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# Neue Spinnerei in Wangen:

**Living and working in an industrial monument**

**The Erlangen-Bamberg cotton spinning mill, or ERBA for short, supported numerous production facilities in southern Germany – one of them is the “Neue Spinnerei” (“new spinning mill”) in Wangen. In view of the 2024 state horticultural show, the monument has been renovated and repurposed in recent years. Thanks to the reconstruction of the large-scale industrial glazing with the Janisol Arte 66 window system, it was possible to preserve the building’s distinctive character – yet it still meets today’s energy requirements, without which converting it into a residential and commercial building would be inconceivable.**

The listed “Neue Spinnerei” is located on the former ERBA site in the west side of Wangen in the Allgäu region. The building is part of the “Baumwollspinnerei Wangen” (“Wangen cotton spinning mill”) cultural monument; its refurbishment and conversion into a residential and commercial building will take place in parallel with the revitalisation of the entire factory premises in the run-up to the 2024 state horticultural show. However, the “new” does not refer to the current refurbishment and repair work, but to two buildings from 1900 and 1908, respectively, which expanded the “Alte Spinnerei” (“old spinning mill”) at the time. The “Neue Spinnerei” consists of a two-storey south-facing building from 1900, the adjacent three-storey north-facing building from 1908 and an additional storey from 1957 with which the height of the south-facing building was aligned with the north-facing building. There are only a few years between the building of 1900 and that of 1908, and yet the difference between the two is a quantum leap from an architectural point of view: While the construction dating back 1900 was adapted to the design of the “Alte Spinnerei,” Philipp Jakob Manz, one of the leading industrial architects of his time, introduced a contemporary architectural language to the site with the extension in 1908. This is expressed in the almost full-surface glazing of the facades. This was made possible by the steel frame construction, which was still modern at the time: Not only did it noticeably shorten construction times (which earned Manz the reputation of being a “lightning architect”), but it also made possible the extremely large facade openings, which greatly increased the amount of daylight in the spinning halls.

**Industrial glazing from the time the building was constructed**

The iron lattice windows in the 1908 building, with 42 (6 x 7) panels per window level, are considerably larger than the windows in the 1900 building, which only has 24 (4 x 6) lattice windows. Each opening had a pivot window at the top; every other axle was also equipped with two inner and one outer casement windows as an escape route in the event of a fire. Six of these extraordinarily large box-type windows are recessed on the western and eastern side walls and nine on the northern wall. The 19 iron windows in the building from 1900 also had an inner and an outer window level and were outfitted with fixed glazing; however, only two internal lattice windows were designed as casement windows. The real estate situation and planning left room for a further extension on the south facade, but this was never to happen: The literally “interweaved” corporate history of the Erlangen-Bamberg cotton mill survived wars, economic crises with a scarcity of raw materials and the shortage of labour during the economic miracle. However, the ERBA was unable to stand up to the increasing relocation of the textile industry to low-wage countries – in 1992, the spinning mill and weaving mill ceased operations in Wangen. In 2009, the city of Wangen acquired the ERBA site, including some of the listed buildings. With a view to the 2024 National Garden Festival, it is to be connected to the old town in terms of urban planning, while the individual buildings were sold on for refurbishment.

**Revitalisation of the industrial monument**

The contract for the resale of the “Neue Spinnerei” was awarded to Wilhelm and Wolfgang Forster: As a master metalworker and founder of the Forster Metalltechnik Group, his father Wilhelm contributed the technical expertise for the renovation of the numerous industrial glazing systems. His son Wolfgang took over the organisational management of the construction project, supported by architect Max Wittmann, who previously served as Managing Director of the National Garden Festival 2006 in Marktredwitz. The aim is a mixed use of residential and commercial buildings: the Red Cross office, an eye clinic, a dental practice and a management consultancy are just some of the future users of the buildings. There will also be space for a shared office, a catering business and a total of 23 owner-occupied flats.

“The discussion surrounding the repair of the windows defined the renovation project from the outset,” said building owner Wolfgang Forster. “Based on our experience as a metalworker and our enthusiasm for the project, we absolutely wanted to keep the industrial glazing that characterises the building.” However, the few openable casements were a major obstacle as they prevented natural ventilation and the original box-type windows were virtually impossible to clean. The option of conservation was examined for each individual window, but for energy reasons it was only possible to implement it in very specific areas. For example, in the future gastronomic area of the ground floor, where an insulating glass pane was placed in front of the restored lattice window structure on the inside of the room, or in the stairwell where the energy requirements are lower than in the residential and commercial areas. For all other areas, a contemporary solution was ultimately developed in close consultation with the Monument Authority: a coupled window with a glass partition between the outer and middle insulating glass pane of the triple-glazed structures – a sample window from the Janisol Arte 2.0 steel profile system had ensured the necessary confidence in the decision made. However, more than 100 windows and fixed glazing were ultimately manufactured using the newer Janisol Arte 66 lattice window system with an installation depth of just 66 millimetres.

“The only thing that adds a little more weight to the new windows is the rebate gasket on the casement windows,” explained Wolfgang Forster. “Otherwise, the new windows are actually as slim as the industrial glazing from back then.” The lower part of the windows cannot be opened to prevent people from falling out. It goes without saying that the basket arch of the 120 centimetres- and 170 centimetres-wide glazing, which has a maximum height of 350 centimetres, was also reproduced. In some apartments where the ceilings have been suspended, the area around the windows has been recessed. However, only a few of the apartments are located in the historic parts of 1900 and 1908 buildings. The vast majority of the building was built on the flat roof of the southern building from 1900, after the unimportant addition of floors from 1957 had been partially demolished. On an area measuring 37 x 37 meters, three-sided apartments were built within the existing static structure as a “house-in-a-house” concept: they will be accessed via an open courtyard that ensures natural lighting and ventilation. All of the apartments also have roof terraces in front, which can be opened to the living area via floor-to-ceiling sliding doors made from the ASS 70 HI aluminium system from Schüco. The attractive new-build flats had already been let long before their completion. They, like some of the commercial units, have already been occupied. According to the schedule, the renovation of the “Neue Spinnerei” should be completed by the start of 2022.

It will take some time before the entire site has been fully renovated for the 2024 National Garden Festival. However, it can already be seen that the considerate way in which the existing building structure and the design-defining elements were dealt with has preserved the character of the “Neue Spinnerei”. In this way, it is contributing to the mixed-use district that will characterise the grounds of the 2024 National Garden Festival: The transition from an industrial wasteland to a new district is well under way.

**Project details:**

**Client:** Wilhelm and Wolfgang Forster, Wangen

**Architects:** Grath Architekten, Ravensburg

**Window manufacturer:** Forster Fassadentechnik GmbH, Mitterteich

**Text:** Anne Marie Ring, Munich

**Photos:** Miguel Babo, Freiburg

**Image rights:** Jansen AG, Oberriet, Switzerland

The editorial use of the illustrations is bound to the present project report.

**Captions:**

pic\_01 MB NSW 4741: Renewed industrial glazing in the “Neue Spinnerei” from 1908. The building is part of the “Baumwollspinnerei Wangen” (“Wangen cotton spinning mill”) cultural monument; its refurbishment and conversion into a residential and commercial building will take place in parallel with the revitalisation of the entire factory premises in the run-up to the 2024 state horticultural show. However, the “new” does not refer to the current refurbishment, but to two buildings dating from 1900 and 1908, which were added to the “Alte Spinnerei” (Old Spinning Mill) at the time.

pic\_02;B NSW 4712: “The discussion surrounding the repair of the windows defined the renovation project from the outset,” said building owner and resident Wolfgang Forster. A sample window made from the Janisol Arte steel profile system ensured the necessary confidence in the decision made – even though the industrial glazing was ultimately made using the newer Janisol Arte 66 lattice window system. “The only thing that adds a little more weight to the new windows is the rebate gasket on the casement windows,” explained Wolfgang Forster, “otherwise, the new windows are actually as slim as the industrial glazing from back then.”

pic\_03: In 1900, the “Alte Spinnerei” was expanded to include this factory building, which was already too small in 1908. A staircase and a second building were added.

pic\_04: On the left hand side of the staircase, the comparatively small glazing of the building from 1900, on the right hand side, the glazing of the building from 1908. The new-build flats are in the top left.

pic 05: The option of conservation was examined for each window, but for energy reasons it was only possible to implement it in the stairwell and a few other areas.

pic\_06: For all other areas, a coupled window with a glass partition was developed between the outer and middle insulating glass pane of the triple-glazed structure.

pic\_07: With Janisol Arte 66, the “tilt-and-turn” opening type can be implemented on particularly narrow frames, even in the case of more stringent monument preservation requirements.

pic\_08: Its construction depth of 66 mm (hence the name Janisol Arte 66) allows stronger glass to be installed up to a leaf height of 2300 mm.

**Editorial contacts:**

Jansen AG

Anita Lösch

Industriestrasse 34

CH-9463 Oberriet SG

Tel.: +41 (0)71 763 99 31

Fax: +41 (0)71 763 91 13

E-mail: anita.loesch@jansen.com

Germany:

BAUtext Mediendienst München

Anne Marie Ring

Pernerkreppe 20

DE-81925 Munich

Tel.: +49 (0)89 21 11 12 06

Fax: +49 (0)89 21 11 12 14

E-mail: [a.ring@bautext.de](mailto:a.ring@bautext.de)