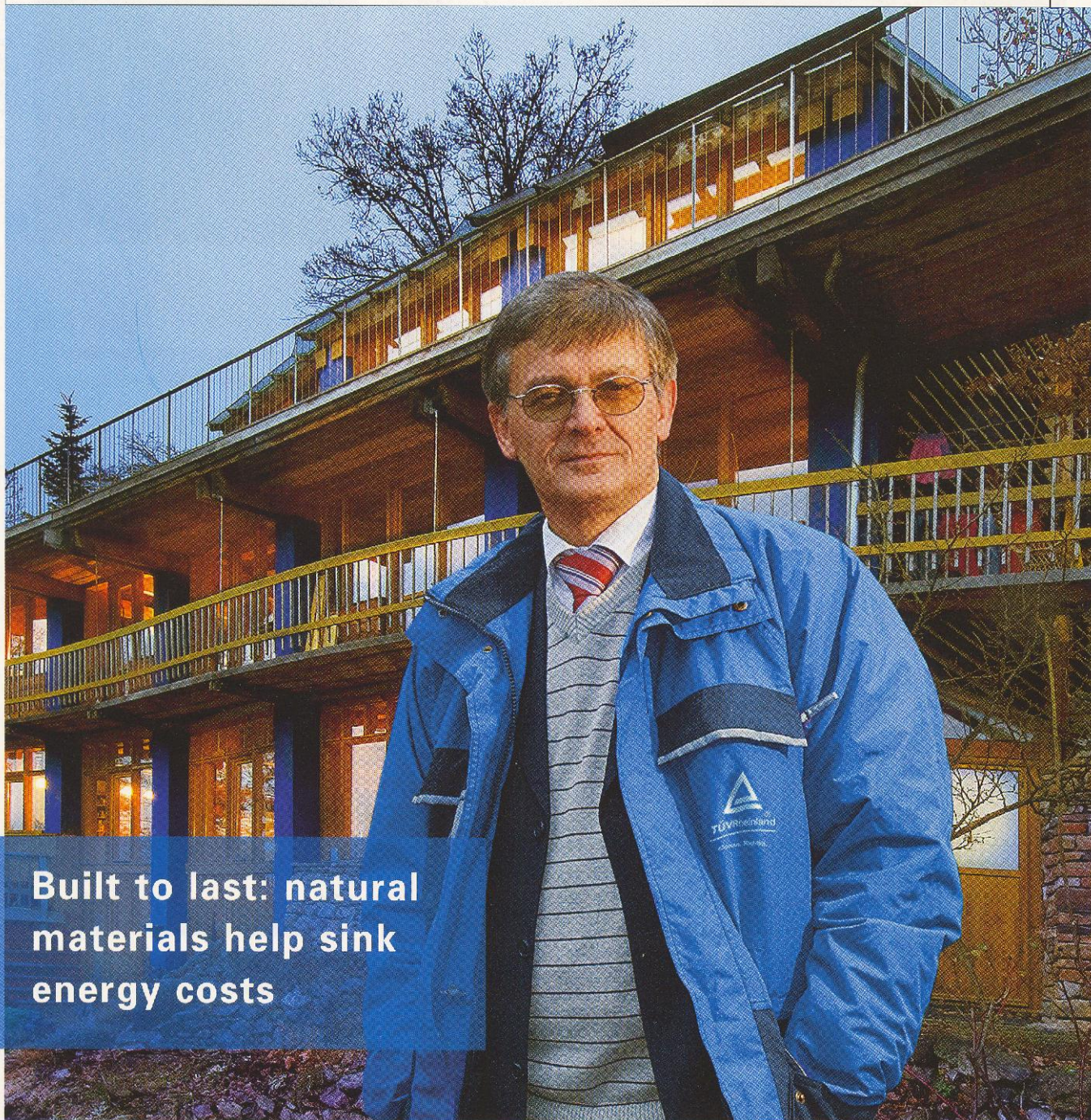


contact

Auszug aus : Contact : Kundenzeitschrift des TÜV- Rheinland

TÜV Rheinland Group Magazine

1 | 08

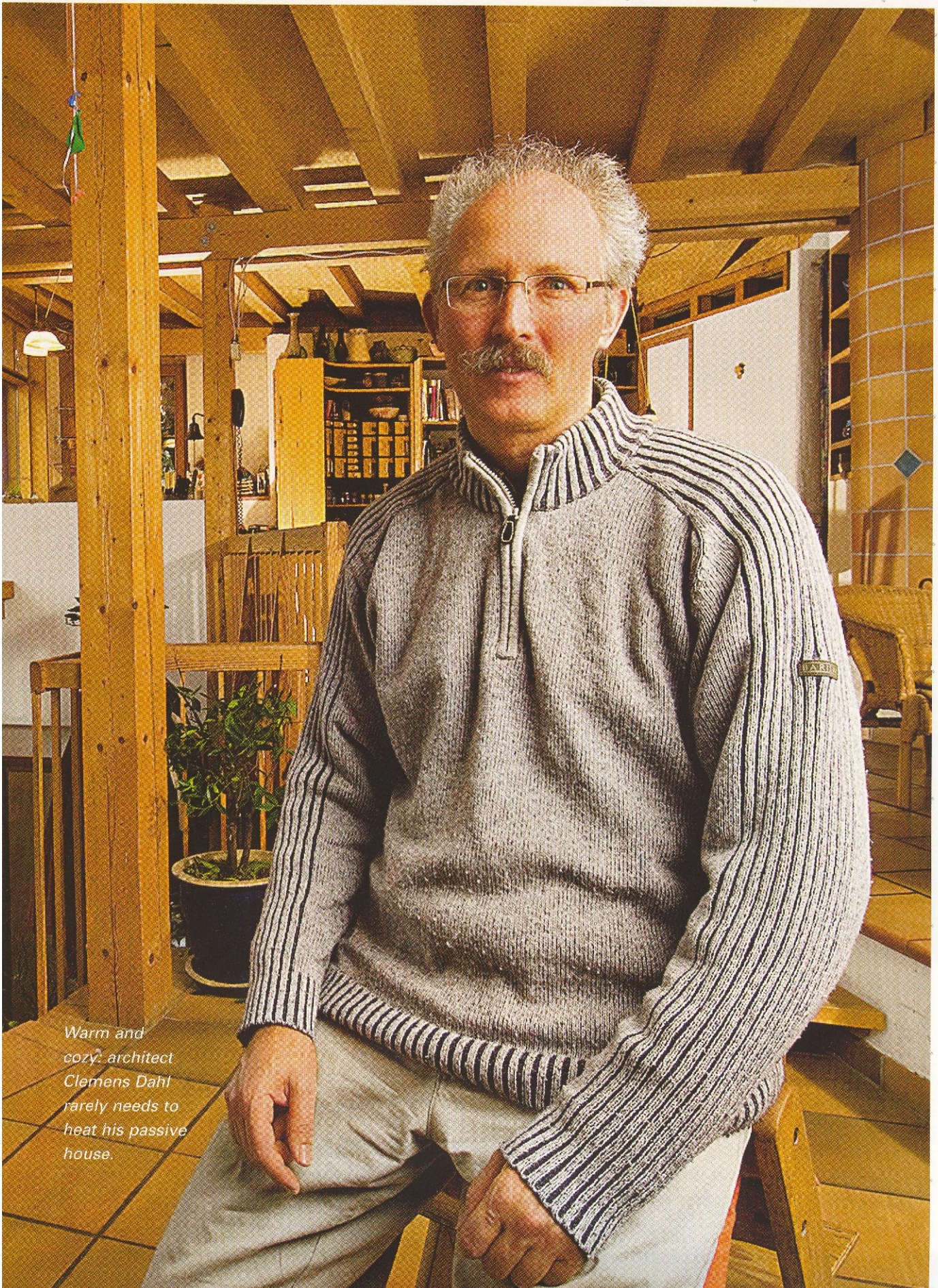


Built to last: natural materials help sink energy costs

Rags to riches: does money really make us happy?
Unusual patents: what exactly is a pole hat?



TÜVRheinland®
Precisely Right.



Warm and cozy: architect Clemens Dahl rarely needs to heat his passive house.

Building for the Future

Saving the environment with subsidies: a government-funded program aims to drastically reduce the energy consumption of our homes

»The December sun's rays barely reach Clemens Dahl's living room. Although the heating is turned off, the architect can walk around his house in the German town of Stephanshausen in a t-shirt without feeling cold. Even a little sunshine is enough to fully heat the spacious wooden home thanks to enormous southern windows and virtually perfect insulation that allows almost no warmth to escape. Clemens Dahl rarely needs to heat the single-family dwelling that he designed himself. He and his family consume much less energy than "conventional" home owners without any reduction in their living standards. Known as "sustainable development", this trend is becoming increasingly popular. More and more homebuilders are opting for low-energy or passive houses that release so little warmth into the atmosphere that additional heating often isn't necessary. "Escalating energy prices make building or purchasing an energy-saving house an economically attractive option for every developer," explains Professor Thomas Lützkendorf, lecturer in economical and ecological housing construction at Karlsruhe

University. On a communal scale, this opens up enormous savings potential. Buildings account for around one-third of Germany's power needs, putting them ahead of the traffic industry when it comes to energy consumption.

Stricter legal requirements

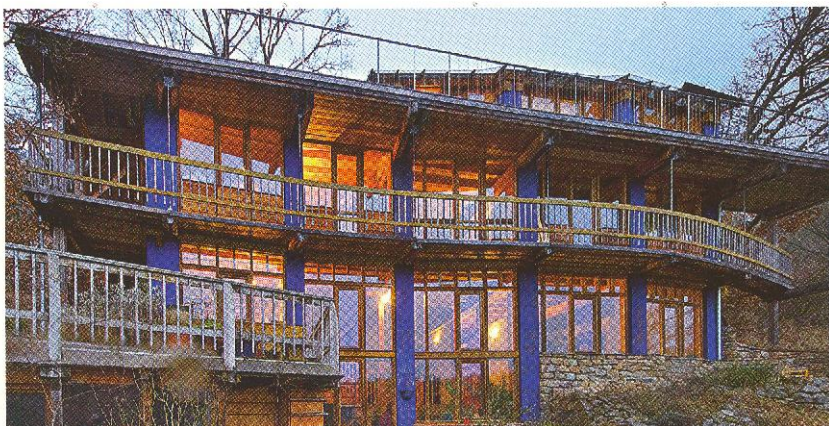
As energy prices soar, the regulations faced by developers and home owners are becoming increasingly tough.

From 1 January 2009 onwards, they will be required to present potential tenants or buyers with a



Tool time: the German government offers subsidies for ecofriendly homeowners.

Economical and elegant: Clemens Dahl's house is extremely energy efficient.





Made to measure: a new quality mark will ensure that passive houses meet sustainability requirements.

certificate documenting the building's energy efficiency.

Owners of properties built before 1965 already have to fulfill this requirement by July 1, 2008. According to the Federal Ministry of Transport, Building and Urban Affairs (BMVBS), sellers and landlords of buildings with a favorable energy balance will benefit greatly on the real estate market. The German government's billion-euro subsidization programs provide a further incentive for energy-efficient building and restoration. Subsidies totaling 5.6 billion euros have been set aside specifically for the energy-efficient redevelopment of existing buildings before 2009. Developers of especially efficient new buildings also benefit from the German KfW – or Reconstruction Loan Corporation's – favorable credit rates. These measures are part of the government's campaign to drastically reduce CO₂ emissions.

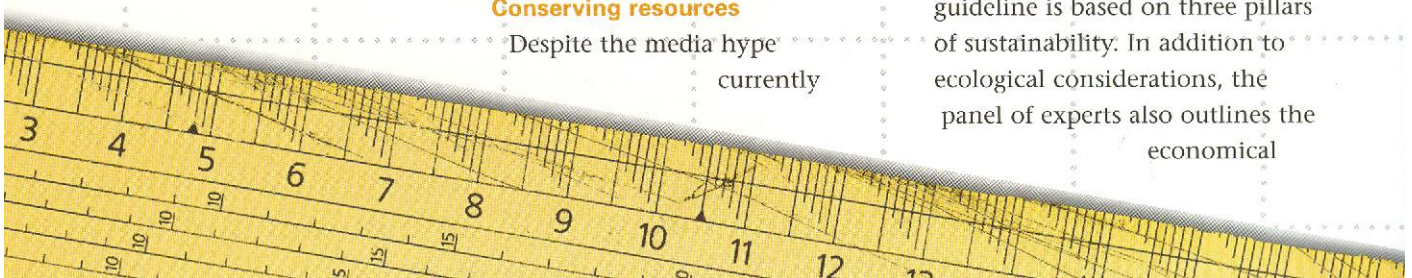
Conserving resources

Despite the media hype currently

surrounding the climate debate, energy efficiency is just one aspect of sustainable development. "Sustainability basically means treating the environment with care and conserving resources," says Dahl. Instead of dynamiting a cliff that was in the way, the architect integrated it into his living room. In hindsight, this turned out to be an advantage: the stone keeps the house pleasantly cool in summer and stores the sun's warmth in winter. Dahl's main building material was wood, which has an outstanding ecological balance since its production requires very little energy.

Three pillars of sustainability

Dahl, who already championed the environment as a high school graduate during his civil service year, finds guidance for his projects in publications such as the sustainable development guideline released by the Federal Ministry of Transport, Building and Urban Affairs in 2001. Written by representatives from the fields of politics, industry and science, the guideline is based on three pillars of sustainability. In addition to ecological considerations, the panel of experts also outlines the economical

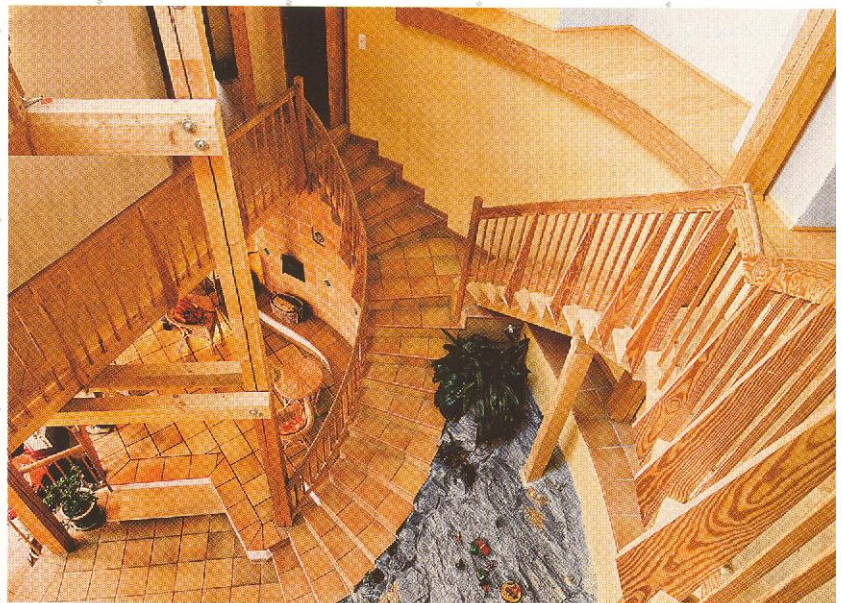


and social aspects of environmentally compatible construction. "A building can only be considered sustainable if it doesn't just meet the ecological requirements but also delivers financial benefits such as low construction, operating or demolition costs," explains Professor Lützkendorf. The social aspects include successfully integrating the building into its surroundings and providing high living standards, since comfort is an important aspect of sustainable living.

Certification on the horizon

As sustainable concepts gain momentum in the construction branch, the call for measurable standards grows stronger. Founded last year, the German Society for Sustainable Construction (DGNB) is already making significant progress towards this goal. In cooperation with the Federal Ministry of Transport, Building and Urban Affairs, the association is developing a quality mark for houses that are especially environmentally friendly, healthy, efficient and economical. The initial building inspections are scheduled for the first half of 2008. TÜV Rheinland is overseeing the process. "As a founding member of the DGNB, we can put our considerable know-how in the field of sustainable deve-

lopment to good use," says Dieter Kaufmann, who is responsible for TÜV Rheinland's construction and property branch. "Our services in the sector range from inspecting environmentally compatible building products and assessing alternative air conditioning concepts to awarding energy certificates." People like Clemens Dahl who own low-energy and passive houses should be pleased with the DGNB certificate – the quality mark shows potential tenants and buyers that the required sustainability standards have been met and is likely to increase their property's value. But Dahl wouldn't sell his house for all the money in the world. His family is much too happy there to ever consider moving. ◀



Stairway to future savings: wooden building materials drastically reduce a house's energy consumption.

Information

Dieter Kaufmann
dieter.kaufmann@de.tuv.com
Phone +49 6131 4654-203

