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Autor: Ernst, Meret / Hornung, René
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FROM GÜMLIGEN TO THE WORLD

Logistic precision: Loading timber elements onto lorries and ships.

Authors: Meret Ernst, René Hornung, photo: Alexander Jaquemet

How does it work? At the Gümligen plant, people calculate and develop, and in Berlin, London or New York, pieces of furniture or partitions are assembled on site. Deeply satisfied, Peter Röthlisberger comments: "it works perfectly!" In addition to close communication with the customer, two things are of utmost importance: The exact dimensions and a carefully planned schedule. Interior decorators depend on absolute precision – down to the last millimetre. You may trust given data, but it is much better to double-check dimensions. The Röthlisberger joiners and carpenters do not simply rely on plans, they actually visit building sites. This is of great advantage in old buildings where walls are often crooked because workmanship was less precise many years ago and structures do not come up to today's standards. Old plans do not reveal everything that comes to light when dismantling and revitalising old buildings. This presents a great challenge to everyone involved, including the architects especially as there are tight deadlines for the renovation and rebuilding of business premises and offices. Precise planning therefore requires flexibility in production, planning and on the building site.

TEMPLATES AND CHECK-UPS Alignments and corners as well as wall and ceiling edges must be precise down to the millimetre to accommodate the fitted units. Few other trades in the building industry, require as much precision as interior design, so interior designers supply the dimensions and, in many cases, templates. Roland Keller, Head of Engineering, at Röthlisberger, explains their approach: "It is either the site manager who co-ordinates the work of different craftsmen and provides drawings and guidelines on the building site, or we work with pre-assembled parts and define the most important parts ourselves." So, as far as windows are concerned, Röthlisberger provides all sub-construction details, which means that the ceiling fixer has to follow Röthlisberger's plans. Sometimes, interior designers define the guidelines for an entire construction project. Naturally, this engineering process requires careful planning at a very early stage, both in the design office and on the building site, even before all the fine details have been entirely clarified.

Tricky sites are subject to additional supervision and inspection, and there are comprehensive checklists for each project. This is particularly important for interior design projects in the USA and the UK where construction is far less precise than in Switzerland. In Germany or in Italy, our joiners and carpenters have hardly any problems.

PRODUCTION IN GÜMLIGEN Based on the plans provided by the architects, the technicians draw up all work preparation documents for the machine production of the individual parts. Quite often, the strict standards applied to the details raise new questions which need to be discussed with the architects.

Many material samples or models are submitted to the client for approval. Mock-ups may cost between one and two per cent of the entire construction costs. The purpose of such 1:1 scale models is to test material, functions, processes, lighting or their effect. Not all mock-ups are as expensive as the one made by Röthlisberger for Ramseier + Associates. The interior designers were planning a series of special "investment centres" for a major Swiss bank. This project called for a model, costing the equivalent of a detached house, to enable the bank staff to prepare for their tasks during a seminar lasting several days. However, following the Twin Towers disaster in New York, the project was dropped and the branch that had already been built and opened in Munich was closed.

The machines in Gümligen do not start until every last detail has been finalised. Joiners and carpenters frequently have to make it clear to the architects that they, too, need sufficient time for planning and production. According to Roland Keller, some architects underestimate the complexity of planning, constructing and producing timber components ready for fitting, especially if the client is based overseas. What is more, delivery times for materials – for instance glass, steel, plastics etc. – need to be taken into account.

Timber components are often assembled in Gümligen down to the very last screw. Then they are dismantled again, numbered, packed and loaded onto lorries or containers ready for shipment by sea or by air. But before the despatch Röthlisberger must know precisely when they can start work on the building site. They must know when a particular part needs to start its journey and when it can be assembled. It is essential to keep to the schedule. The worst scenario is the assembly of a fragile piece of timber furniture at a stage when bricklayers, plasterers and electricians have not finished working in the same room.

Perfect organisation on the site is vital for the interior designer. His products are the most fragile, and as large individual components are often produced the joinery nothing is more important than logistic precision. Does the piece of furniture destined for the 76th floor of a New York office tower fit into the elevator? If it is a tight fit, a scale model may need to be produced to allow a trial run with the elevator transport.

THE PSYCHE OF A BUILDING SITE In the end, every final assembly is an adventure to some extent because no two building sites are identical. Peter Röthlisberger calls it the "psyche of a building site": If the architect and the site manager work together well and if the architect has a clear vision, things work out well. However, the "psyche of a building site" also entails the site manager praising the craftsmen now and again. He needs to make sure that nothing hampers the work unnecessarily. There is nothing worse than chaos and untidiness on a building site.

Whenever projects are complicated, Röthlisberger's experts travel with the material and supervise its assembly on site. Peter Röthlisberger remembers that everything worked fantastically on building sites in nearby Bern, at the Paul Klee Centre and in the "Bundeshaus" (parliament building). However, it is an open secret that things did not go so smoothly on the Novartis Campus in Basel.

>Produced in Gümligen, the timber component is loaded and transported to its destination.