallel to the museum's operations, the last few months of the renovation were a huge labour-intensive effort. The second half of the general refurbishment in the north-east wing is already underway. The refurbishment is due to be completed in 2028, when the museum will once again be accessible via the central entrance hall from the museum courtyard.



Currently, around 1.5 million visitors a year access the currently open part of the exhibitions via the Cornelius Bridge and a temporary entrance made of reinforced concrete with double-skin profiled glass. Here, too, short-term adjustments to the construction project were necessary: The originally planned 3D-printed plastic façade could not be realised in practice.



The fire-resistant T90-1-FSA „Teckentrup 62“ is part of the fire protection concept in the redesigned exhibition and sanitary areas.

The majority of the 200 fire doors are used in the areas of the museum that are not accessible to the public. Here in the T90-2-FSA „Teckentrup 62“ version, thick rebate, tested in accordance with EN 1634-1 (DIN 4102). The doors are connected to the smoke detection control panel and fitted with a release button. Other versions include panic lock, inactive leaf lock and holding magnets.

TECKENTRUP
DOOR SOLUTIONS

SERVICE EXPERTISE FOR SPECIAL BUILDINGS

Building in existing structures means working in existing structures. Particularly in historic buildings such as the Deutsches Museum in Munich, this resulted in difficult door transport. Narrow spiral staircases, narrow corridors and room-filling exhibits were obstacles that had to be overcome.

This is where Teckentrup's contract service comes in: with this service, building elements are no longer just delivered to an assembly point on the construction site, but directly to the installation site. This relieves specialised fitters of the pure „dragging work“, allowing them to concentrate on the demanding installation. In addition, the time required for day-to-day work is reduced: additional doors can be installed at the same time. This means that fitters can get straight to work instead of losing time transporting doors. This service is particularly worthwhile for large projects and guarantees problem-free deliveries and time savings.



Teckentrup products also provide the necessary escape route and burglar resistance in many other museums around the world, including in the Klimahaus Bremerhaven, the Tate Modern in London and the M+ in Hong Kong.

Photo credits: Photodesign Eblenkamp/Deutsches Museum



Fact sheet

Facts & Figures

Address	Museumsinsel 1 80538 Munich (Germany)
Builder	Deutsches Museum, Munich
Architects	RKW Architektur+, Düsseldorf
Doors Teckentrup	Jens Dunkel Glas- und Bauelemente GmbH, Burg
Teckentrup products	approx. 200 doors, including mainly fire-resistant and fire-proof doors and flaps (T30-1/2-FSA „Teckentrup 62“ and T90-1/2-FSA „Teckentrup 62“)

Modernisation/
refurbishment
Section 1

from 10/2015 to 07/2022 (opening)

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