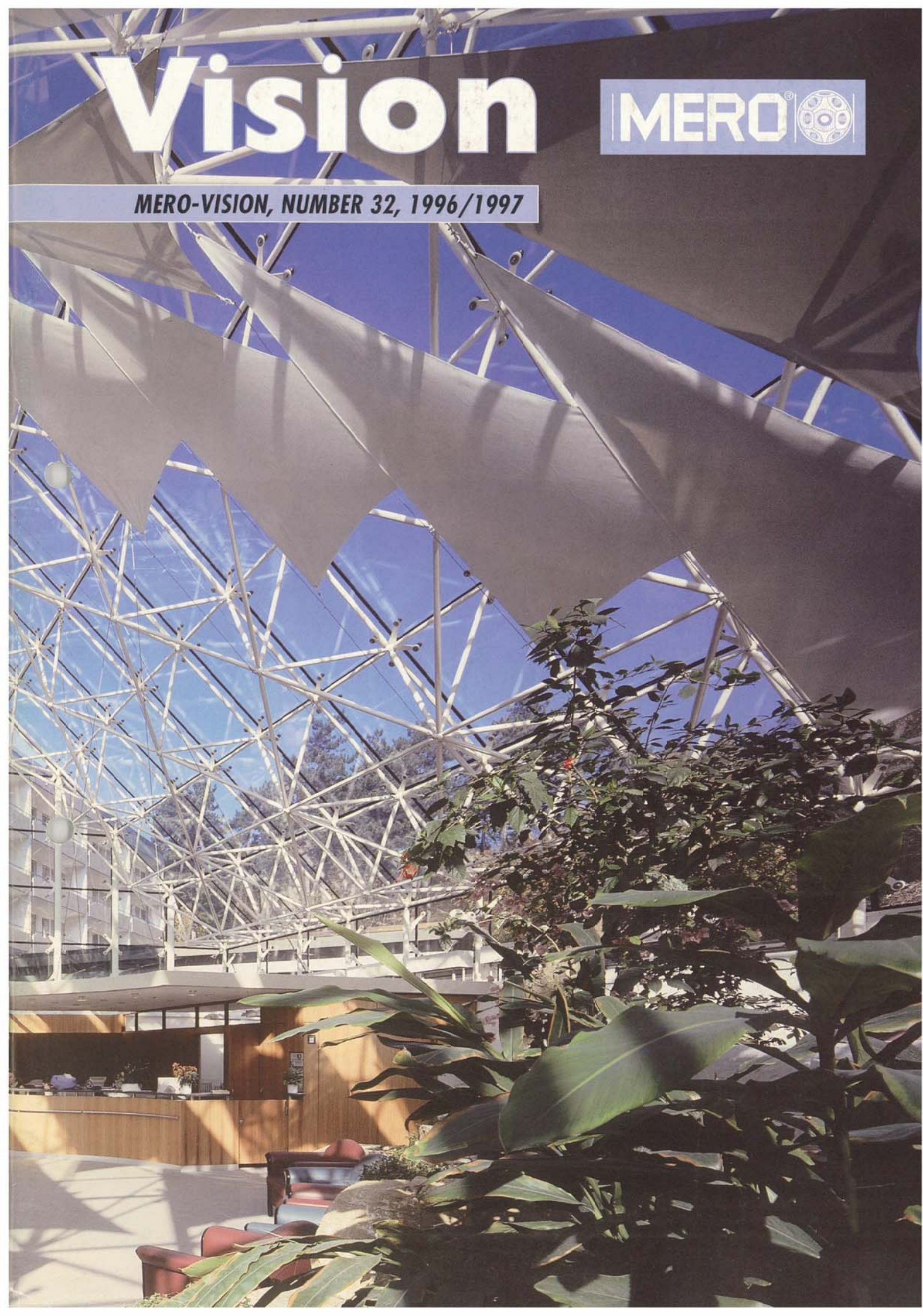


Vision

MERO®



MERO-VISION, NUMBER 32, 1996/1997



MERO Group of Companies

Globalization Through Innovative Technology

The business development of the MERO Group of Companies is being influenced by different constellations of the construction industry in Europe and overseas. While Europe's market is still stagnating, Singapore, Malaysia, Indonesia, Southern China and the USA show a clear pattern of growth.

Substantial Increase of Construction Systems

In particular in non-European countries MERO's main focus are projects of increasing technological and logistical complexity.

In the USA the expansion of MERO Structures is being systematically pursued. In the Far Eastern markets further growth is generated through our already established subsidiaries MERO ASIA PACIFIC Ptd. Ltd., Singapore and MEROTECH, Malaysia. In order to participate in the increasing construction business in Thailand we are planning to found MERO THAI Ltd. - a joint venture company between MERO and the TEO HONG SILOM Group.

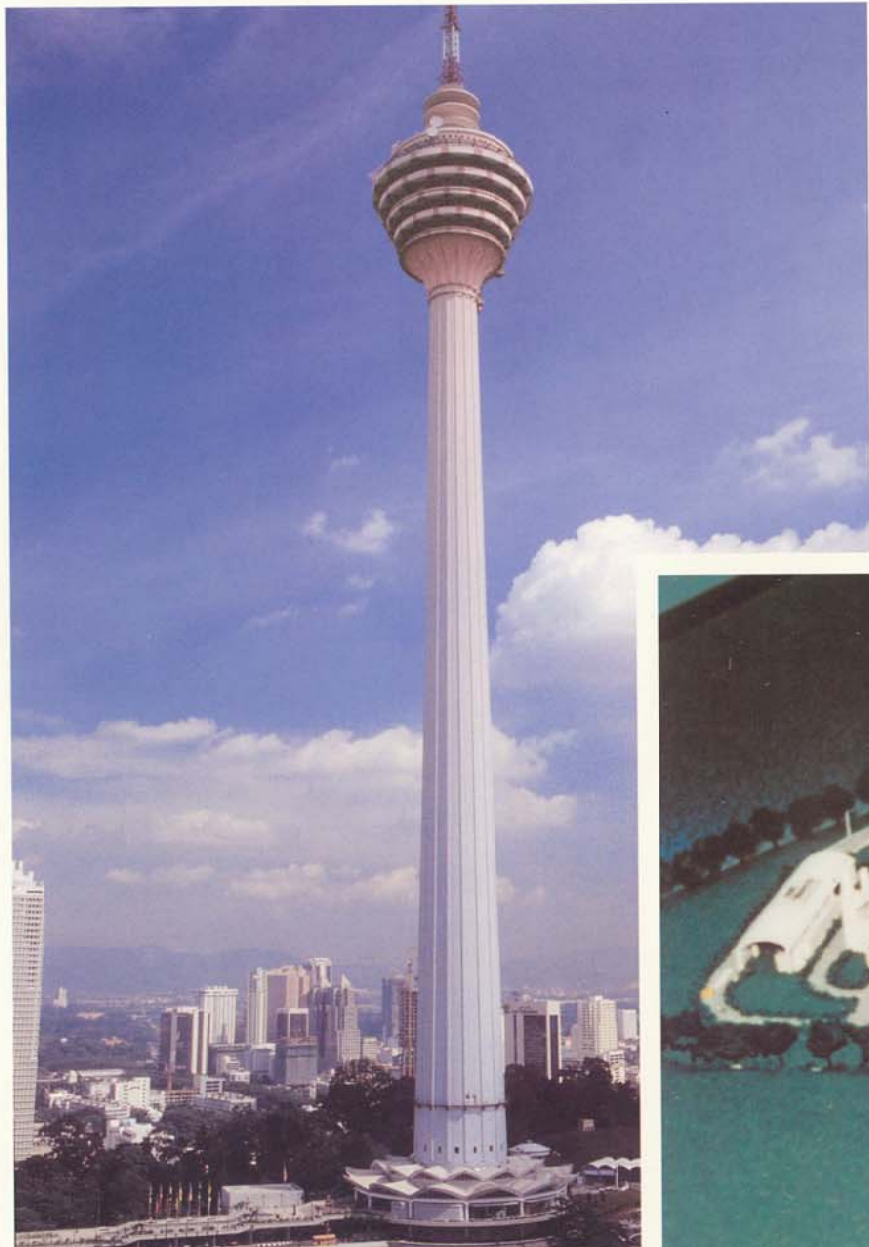
In September 1996 the 115 m high ESSO high-rise building in Kuala Lumpur, Malaysia, with its sophisticated curtain walling of 25.000 sqm of Spanish granite was completed. At the same time the 421 m high TV Tower of Kuala Lumpur was inaugurated in the presence of the Malaysian Prime Minister Mahatir. MERO was responsible for the manufacturing and installation of the four-story glass/aluminium facade and the „Islamic Pattern“ creating a harmonic transition between the concrete shaft with a radius of 13.6 m and the tower turret. With these major contracts MERO can add two additional projects of high technical sophistication to their list of references in Malaysia.

In June 1996 MERO ASIA PACIFIC Pte. Ltd. received the order as subcontractor for planning and supply of the complete roof structure for TUAS Checkpoint, the new border station between Singapore and Malaysia. The different buildings have heights up to 26 m, spans up to 45 m and lengths ranging from 145 to 250 m. For this project MERO's manufacturing plant in Prichsenstadt supplies approx. 1.100 tons of roof supporting structure.

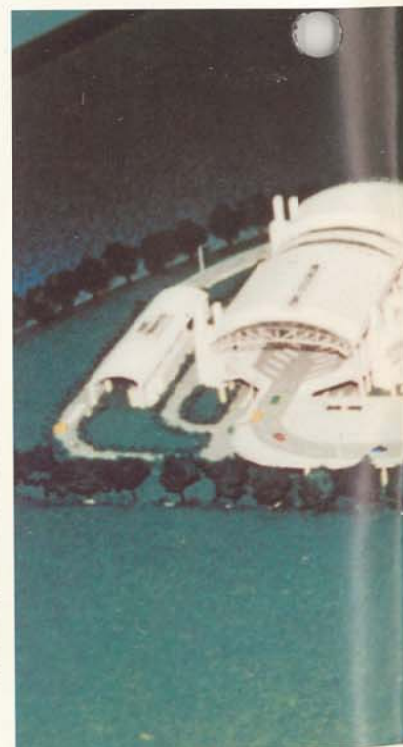
In addition, approx. 3.000 tons of steel structure components are manufactured locally.

Estimated time of completion of this project is early 1998.

Negotiations on further large projects with growing architectural demands are currently in progress.



TV Tower in Kuala Lumpur/Malaysia
Arch.: Dato Nik Mohamed Mahmood, KL



Raised Floor Division - Single Source Supplier of Floor Systems

In order to stay competitive with the increasing demand of quality and intelligent solutions, MERO as single source supplier of floor systems offers the entire scope of access floors, cavity floors, cableway trunking systems, screeding works and different types of floor coverings. Modern manufacturing facilities guarantee a continuous high quality and availability.

MERO Systeme supplies above materials in accordance with high quality standards such as the certification DIN EN ISO 9001 and transfers these quality requirements into its design works and logistics at site. This procedure is of utmost importance at large projects. In foreign markets the rising standards of large projects gives MERO's Raised Floor Division the opportunity to expand in this growing market. In Germany MERO is market leader in the field of Access Floors. In order to meet the expectations of our customers, our distribution and after-sales service are adapted to the

highest standards. In addition we added the renewing of floor coverings to our list of services.

MERO Group as Systems Supplier

In line with high efforts for the further development of technically demanding products and systems the internal working process was restructured and a steady improvement of productivity in all business fields was achieved. At the same time globalization became more and more important. Thus, MERO has created counterweights to the cost-related disadvantages of being located in Germany in order to win and secure international market share through innovative technology.

By providing know-how-intensive basic engineering from Germany and acquiring detailed engineering locally, MERO's resources are being fully utilized. All products and services are structured with high flexibility and optimized productivity in the interest of our customers.

The technological and business-relevant challenges facing us in the future will be managed by the competitive supply of intelligent technologies and optimized systems. With growing economical success we trust to meet these objectives.

Rolf F. Dittrich
Chief Executive Officer

*Model TUAS Border Station, Singapore
Arch.: Public Works Department, Singapore*



Individual Design With System

On reviewing 1996 this period featured two major events - the opening ceremony of the New Leipzig Fair with its unique barrel vault shaped glass hall and the laying of the foundation stone for the TUAS Border Station in Singapore. Both projects use unique systemic design based on MERO typical connection systems and incorporate the complete cladding system.



As scheduled the New Leipzig Fair was inaugurated by German President Roman Herzog on April 12, 1996. The first trade fair „Technology and

Trade" was attended by an unexpectedly high number of visitors.

The glass hall with the world's largest suspended glass envelope (26.000 sqm), completed in a joint venture with Seele, is the central entrance and eye-catcher of the fair ground.

Without visual connections and wind bracings the spanned hall with a size of 80 x 244 m is designed in such a way that the point supported panes (approx. 1.5 x 3.0 m) are fixed stress-free to withstand all types of loads. The pre-fabricated elements of the outer supporting structure allow a partial galvanizing.

The application of an additional color coating guarantees a long-term protection against corrosion. The receipt of the '96 Galvanizing Award of the British Galvanizing Association

is only the first recognition for this fascinating concept of steel and glass.



Innovative Package Solutions

Our total project management performance is not solely measured by the size of the project alone, but also by the timely execution of comprehensive solutions.

The turnkey completion of a glazed entrance area at the **Franken Health Clinic** in Bad Neustadt/Germany shows another typical example completed to the client's satisfaction.

The 22 m high pyramid-shaped space frame structure with its point supported, silicone sealed glazing meets a demanding technical concept. With the integration of a glazed elevator shaft, sun shades, floor heating and artificial water falls an ultimate ambience for the clinic's clients rehabilitation is being created.



Arch.: Herbert, Bad Neustadt
Germany



Variations Of Steel And Glass



Arch.: IFB Dr. Braschel, Stuttgart/Germany



The Quartier 203 in Berlin includes a 60 m long covered shopping center consisting of a single-layer tube construction. Members of only 8.9 cm in diameter are cantilevered over a length of 16 m achieving stabilization through a spatially arranged pre-tensile cable construction. The covering of laminated glass is point supported at corners and joints are sealed by means of silicone creating an aesthetic envelope separated from the supporting structure.

Arch.: gmp, Hamburg/Germany

The Goethe Galerie in Jena is a highlight for the regeneration of unexploited industry. On the former manufacturing area of Carl Zeiss in the center of Jena the Grundtag AG, Berlin, built a multi-purpose service center including underground parking, shopping centers, office space and a four star hotel. The sophisticated technology of this steel and glass combination covering an area of approx. 4.000 sqm shows one application of endless variations.



While the dome with a span of 55 m connected to a barrel vault-shaped arcade is formed by tensile arch girders, the atrium roof of the hotel consists of a grid net shell. The canopies and facades create a contrast with point supported glazing.

In order to enhance the attractiveness of Hamburg's Langenhorner Markt not only were the buildings renovated but also the pedestrian precinct was partially covered with glazed roofing creating a consumer-friendly shopping zone. Harmonizing with the flat roof construction at both sides of the street, the wire reinforced glass roofing was installed with a slope of only 3%. The tensile circular hollow sections form an inviting colonnade. Appealing details and functional coloring increase the value of this economical solution.



Arch.: Prof. Winking, Hamburg/Germany

MERO Throughout The World



*Simon Fraser University, British Columbia
Execution: MERO Structures, USA*



*Metropol Hotel, Birmingham/UK
Arch.: Igal Yawetz + Associates,
Execution: MERO (UK) PLC.*



*Shiga Factory, Japan
Execution: NISSO-MERO Corporation, Japan*



*Pusat Sains Negara National Science Centre, Malaysia
Arch.: Public Works Department, Kuala Lumpur
Execution: MEROTECH, Kuala Lumpur*



*Courthouse, Albenga
Arch.: Studio Ass. Romano
Execution: MERO Italiana*

High Efficiency At Maintenance And Overhaul

The climbing number of airline passengers not only leads to a large increase of orders for the aircraft manufacturing industry but also to the planning and execution of new overhaul and maintenance centers in particular in Far East's booming market.

Unfortunately, due to the recent airplane crashes and the associated publicity the general public was sensitized about the maintenance issue. Therefore all airlines are reviewing even more rigorously how to better carry out the required maintenance intervals with the utmost quality control.

The efficiency of MERO Docks for maintenance and overhaul for all types of aircraft remains uncontested and of increasing demand.

The concept of maintaining the areas above the wings by means of roof-suspended platforms and leaving only smaller manually controllable units on the ground is more frequently being used. This procedure enables a quick and safe positioning of the aircraft and creates room for ground based equipment.

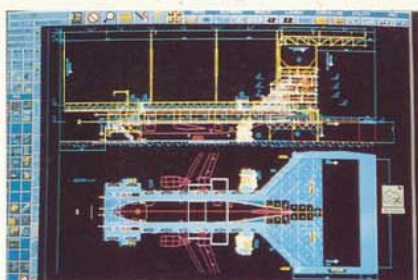


Lifting-in of maintenance and cleaning gantries

Looking at the enormous market potential for this type of facility, the receipt of an order by Ameco, a joint venture between Air China and Luft-hansa, was especially pleasing. In a continually increasing degree we apply our know-how on movable and adjustable maintenance or assembly platforms onto other sectors. As a supplement for MERO glazing structures cleaning gantries were provided in technical coordination resulting in advantages for our customers.

Additional orders have attested the concept of our platform constructions for the final assembly of stationary gas turbines (50-100 MW). We also see a new market potential with the Deutsche Bahn AG (German Railway).

A continuity of product innovation and the expansion of application areas is our objective.



Roof-suspended maintenance dock: Al Salam, Riyadh/Saudia Arabia

MERO 4D -

For A Strong Appearance



Double-deck exhibit booth with MERO 4D: Cityneon, Indonesia



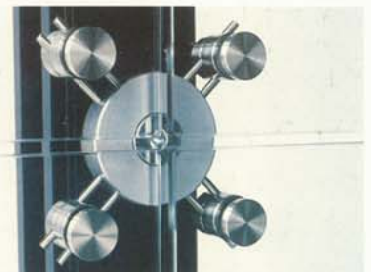
Cable technique MERO 4D

After its market introduction and its brilliant appearance at EuroShop '96 in Duesseldorf, the MERO 4D Construction System has established itself in the market and achieved a remarkable increase in sales. Companies like Audi, Canon, Coca Cola, Lufthansa, Philips, Renault, Siemens,

Stihl - to name a few - have already successfully used this new system technique for their presentations. In addition, the MERO 4D cable technique ceiling construction with its slender built and visual light weight effect has raised the interest of many designers.



Exhibit booth with MERO 4D: Schnaitt Int. Messe- u. Ladenbau GmbH/Germany



Glass fixing devices

The development of accepting elements for pre-suspended glass facades (fixing techniques to allow use of thin panels in the structure) will be introduced in 1997 to further increase the system's application possibilities for fair and interior constructions.

meroform Construction System M12 -

Outstanding Applications



Exhibit booth with meroform M12 and R8system: Steinmetz Expo AG, Switzerland

Mainly used for extensive roofings and open structures in the 1980s, meroform constructions are now often found completely covered or in connection with conventional construction elements.



In 1996 many outstanding projects were realized with meroform - the classic choice among fair construction systems. Once again the meroform Construction System M12 has proven its diversity by being the „right system“ for changing tasks and design trends.



Exhibit booth with MERO 4D: ARPRO, Brazil

MEROCOM

For Decorative Outdoor Structures

Many MEROCOM projects, showing subtle and aesthetic constructions, reveal the designer's affection for details. Supported by promotional measures MERO Exhibit Systems in 1996 has achieved considerable sales increases in this market segment.



Advertising Tower Coca Cola
Olympic City, Atlanta/USA
MERO Structures, USA
Arch.: Bullock, Smith + Partner



Lightweight dome with meroform M12: Lotech, Czech. Rep.

voluma Connector System - A Classic System Celebrates Its Birthday!



Exhibit booth with voluma: Exprim, Portugal

For 20 years the voluma Connector System, developed in Switzerland by Ruedi Zwissler, has been used for fair and exhibition construction as well as for shopfitting and interior design. The infinite possibilities of shapes created with voluma materials is still a fascinating challenge for creative designers.

And, in order to offer complete solutions, MERO Exhibit Systems in 1997 plans to also supply panel materials.



R8system

After its market introduction, the R8system has now become an integral part of MERO Exhibit Systems' family of products. The connection with modern materials creates impressive designs of single elements such as counters and showcases up to complete solutions in fair and exhibition construction as well as shopfitting.

*Exhibit booth with R8system:
Spektra Werbetechnik, Switzerland*

New In Our Product Range: **MEROLITE**

Apart from the classic fair participation, the MERO Exhibit Systems marketing mix of sales promotions also includes presentations on regional information events, congresses and home fairs.

For this reason, MERO Exhibit Systems complements its product range by presenting the MEROLITE pop-up system.



The program supply for MERO Exhibit Systems was defined and determined in cooperation with one of the leading producers of pop-up systems. The ML 3.0 and ML 2.4 displays are available in two different sizes. Different materials and colors of the cladding panels offer a wide variety of design possibilities.

In order to offer an optimized support in the graphic area, an agreement was made between MERO and a professional graphics producer in Germany.

In contrary to the usual practice where pop-up systems are sold directly to the end user, the distribution of MEROLITE was integrated into the sales concept of MERO Exhibit Systems. This provides many advantages to MERO Exhibit Systems' clients, such as customer protection, single source supplier and attractive purchasing conditions.

MERO Glass Access Floor -

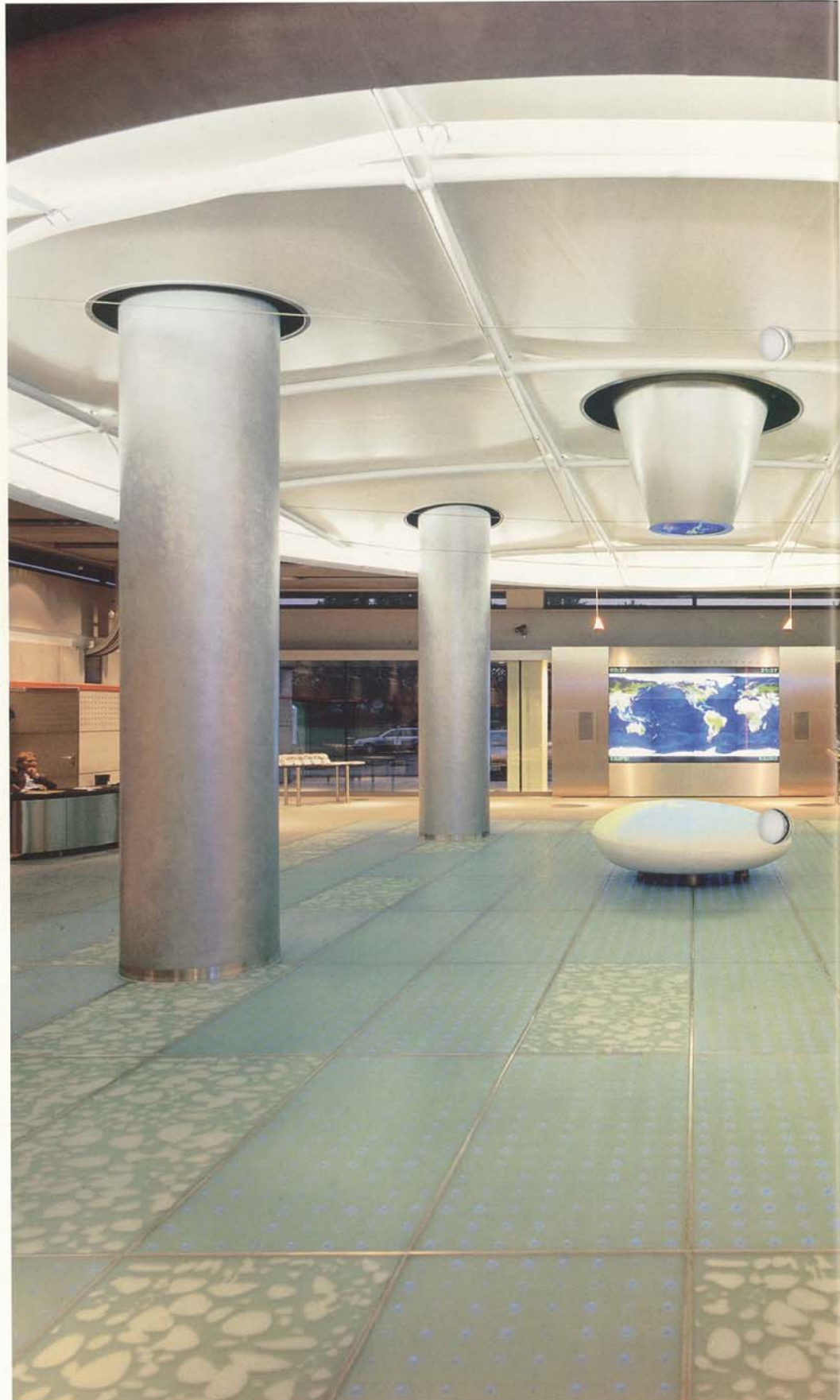
An Illuminated Floor With 11.000 Controllable Light Spots

In the fall of 1996 the Corporate Forum in the entrance hall of the Hoechst Center was opened. In an area of 650 sqm Hoechst presents its company profile to clients, guests and employees through a combination of architectural and media-aided design concepts.

The prime focal point in the Forum of this new administration building is a central video sculpture made of stone. The white lens-shaped marble block serves as a video projection screen showing materials and products Hoechst is dealing with. Molecular, chemical, physical and organic structures of Hoechst's various business sectors work together forming an organic complex. These structures are overlapped by above an electronic wave starting at the center, moving alternately above and below the MERO glass access floor - a novum among MERO's floor systems. The entire Forum is covered by an aesthetic hightech tensile MERO steel structure into which a computer-controlled large screen projector is integrated. While entering the illuminated floor, visitors immediately feel linked to the data flow and dive into the communication space of Hoechst.



Side walls are clad with glass elements which are fastened by special fixing devices.





While walking over the MERO glass floor you can almost physically feel information crossing the data highway.



Besides these highlights the conference room as well as the interpreter booths were equipped with a MERO space frame structure and MERO access floor type 4.

The glass panels with a thickness of 27 mm either have a pebbly pattern or a green surface.

MERO at the Orgatec 1996 Expo in Cologne, presenting its MERO Raised Floor Division providing access floors, cavity floors and services.



A large video screen designed as a world time indicator is provided at the end of the light wave at one wall of the Forum.

With the slogan „MERO, the universal floor systems supplier“ MERO's Raised Floor Division presented its products on a booth with a size of 85 sqm.

No Chance For Fire-

3.500 sqm Access Floor Type 4 Anhydrite



DATEV IV in Nuremberg, Germany
Service-Center Hoefen

Another DATEV location - the Service-Center in Hoefen - opened for business only 17 months after laying the foundation stone. 750 people are employed at this new building. The main aspect for the design of the buildings was the application of environment-friendly building materials and the creation of a natural climate control.

For safety purposes the corridor areas were equipped with 3.000 sqm of non-combustible MERO access floor type 4 anhydrite. In addition 12.500 sqm of access floor type 5 were installed in the offices areas. The opening ceremony took place in July 1996.

Europe's most modern chip factory in Dresden started its production

The new center in Dresden sets new standards for the European production of semi-conductors. With its manufacturing capacity the new plant has a significance that reaches far beyond Saxony and Germany. More than 100 technical rooms were equipped with MERO access floors type 2 and type 5 QR.



Shanghai Bell, Shanghai

Shanghai Bell, one of the world's largest manufacturers of telephone equipment, erected its new administration building at the Pudong Area in Shanghai. 24.000 sqm of MERO access floor type 4 anhydrite with factory-applied carpet were supplied by our local distributor Merlin Gerin Electronics.

20 years ago MERO access floor was installed for the first time in the 15 stories high office building of the German Television Broadcasting Company ZDF in Mainz.



Office and administration building at the Spreebogen in Berlin, Germany, Client: Heinrich Klammt AG
8.100 sqm MERO cavity floor type Combi with different types of screeding



City Carré Berlin, Germany
A project by the Koellmann GmbH serving as an administration building of the Dresdner Bank AG and Residence Hotel.
24.000 sqm non-combustible MERO access floor for office areas and 3.000 sqm MERO cavity floor type Combi for casino and shopping area

Today this building is being refurbished and MERO was given the opportunity to renew the access floor. All corridors will receive non-combustible panels. The floor panels in the office areas will also be renewed by replacing the old needlepunch covering. This process will be carried out in three phases of five stories each.

Footnote

Quality control acc. ISO 9001

In October 1996 MERO applied for the certification of its quality management system acc. DIN EN ISO 9001. This certification represents the highest level of quality control. It is assumed that the certification will be granted by mid 1997.

New distribution system for Germany

The new distribution system to sell panels and pedestals through partners shows promising results and will be intensified in 1997.

Sound That Doesn't Spread, Doesn't Create Noise

Whether or not you have the right acoustic sound level in your bathroom is often found out the hard way. Not only is the designer bath tub or the colored fitting of importance to the occupier but also one desires not to be disturbed by the irritating noise of their own or neighboring bathrooms.

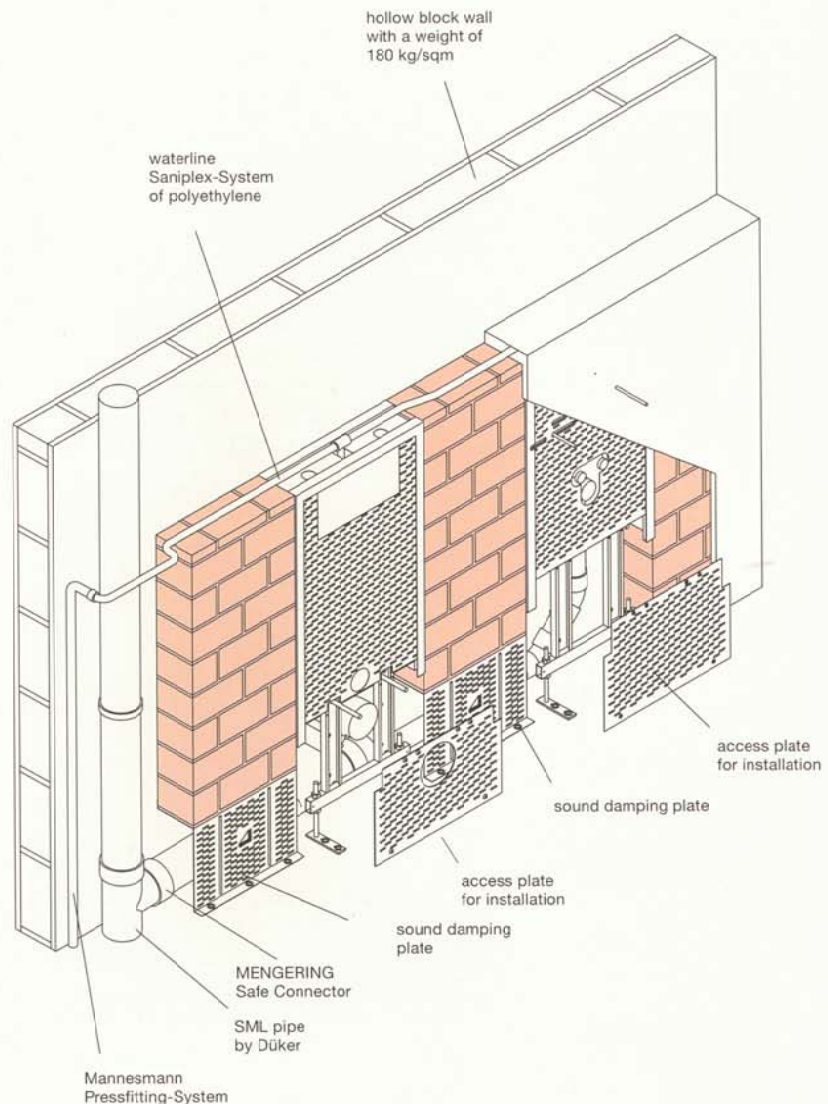
Since sound protection is not something that can be added after installation, the wrong decision can turn out to be very costly in the long run, as savings achieved from the initial „low“ investment often prove to be highly uneconomical. Sound protection of sanitary installations should therefore be considered in the planning stage. Until now it was only possible to determine the combination of installations, pipes, walls etc. in advance, not their noise behaviour.

The current existing sound protection requirements for sanitary installations can be divided into three categories:

- acc. DIN 4109
- acc. technical standards / average type and quality
- acc. higher demands

These three categories generally comply with the requirements of VDI (Community of German Engineers) guideline 4100, mainly for use by planners and contractors as well as tenants and customers. These recommendations are standardized but do not include applicable installation practices.

In addition the acoustic suitability proof certificate is granted only by fulfilling the minimum requirements acc. DIN 4109 in which the installation wall has to have a minimum wall weight of 220 kg/sqm. This usually equals a brick wall with a thickness of at least 17.5 cm. If these requirements are met, MERO easyTec enables a quick, economical and design-oriented realization of pre-wall installations. Besides this MERO easyTec is compatible with all drainage and sewage systems. The metal cover sheet comes ready equipped with the necessary drillings and openings and broadens the service range of the plumber as a competent systems provider.



In practice most designated installation walls are thinner, i. e. brick walls (11.5 cm) or lightweight metal partitions. In these cases an acoustic suitability proof certificate acc. DIN 4109 is required as this is generally the case for sound level requirements acc. aRdT (technical standards) and higher demands. This proof acc. DIN 4109 and DIN 52219 is being achieved by an acoustic test of a sample unit.

Pre- and In-Wall System Technology

MEROBLOCK®

Universal
System with certified Sound Protection

MERO
easyTec
Sound Protection acc. DIN 4109

MENGERING®

Couplings
System with certified Sound Protection

Test reports often only deliver information about component characteristics of an installation element under laboratory conditions and do not necessarily consider the common mounting situations of pre-wall installations in connection with water and sewage pipes, lining as well as installation wall, layout and the unit itself.



For this purpose the Fraunhofer Institut für Bauphysik (Institution for Building Physics) carried out sound protection tests of the MEROBLOCK Universal in „real“ conditions and different mounting situations.

Test results on a bricked pre-wall installation or clad in front of a hollow block wall of 180 kg/sqm with a



thickness of 11.5 cm fulfill not only the sound protection requirements of DIN 4109 but also the ones of the technical standards.

For improved visual demands the MEROBLOCK Universal can be mounted as an in-wall installation in a lightweight metal partition.

These test results enable planners and plumbers to make reliable statements about the acoustic result of the sanitary installation during the planning stage. Last but not least this lowers their liability risk.

Additional advantages of the MEROBLOCK Universal speak for themselves - its multiple installation possibilities, its accessories, its options for obstacle-free living and a non-combustible version for use in fire proof zones.



MEROBLOCK WC, Type 83,
offering versatile application possibilities

A new addition to our system technology is the recently developed MENGERING fastener for cast iron (SML) sewage pipe fixings. These fixings serve the purpose to transfer loads due to self weight of pipes and passing through waste water onto the unit itself. Up to now in most cases the sound transmission arising from sewage pipes was unfortunately transferred into the pre-wall installation through the pipe fixings.



The new technical solution for sewage systems therefore is:

- to support the sewage pipe's loads by means of a sound transmission proof fastener,
- plus the axial stabilization of the pipe through high quality, sound transmission proof couplings.

A sample pre-wall installation in front of a wall of 220 kg/sqm, tested by the Fraunhofer Institut für Bauphysik (Institution for Building Physics) proved, that with a max. of 24dB (A) the acoustic suitability of a sewage system - SML pipe - MENGERING Safe connector - MENGERING fastener for sewage pipe supports - MENGERING couplings - is efficient for even higher demands.

At MERO's Sanitary Division the course for 1997 is set. System Technology is the name of the game.



The MERO Group:

MERO GmbH & Co. KG

The Holding Company
of the MERO Group

**MERO-Raumstruktur GmbH & Co.
Würzburg**

Construction Systems

- Steel Structures
- Glazing Systems
- Curtain Walls
- Aircraft Maintenance Docks

MERO Systeme GmbH & Co. KG

Raised Floor Division

- Access Floors
- Cavity Floors
- Services

Sanitary Division

- Pre-Wall Installations
 MEROBLOCK Universal
 MERO easyTec
- MENGERING Couplings

Exhibit Systems

- meroform
- MERO 4D
- MEROCOM
- MEROLITE
- R8system
- volumna

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