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When placed vertically as façade elements, it is clear that the supporting and insulating layers run through continuously without interruption, as the floors are simply supported on the 3.5 cm thick stock lumber panel. It is different in the case of frame construction with upper and lower chords, where the façade construction is completely interrupted by the floor and ceiling supports, or this can only be prevented by supports made up of protruding steel angles (Z profiles). I should like to use a concrete example to explain this:

For example: a stretch pullover covering sheet tectonics

The Bearth-Candinas House is a slender four-storey residential tower at the end of the village of Sumvitg. Its ground plan is based on a simple rectangle articulated longitudinally by a supporting centre wall. This produces two longitudinal spaces per storey, which are central in terms of usage, as they can be further divided according to need. The building has no cellars, as the mountain slope carries a lot of water. On the ground floor you walk into an open, glazed hall (space for plants in winter, and a play area for children). This contains the actual entrance to the building, from which it is possible to reach the actual living accommodation above. As all timber construction systems have little storage potential for heat or cold and thus tend to follow an insulation concept in order to keep the heating budget low, the window apertures in the rooms face in all façade directions, so that there is no overheating in summer. In winter the heat of the sun from the entrance hall rises through all storeys and is distributed into the living and sleeping areas.

The wall surfaces of the stock lumber panels – to return to our subject – are painted white and lemon-yellow to minimize the impact of the elements in the façade and supporting walls and make the rooms homogeneous. The impression of a “timber building” recedes, and we are left with a sense of a structure that is fragile, almost papery, whose rooms seem as though they are clad in wallpaper. (Seen from close up, a thousand fine, regular hairline cracks cover the walls: a true “cultivation of the crack” that clients

will never again censure as a flaw!) Because the only shingle-maker in Grisons plies his trade in the village it seemed opportune to use shingles for the façade cladding. This clings to the building like a tight stretch pullover, making the structure look homogeneous from the outside as well, and helping us to forget the sheet tectonics. Thus high-tech production and tried-and-tested expertise come seamlessly together in this house.

Away from the wooden model

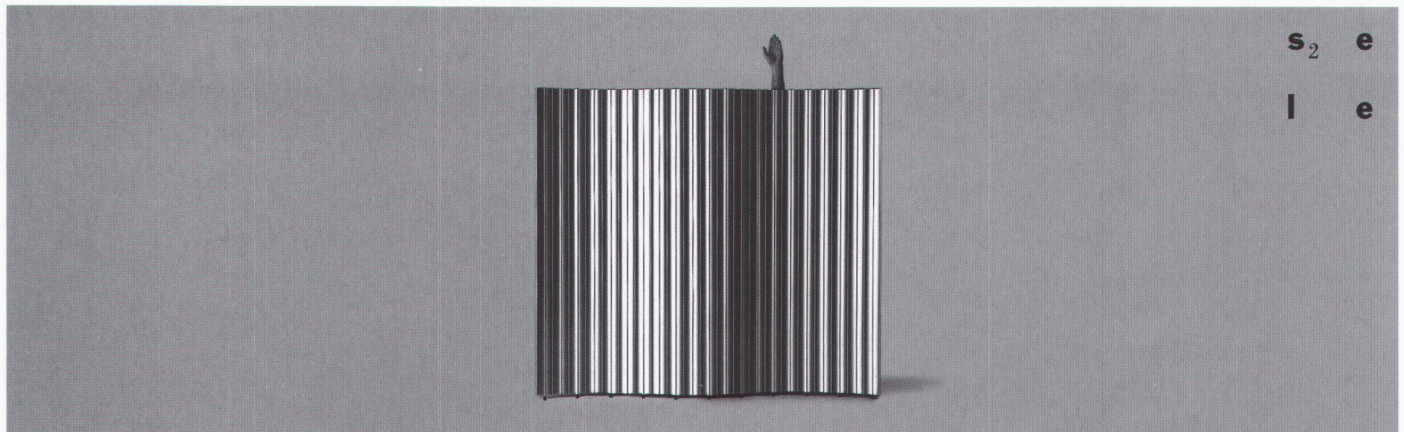
If you pursue the sheet tectonics and the technology of a façade skin without rear ventilation further, you inevitably discover that modern timber building is detaching itself from its “wooden model” in two respects: today numerous kinds of façade planking that are a world away from wood are available, like flat sheeting, glass and plastic panels or even foils, plaster-base and fibre-concrete boards, as well as corrugated panels. The last put their stamp on the Icelandic architecture of Reykjavik, in an amazing fashion. What has happened is that the American-Icelandic “sheep for sheets” trade promotion plan meant that the “sheets” – of corrugated iron in this case – could be used instead of wooden cover-boarding with pointing to make the beading-like profiles on the colourfully painted façades – a fascinating transformation of material, completely in the spirit of *Semper*. Or a more general point: current building in wood hides behind other non-timber materials, which have the advantage of providing large, impervious surfaces with few joints, made of remarkably thin, light materials. Of course people are still playing with the possibility of replacing the load-bearing boarding of the protective planking directly with the latter, to achieve the most compact façade element structure possible. Although this would make the problems of obtrusive elements and a network of joints even more acute, as is all too well known from the massive slab construction approach taken by command economies in the former Eastern bloc states.

I think that the second tendency is even more interesting: the sheet tectonics of current timber building will be read exclusively struc-

turally, and not materially, as is the case with traditional timber building. What has previously been defined as cardboard work, as a technologically driven process involving large panels made up of thin-walled rib-sheets in stock lumber, but also involving so-called thick-laminated sheets, will be seen as “man-made material” – above all when they are neutralized inside and out by coloured paint – and will take up a position similar to homogeneous concrete in massive building, which can occupy all the tectonic elements of a building structurally without ever being able to express itself as a material. (At most, we sense that certain spatial constellations and expanses of space could only have been realized with the aid of the “non-visible concrete”.) In fact the architectural theme of abstraction is enriched through the cardboard-work concept by the phenomenon of “white spacelings” that will create the greatest possible sculptural potential with thin-walled elements (comparable with the work of Absalon in art). On the other hand the simple technique of cutting sheets to size as if with a fret-saw, with apertures sawn out (almost) at random, and the model-like assembly of walls and ceilings, will require a do-it-yourself building method of the kind typical of American Balloon Frame architecture today; it has also been immortalized in building instructions written by the Dutch artist Joep van Lieshout as “high-grade bricolage”.

Architectural professionalism

Timber building as practised today will contain to gain in importance because of the burgeoning interest in questions relating to energy, ecology and building biology. Certainly only compact, multi-functional solutions will be competitive, but skill in synthesizing a whole range of different requirements will not be restricted to developing and mastering technological expertise; such skill will be shown in the first place in intelligent and competent strategies in architectural design, which is the only guarantee of professional architecture, and thus of “durability”.



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