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year 2005

Special edition — Fair novelties BAU 2005 Nr.1

- TrimoRaster
- ABP
- Iridescent paint
- MultiVario
- Gladio

Trimo

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Trimo

Trimo creates novelties

TrimoRaster panels are a perfect solution to modern minimalism.

MultiVario panels with over 40 possible profile combinations revolutionise façade design.

Gladio panels are optically totally smooth.

Iridescent paint - innovative and unique architectural expression

Decorative foil - graphic decoration on panels

Acoustic panels - high noise absorption

New module widths of façade panels 1200 mm, possibility of adjustment ranging from 600 to 1200 mm.

TrimoDesigner WIN and **ACAD** module - panel design software
TrimoExpert - software for building physics

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Complete solutions

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INFORMA - Editorial
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Introduction

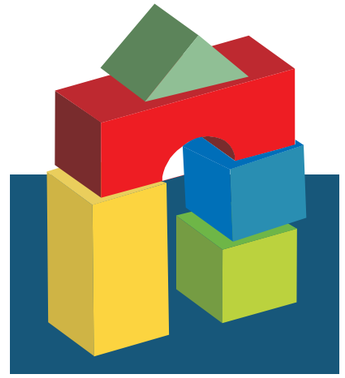
Welcome to this special fair novelties Bau 2005 edition of Informa, which highlights some of Trimo's many exciting new products and services that have helped position the company as one of Europe's leading manufacturers and suppliers of steel construction products.

The construction industry has undergone something of a renaissance in recent years as architects push back the traditional design boundaries by combining colour, texture and form to create the most exciting buildings. However, more significant is the contribution made by construction companies like Trimo that have risen to the challenge of developing the materials and methods to bring these designs to life.

Unique in the construction industry is Trimo's new MultiVario panel, which, with over 40 possible profile combinations, will revolutionise façade design and takes the level of creative possibilities to new heights. In contrast, Trimo's Gladio panels are optically smooth and defect-free – all features that not only engage the onlooker, but present a classic simplicity that can blend seamlessly with the surrounding landscape.

Trimo has also introduced TrimoRaster an innovative modular panel that is a self supporting, insulating, fire-proof façade, yet its external appearance is that of pure seemless luxury that emphasises the architectural form.

Colour is increasingly being used an integral design tool in architectural expression but the use of iridescent paints is both innovative and unique to Trimo. Trimo's innovative process allows new levels of architectural freedom as



BAU 2005

buildings come alive through changing light, viewing angles and by combining with different profiles. The landscape has just got a whole lot more colourful and vibrant.

Product, however, is nothing without quality and consistency and Trimo has an enviable portfolio of major European quality and approval certificates, including a new ABP certificate for roofing panels that is also discussed later in this special Bau edition of Informa.

The future of construction is filled with both challenges and opportunities and only those companies like Trimo that invest in research and development to meet the creative demands of architects, yet also the increasingly important regulatory and environmental issues will succeed. For those that do the creative and design possibilities are endless.

Editorial Board of Informa

Complete solutions

TrimoRaster - Luxurious minimalism

Panel Characteristics:

- Thickness: 80, 100, 120, 150, 200 mm
- Width: 1000 mm
- Length: 1200 ÷ 6500 mm
- External profile: smooth
- Panel core: mineral wool
- Internal profile: V-profile

In the sixties the American architect Robert Venturi divided buildings into a façade and volume. He believed the façade is more complex than the building's volume because it is the interface with the surrounding environment which may be a town, a street or the people passing by. It is an autonomous information board that may or may not relate to the structure of the building and it is this façade that becomes a vehicle of communicationand which changes the building into a symbol.

When skimming through the pages of international architectural journals and researching modern technologies it obvious that present architecture focusses far more with the surface and details than with its structure. This is, of course, excellent, if the said architecture is designed well, precisely and in a refined manner. Buildings, with their smooth surfaces, are similar to cut diamonds and the world of architecture gets in a fever of excitement when showing this glittering luxury. Trimo has also met the architectural and market demands for smooth façades without any visible fixing elements; its new TrimoRaster panel – a premium product – for the construction of the most exclusive and luxurious buildings. In adition to shopping centres and commercial buildings, but also banks, hotels and other high profile architectural constructions will be proudly wrapped in this raster façade panels. TrimoRaster is the perfect solution to modern minimalism that requires simultaneously light, strong and quickly assembled façades. In contrast to similar existing cassette systems where the aesthetic design is the primary function and does not serve as a load-bearing cladding, the TrimoRaster is a self-supporting, insulating and fire-proof façade, where the external appearance remains smooth and luxiruous. Such a façade emphasises the purity of the architectural form.

In spite of their abstract appearance TrimoRaster panels meet numerous fundamental conditions. The façade with an emphasised joint, where the longitudinal and transverse joints are equally wide (2.5 cm), has all the fundamental characteristics of existing Trimo panels, it is available in various sizes and in different colours. Possibilities are also expanded as the panels can be used horizontally and vertically. They can also be used in an alternate manner with bricks. Using the panels imaginatively can help design solid and fine, elegant and spectacular, or smooth and structured architecture, which constantly changes depending on perception. Externally, the façade may convey various messages from the simplest such as: "Look at me! I am a luxirious building," to more complex where the achitecture speaks about its contents through its surface, but its cladding is an active factor when experiencing the wide environment.

Maja Vardjan

ABP

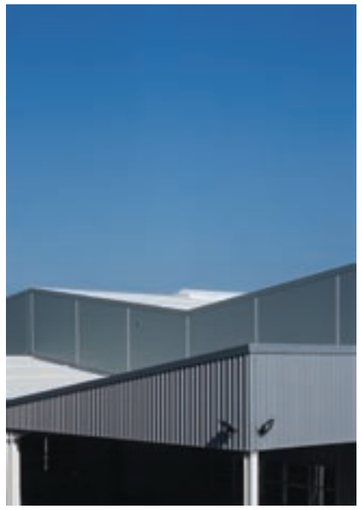
The first sandwich roof system with the general building supervision licence in the fire-resistance classes ranging from F 30 to F 150 in compliance with din 4102-2.

Trimo, one of Europe's leading producers of fire-resistance panels, has acquired all general licences in accordance with the EN standards and several national standards for Trimoterm façade and roof panels.

In compliance with the requirements of the Sample Construction Regulations it is necessary to obtain the general building supervision licence for non-regulated building products for fire resistance. Trimo, as the first producer, has succeeded in obtaining licences for a load-bearing roof structure made of sandwich elements for fire loading of the roof bottom side in compliance with DIN 4102-2.

With regards to fire resistance, the system described represents an innovation whose technical and fire characteristics have been defined by a high number of influential factors.

When considering the whole picture it is practically impossible to check the co-influences of these factors by testing and therefore a new approach has been developed for the construction system stated in co-operation with eminent experts within the IBMB MPA Braunschweig and IS Mainz. This approach includes the theoretical determination of fire-resistance



by calculation of allowable spans or loadings that is logically supported and is proved alternatively by an otherwise limited number of tests.

The theory is based on practical experience of panel behaviour during fire loading of know mineral wool insulation thinkness and static calculation of the load-bearing trapezoid sheet metal in compliance with Eurocode.

The classification of roof panels considers all the main and most influential factors that govern the fire resistance as well as a static system of single-span, double-span and multispan supports, available range of panel thickness of Trimoterm SNV production, various thicknesses of load-bearing trapezoid sheet metal and loadings faced in real buildings.

The confirmation tests conducted in the border areas and in the wider picture enabled by the test infrastructure have acknowledged the correctness of the theoretical starting point.

The result is classification tables that jointly determined fire resistance depending on panel thickness and allowable distance depending on the loading and a static system in the fire project condition.

Thus, the Trimoterm SNV roof achieves fire resistance ranging from F 30 to F 150 for applications when loading ranges from 0.75 to 2.5 kN/m^2 and for allowable spans up to 4.15 meters for single, double and multispan systems. Detailed data is available from Trimo's technical department.

Brane Tisu

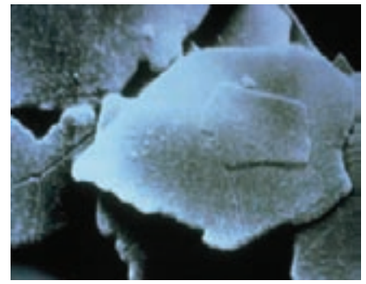
Complete solutions

Iridescent paint - coated panels

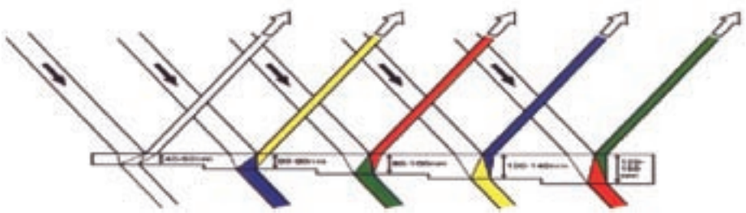
It is a well-know characteristic that surfaces coated with an iridescent paint change colour with respect to the viewing angle and depending on the kind and position of he light source.

Although iridescent paint is used widely on some other products, such as in the car industry where luxury car makes benefit from the application of these colour varnishes, its use within the construction sector on buildings represents a real innovation. Its use should enable architects to use additional expressive possibilities and it is in harmony with modem trends of façade design that not only emphasises the individuality of the solution, but also adds to the dynamic character of a façade shell and blurs the borders between the interior and the exterior.

The innovative use of panels painted with iridescent colours, together with various panel profiles offers an almost infinite number of available optical effects on façades. These may rang



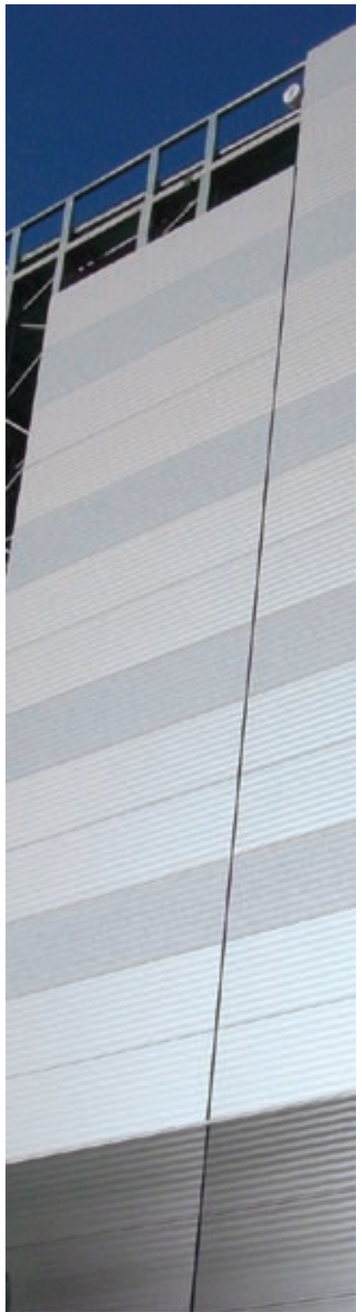
by or with respct to the kind of lighting (e.g. direct sun light, diffused light in cloudy weather or artificial light at night). Additional application of different kinds of iridescent paints together with various profile type can only increase the number of possible expressive solutions and optical effects that can be achieved by the use of this product.



from emphasising vertical or horizontal colour shades, as may be required by high or long buildings to changes in the appearance of a building with respect to the speed of movement of passers-

We at Trimo believe in innovation and are confident that this product presents many interesting and exciting new approaches to design and individualisation of the façade shell. It will also stimulate a whole new era of new and interesting architectural solutions.

Miloš Ebner



Complete solutions

Multi Vario
Trimoterm Façade panels
Go-Create!

Panel Characteristics

- Limitless combinations
- Allows individual creations
- Flexibility of design
- Energy efficient
- Fire Rating of upto 2 hours
- Environmentally Friendly

The complex visual interplay of surfaces and textures is an area many architects see as essential to bringing a building alive. The traditional square box design, fashioned from mighty slabs of panels is being replaced by more flexible surfaces that add an air of individuality whilst allowing the construction to connect with the surrounding environment.

Dynamic elements – the use of graphics, patterns, and textures combine to create a living structure that can exist in harmony with the surroundings yet allowing architectural distinctiveness and free creative expression to shine through.

The 'information society' encourages us all to be different, to think different and to be different in creative expression. This extends to construction as few would wish to see a landscape of dull sameness, where repeating designs and repeating colours elicit only repeating emotions. This culture needs to be replaced by a culture of diversity and is where Trimo, with the completion of its range on Trimoterm panels, can help.

All construction projects start with a blank sheet and are developed individually yet ignore the fact that they will utilise the same materials which itself imposes limits on the extend of design variation, despite the fact that architects want to put their own stamp on the project. No building should, or indeed, needs look the same as any other. Modern technology allows much greater flexibility in production removing the restrictions that by default resulted in mile after mile of repeating panel units of one single profile. Modern production facilities can vary profiles and adjust to the creative demands of architects, designers and ultimately customers.

Experimentation with surfaces and 'deformations' and material composition can now all feature at the architectural planning stages, with the façade interwoven with a variety of textures and patterns that create a field of dynamic expression rhythmically pulsating and alive. Trimo's Multi Vario Trimoterm fire resistant panels allow this creative freedom to be realised and is unique in the construction world. With over 40 possible profile combinations, it looks set to revolutionise façade design.

By changing the profile form, the flat surface converts to a dynamic, living landscape that can present a wide variety of visual expressions. Add colouring, different façade flashings, corners and other details and an almost limitless number of creative possibilities are available.

Multi Vario allows each building to tell a story and shows how architects can go beyond simply designing to breathing life into it.

Andrej Novak

Complete solutions

GLADIO - Smooth is Cool!

Architecture, like all creative projections, is subject to trends and fashion and whilst the boundaries of design are tested ever further, the utilisation of smooth facades is playing an important part.

Smooth, defect-free façades have long been the desire of many architects, as they exude elegance and simplicity, and their clean unblemished appearance captures an almost classic quality of beauty that engages the onlooker without spoiling the natural landscape. Whilst panel manufacturers have appreciated these qualities, the technical and practical solutions of producing a perfectly smooth panel have proved elusive and whilst many have made claim to the achievement, the best critic, the human eye, has said otherwise. Trimo can now answer this critic.

The pursuit of smooth, completely flat surfaces in construction has been one of the most noticeable trends in architecture. Where a construction may utilise a variable surface texture, there is often the desire to create smooth neighbouring breaks and lines in not only a macro level, then certainly in detail. Many panel manufacturers are striving to produce a completely smooth element, but the problem of production is none more evident than in glass panels where the smallest surface imperfection results in a deformed reflection.

But what is 'flat' and how should it be defined?

Visual flatness is subject to conjecture as it is a subjective measure dependent on the individual who will employ a variety of different methodologies and present the results in an equally diverse way. Arguably the best judge is the human eye; under normal daylight conditions the viewer should not be able to observe any surface irregularities. Whilst this may sound simple to achieve, the reality is somewhat more difficult and explains why many manufacturers have avoided producing such a panel, despite a growing market demand.

Trimo, however, has finally come up with a solution – Trimoterm FTV smooth panels. Surprisingly, the solution to their achievement does not result from the deployment of complicated technology or the use of sophisticated materials. Whilst these two components are present in the result, overcoming defects in manufacturing processes and production inconsistencies, the solution was derived from experience gained from many years of panel production.

Panel Characteristics

- Optically totally smooth
- Clear hi-tech image
- Limitless combinations
- Allows individual creations
- Flexibility of design
- Energy efficient
- Fire Rating of up to 2 hours
- Environmentally Friendly

The panels are visually clean, extremely minimalist and therefore very elegant. They can be used for a wide variety of construction purposes, in particular, horizontally, where they are fixed as line elements on edges. The use of prefabricated sharp-edged corner panels is recommended for building corners. A wide range of colours are available and the use of decorative elements that can emphasise the individual appearance and stature of the construction further extends possibilities. Combining smooth panels with decorative facades is also an interesting possibility, allowing numerous design options through the contrasting texture of smooth and three dimensional appearances. Light and shadow also play on the panels adding highlights and tones that further accentuate the individuality of the building.

Smooth panels are also extremely effective creating a clear 'hi-tech' image. It confers a sense of the very best of design and allows a clear departure from the 'industrial' look and defines elegance. This new approach communicates a high degree of aesthetic experiences to observers.

Smooth panels have arrived and offer the very best solution to meet the architectural trends of façade use and will play an ever increasing role for the future of construction.

Miloš Ebner