



Project Information

Builder-Owner

Kaufmann Holz AG

Location

Reuthe

Completion

1992

Project facts

n.b.ar. 9.700,00 m²

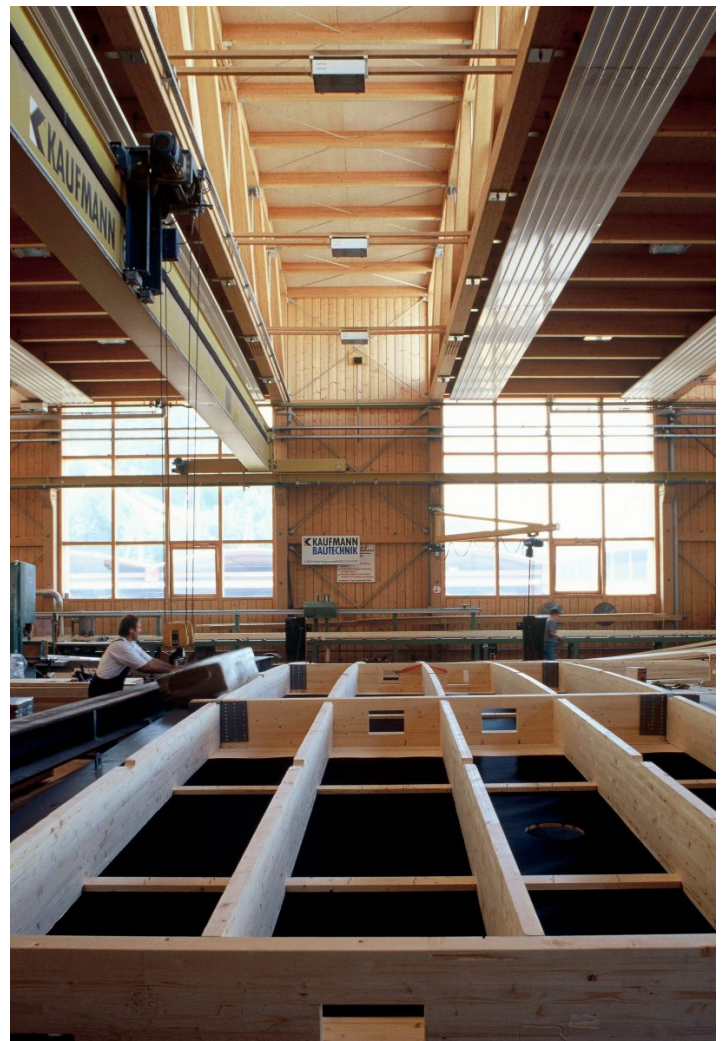
A rapid and effective realisation of a vast timber facility.

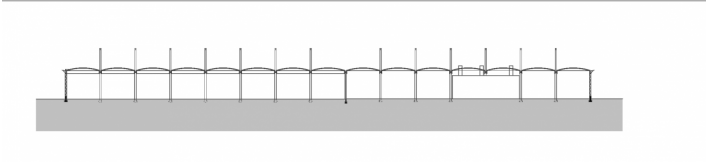
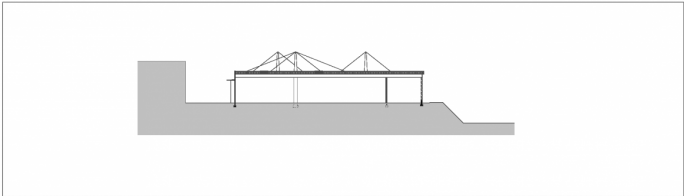
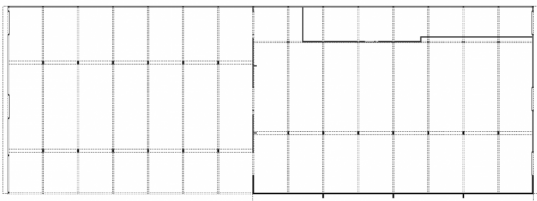
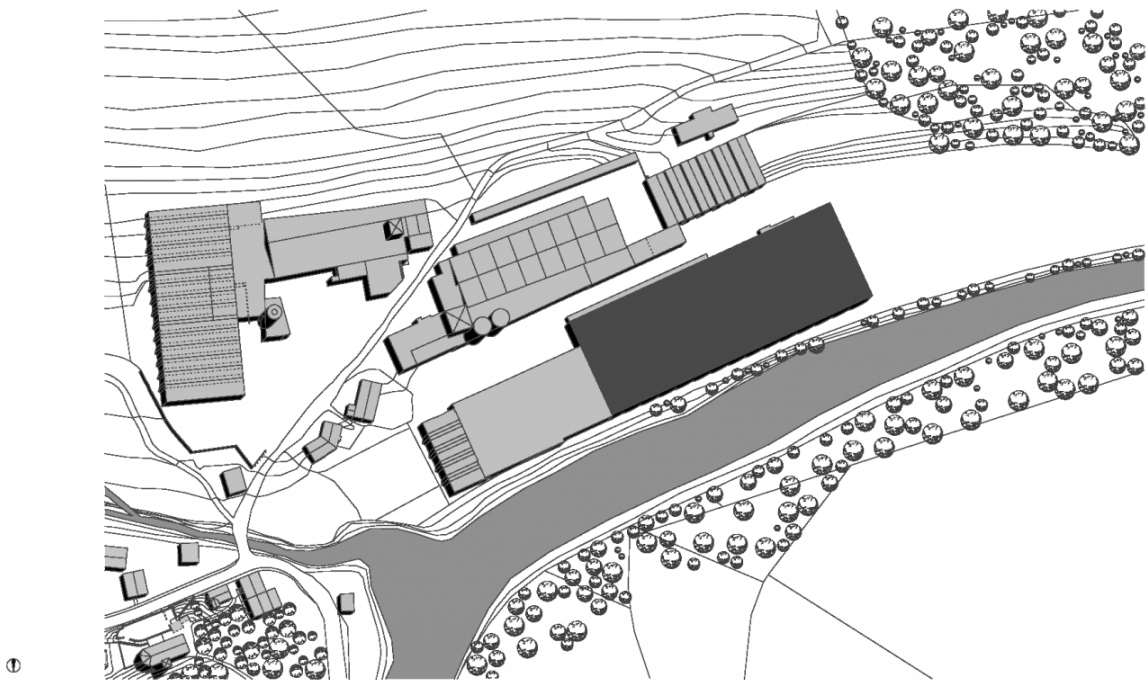
On 19 August 1992 a major fire at Kaufmann Holzbauwerk, in Reuthe, destroyed a 7,000 m² hall with facilities for drying and sorting of timber, as well as 7,000 m³ of dry and processed stock. It was paramount to quickly turn around a new hall and a warehouse for all sorting and drying of timber, for the company to get back to business.

For planning and building permits 4 weeks were scheduled for the construction of 10,000 m², building, an estimated 2 months. Therefore the design of the hall is based on a very easy to assemble and build concept. The new building material Intrallam LSL, which is manufactured in large-sized panels, was the most suitable product for this purpose. The large format allows a high degree of prefabrication and thanks to the high strength qualities this plate could be used not only as a space-enclosing element, but also as a support. During the foundation work, the prefabrication of the roof and wall elements in the timber framed hall was carried out in shifts. After erecting the first two main trusses, they immediately went on to lay the roof elements and weld the sealing foils. This continuous development process of the construction also includes the lengthwise wall made of timber. After seven weeks of construction the hall could be used again in time for Christmas.

The building is divided into two sections with different widths. The pylons consist of 2 HEA profiles each, with diagonals connected to a grid support. All other supports are made of timber, with Parallam, glued laminated timber or a cross-section composed of these materials, depending on the load and constructional considerations.

The two BSH twin carriers act as a continuous beam, while the intermediate Parallam sections compensate for the horizontal pressure component of the bracing and form the substructure for the drainage channel. The secondary carrying system was made of the large-sized Intrallam plates which are bent and connected with curved glued ribs. Together with the steel tie rods, the ribbed panels act like a double hinged arch. The load of 380 kg /m² required the use of 40 mm thick plates and 3 ribs per plate. Two anchor steels were used under tension. The walls were also folded large Intrallam panels and transfer both load bearing weight and wind forces to the main columns of the building. The design of this hall was carried out within a planning team involving engineers, builders and architects. This interdisciplinary process was necessary for planning efficiency.





Project Stakeholders

Structural Engineering

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Dornbirn

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