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les couleurs: le murs des pavillons de fabrication sont bleu clairs, ainsi que les plafonds pour éviter le sentiment d'être enfermé dans une prison surpeuplée et pour faire penser au ciel ouvert. La structure métallique apparente est peinte en blanc. Les machines pour la fabrication de cerveau éléctroniques sont bleu foncées. On superpose 20–30 récipiants dans lesquels on conserve les éléments de machine et dont le jeu de leurs six couleurs varie selon l'usage comme une mosaïque. Les bureaux ont les mêmes couleurs claires et leurs accents sont les corbeilles à papier et les pupitres en couleur.

Deux grands couloirs, séparés par locaux de travail par des cloisons en verre teinté et vitrés vers les cours intérieures mènent à la cantine, où les ouvriers et les employés se rencontrent. Ainsi, on obtient partout un effet de continuité.

Des bacs à fleurs en noyer séparent le bar à café de deux salons; la cuisine dont les murs sont en klinker sombre de couleur tabac, se trouve au centre de la salle à manger. Les lampes électriques suspendues donnent à la cantine une lumière plus chaude que celle des tubes dans les locaux de travail.

Dans l'un des pavillons de l'administration, il y a des salles de cours et un auditoire avec 160 places où l'on peut projeter des films.

Toutes les constructions, à l'exception des locaux, où l'on travaille à chaud, sont climatisées.

L'ensemble de ces constructions basses s'étend dans un terrain sinueux à travers 56 292,4 m².

Helmut Hentrich
Hubert Petschnigg

Maison-tour Unilever à Hambourg
(pages 431–432)

Situation et circulations

Ce bâtiment est erigé Dammtorwall, Valentinskamp et Caffamacherreihe. Il aura une hauteur de 76 m et ses 3 ailes s'ouvrent dans 3 directions, pour des raisons urbanistiques. Le bâtiment est collé contre les limites nord-est du terrain et permet un aménagement extérieur généreux vers le sud-ouest. Un accès privé mène de Dammtorwall à l'entrée, passant sous le bâtiment et conduisant par une rampe au sous-sol, où se trouvent les surfaces de stationnement pour les employés et les entrées de service.

Construction

Pour des raisons constructives, le plan est un triangle équilatéral. Le noyau central a la forme d'un tuyau en béton armé auquel sont accrochés les différents planchers à l'aide de sommiers et de colonnes en acier. L'effort du vent est ainsi transmis au noyau, dont la fondation sera un radier, tandis que les colonnes reposent sur des fondations individuelles.

Conception architecturale

Idée: créer une surface maxima de travail librement divisible autour d'un noyau central de service. La grande hauteur du rez-de-chaussée est fortement vitré et montre bien le noyau qui sera revêtu jusqu'en haut par un placage de pierres naturelles.

Les étages supérieurs ont des façades uniformes composées de cadres métalliques et de vitrages qui s'abritent derrière des lamelles horizontales qui servent de brise-soleils.

Organisation

Le rez-de-chaussée sert de hall de réception et d'attente. Le plan des 15 niveaux de bureau se subdivise en 3 ailes appuyées contre le noyau central et dont l'extrémité forme un grand local. Tous les bureaux peuvent être communicants et sont librement séparables. Le noyau contient 6 ascenseurs, 1 monte-charge, 3 escaliers de secours, des WC et des locaux de lavage, 1 local de surveillant avec un monte-charge pour les documents, 1 office d'étage, un local de nettoyage et les conduites pour la tuyauterie (eau, écoulement, climatisation, électricité, téléphone).

En outre, il y a un étage de restaurant avec bar à café, salles à manger pour le personnel avec une cuisine à disposition pour tous, et deux autres étages techniques. Les machineries se trouvent sur le toit en superstructure. Au sous-sol, on prévoit un auditoire avec des salles secondaires qui est accessible par un escalier indépendant depuis le rez-de-chaussée. Ce même étage loge les archives centraux, la réception des marchandises, des entrepôts et la centrale technique.

Hecker, Hornschuh et Kiechle

Hôtel de ville à Achern, Forêt-Noire
(pages 433–434)

Situation urbanistique

L'hôtel de ville, centre de l'administration municipale est librement implanté sur la place du marché. Ce sont des volumes bas très horizontaux qui délimitent la place et qui couvrent les alentours dépourvus d'unité. Le plan carré est collé contre ces façades et s'ouvre vers l'artère principale en créant ainsi des espaces variés.

Circulations

On a supprimé la circulation automobile partout sauf dans cette artère principale, et le marché se groupe librement autour de l'hôtel de ville dans une zone réservée aux piétons.

Organisation

Depuis l'entrée, on a directement accès aux bureaux les plus fréquentés (caisse municipale, registre foncier, contrôle des habitants); la salle des conseils est située au premier étage, dont la hauteur est plus prononcée; le deuxième et le troisième étage sont groupés autour d'un hall central et contiennent la mairie, l'administration principale, le service des finances, l'état civil, le service des constructions municipales et les services sociaux.

Construction

Structure en acier et dalles en béton armé, supportées au rez-de-chaussée par des piliers en béton armé et suspendues dès le deuxième niveau à une structure métallique extérieure libérant ainsi le niveau de la salle des conseils qui n'est traversée que par un appui central.

Otto Apel et Hannsgeorg Beckert,
Gilbert Becker

Piscine couverte à Mayence
(pages 435–440)

Début du projet : Octobre 1959
Début de la construction : Sept. 1960
Durée des travaux : 19 mois

Lors des festivités pour les 2000 ans dès la fondation de la ville de Mayence, on avait inauguré la première piscine couverte depuis les Romains, le 14 avril 1962.

Le choix du terrain situé le long de la piscine en plein air déjà existante semblait favorable, malgré son étroitesse et les difficultés qu'il prêtait aux fondations sur terre ferme, car il permet une surveillance centrale des deux bains et une possibilité de les lier en été.

Comme la piscine est située dans un nouveau quartier d'habitation et à proximité de l'université, on a renoncé à des bains hygiéniques et médicaux. La région autour de Mayence comprend plusieures piscines olympiques; ainsi, on a supprimé des tribunes et une plate-forme couteuses.

On adopte finalement un programme qui peut servir de prototype pour une piscine de sport et de délassement, et qui correspond aux exigeances de toutes les villes.

Capacité

La piscine est conçue pour une région de 150 000 habitants. On compte sur une fréquentation de 375 000 personnes par année. Donc, on a prévu:

66 cabines
190 armoires
10 cabines individuelles
180 places dans les vestiaires communs, dont $^2/_3$ pour hommes et $^1/_3$ pour femmes.

Projet

On a entièrement exploité la pente naturelle du terrain. Le sous-sol abrite le hall d'entrée et les locaux techniques, l'étage supérieur contient les vestiaires et la piscine. L'entrée se trouve au niveau de la route et la piscine est orientée favorablement vers le sud-ouest de plein pied avec les espaces verts de la piscine en plein air.

Le contrôle s'effectue au début du hall d'entrée et la suite de la circulation s'impose.

La partie contenant les vestiaires et les douches est borgne vers l'extérieur. L'éclairage s'effectue par des lanternaux en forme de coupoles et par une cour intérieure.

Equipement

Un bassin à usages multiples de 15 m × 25 m et d'une profondeur allant de 1,10 m à 3,50 m.
Un bassin d'instruction de 5.50 m × 15 m.

Comme ils sont situés l'un près de l'autre, on adapte tout de suite une profondeur relativement grande dans le grand bassin. On renonce à une giraffe de 5 m pour obtenir une forme de fond plus douce. Ainsi, le volume garde une hauteur agréable pour l'œil qui améliore l'acoustique et rend la construction économique.

Il y a possibilité de placer 400 sièges autour du bassin lors des compétitions, et les spectateurs s'y rendent par un accès séparé.

Matériaux

Les bassins, les planchers et les parois sont recouverts avec des catelles en céramique. Les plafonds sont constitués par des lamelles en métal léger qui servent d'isolation sonore.

Couleurs

Elles sont discrètes dans l'ensemble: gris clair pour les planchers, brun chocolat pour les cloisons, blanc pour les plafonds; les cloisons extérieures des vestiaires sont rouges vifs pour accentuer l'ampleur du volume que l'on sent partout à cause de sa conception transparente.

Les mouvements des gens et les reflets variés sur l'eau interdisent de traiter une piscine d'une manière polychrome trop différenciée. Pour cette raison, on choisit peu de couleurs franches, appliquées en surfaces généreuses et quelques accents de contraste.

Installations techniques

Contenu du grand bassin: 920 m³; temps de renouvellement d'eau total: 5 heures; contenu du bassin d'instruction: 110 m³; temps de renouvellement d'eau total: 22 heures; filtre ouvert avec trois compartiments à 45 m² de filtrage chacun.

Ventilation

3 zones:

a) piscine: système à circuit continu: amenée d'air le long des surfaces vitrées, aspiration par le plafond.

b) Douches: distribution et aspiration par le plafond.

c) Vestiaires: système à circuit fermé: amenée d'air par le plafond, aspiration par les armoires.

En plein été, la ventilation s'effectue naturellement. Les surfaces vitrées vers la cour intérieure sont coulissantes pour faire entrer l'air frais qui est ensuite aspiré mécaniquement par le plafond de la piscine. Cette ventilation ne provoque pratiquement pas de courant d'air. La piscine exige un total de 2 400 000 Kcal/h. pour le chauffage, la ventilation et la préparation de l'eau chaude.

Chauffage

1 brûleur à mazout
2 brûleurs à coke

Eclairage

L'éclairage du plafond et des parois de la piscine est indirect; une bande de tubes logés le long des canaux de ventilation illumine le haut, et l'éclairage des surfaces de circulation est muni d'éléments qui empêchent les nageurs d'être aveuglés.

Coût de la construction

Fouilles, canalisations etc.	52.000,– DM
Construction (gros ouvre)	2.907.000,– DM
Equipement et installations techniques et installation spéciales	1.135.000,– DM
Travaux exterieurs	190.000,– DM
Frais de construction secondaires	410.000,– DM
Appareils et matériel d'entretien	71.000,– DM
	4.765.000,– DM

Summary

Mies van der Rohe

Ron Bacardi Administrative Building, near Mexico City
(pages 407–411)

In recent years industry, and with it the Bacardi distillery works, has come to a valley north of Mexico City.
Felix Candela was commissioned to design the factories and the warehouses whereas Mies van der Rohe was made responsible for the administrative building. He also designed the main administrative building in Mexico City itself but this has not been carried out.
Whereas Felix Candela has used curtain walls of reinforced concrete, Mies van der Rohe was expressly requested to build a steel skeleton structure on the lines of his Crown Hall in Chicago. From the raised highway situated only 60 m away from the site it would have been possible to look down on the roof of a one-storey building. For this reason Mies van der Rohe has set his building on stilts, keeping the ground floor almost entirely open. The entrance is by way of a two-storey hall, from which two staircases lead off to the administration level. On the ground floor there is the reception, an information office and the waiting-room for visitors as well as the pay desks for the staff and workers. Two small areas completely clad with travertine to the right and left contain the safe, the switchboard system and installations. The stairs lead directly to a large office which is subdivided merely by document cabinets. These mark off the sales office, the accountancy department, the legal division, the personnel office and two conference rooms, beside which there are two service cores with lavatories, utility rooms and files.
The building is in the form of a steel skeleton with a 9 × 9 m field. The plan is rectangular and along the smaller sides the upper storey projects 3.5 m outwards. There are five window panels 1.8 m wide set between the bearing columns. These windows cannot be opened and are glazed with grey heat-absorbent glass. All the steel parts that do not need to be fireproofed are painted black. The steps of the stairs, the entrance hall and the main storey are covered with travertine as are the service cores on the ground floor. The corresponding cores on the upper storey are panelled with Yucatan mahogany. The building is heated by the sun and by convectors. Fresh air is brought in through ventilators above the core elements and hand-operated slits along the windows next to the convectors. The insulating glass and the curtains are sufficient to ensure that there will be protection from the sun at this altitude – 2,400 m. The lighting elements have been built into the ceiling and each desk is equipped with a power point.

Harry Seidler

Lend Lease House, Sydney
(pages 412–416)

This, the most recent office building in Sydney, is sited on a peninsula off Sydney harbour near the Opera, where the first pioneers in Australia landed. The site is bounded by two parallel roads, one of which is $2^1/_2$ storeys higher than the other. The building-site is 36x15 m in size with the longitudinal axis running from the north to the south. From it one has a

superb view of Sydney harbour; to the west the terminus of the popular ferry-boats, the bridge and its approaches can be seen, whereas the zoo and then the sea are visible to the east.

This 19-storey building faces two roads and has four garage levels, two of which have been cut into the rock below Circular Quai and can be reached by way of a circular ramp.

Next to the main entrance on Macquarie Street there is a 2-storey exhibition hall at basement level. There are 14 office storeys.

The massive concrete construction consists of two flights of pillars set inside the building and thin slabs. These appear in the elevations and carry the white brick parapets. The stair-heads are likewise visible in the elevations.

The lavatories are grouped near the lifts at the south-west end; the slits in their ceilings create a staggered rhythm in the west elevation. The sunbreaks are the most striking feature of this building. These elements, which are indispensable on east and west elevations in Sydney, have been placed vertically along the window stiles so as to preserve the outlook as far as possible. The 1.80 m wide slats can be regulated from inside two by two. Their width corresponds to half of that of an office. The breaking down of the windows to 90 cm, one out of two being capable of being opened, makes for great flexibility in the interior fittings. The slats, which can be cleaned from the inside, consist of a tubular profile that can be swivelled almost 180° and offer almost perfect insulation. Depending on their setting, they create a dazzling pattern of light and shade on the elevations.

This solution is unlike most other commercial buildings, which have entirely glazed curtain walls. One sees these frequently in Sydney but they are not suitable owing to the climate.

On the superstructure there are the cooling towers for the air-conditioning plant, water tanks and installation machinery protected by a wall of eloxydized aluminium.

Only three materials are in visible use in this building: the concrete slabs, brickwork and eloxydized aluminium. The walls of the central hall are faced with black and white marble. The three direct lifts are carpeted; their walls consist of a stainless metal trelliswork and their ceilings are luminous.

On the final storey there are the administrative offices of Lend and Lease. These enclose the staff offices. This central area is lit by glazed walls running from floor to ceiling. The reception office facing the lifts is linked by glazed doors with the directors' dining-room and the board room and can be cut off with curtains of Indian silk. All the furniture, doors and lights have been carried out in matt, slightly varnished teak. The ceilings are covered with a layer of absorbent plaster. The walls are hung with brown Japanese wallpaper and on the floor there is an anthracite-grey fitted carpet.

Skidmore, Owings + Merrill

Pepsi-Cola Building in New York

(page 417–422)

This building costing 8 million dollars was inaugurated on a beautiful sunny day in February 1960. Located on the corner of Park Avenue and 59th Street, it rubs shoulders with such skyscrapers as Lever House, the Seagram Building and that of Union Carbide. The Pepsi-Cola Building has 11 floors and despite its modest dimensions it is a distinctive creation. On its faces it has perhaps the most glass of any building in New York:

Thickness	1,25 cm
Height	2.70 m
Width	3.90 m

The glass fields are framed in aluminium profile sections. The building is separated from the adjoining one by a dark party-wall, creating an effect of independence. Moreover, it is recessed behind the building line. The space thus saved has made it possible to integrate the outdoors with the ground-floor display room. The first three floors have been let. The management occupies the remainder of the building. The plan measures 30×37.50 metres. The building rests on 10 reinforced concrete pillars. The overhang on the street side projects for 3.90 metres.

The Pepsi-Cola Building is one of the most beautiful constructions of Skidmore, Owings + Merrill, and in its conception and execution is up to the polished and severe standards demanded of American office buildings.

Hans Luder

Municipal Office of Works, Solothurn

(pages 423–426)

Building at the Edge of the Old Town

This example will serve as illustration of the problems involved in using constructional methods of the present time without violating historical surroundings.

The building itself, more than the photograph on this page, goes to show that a structure of this type makes little difference to the distinctive silhouette of the old town; it maintains it intact thanks to the distance between the two, which acts as a clear line of demarcation.

Is it necessary to adapt constructional elements to older forms, or must there be a stylistic rupture as was the case earlier even though it can no longer be discerned?

So far as architecture is concerned, nothing is less satisfactory than the muddled idea of adaptation to natural surroundings or neighbouring buildings because there is then a tendency to confuse this adaptation with a valid scaled form of integration, to confuse it with a perfectly legitimate form of spatial ordering.

Falling back on a traditional form of roofing in a fit of sentimentality can lead to the breakdown of an economically viable programme or to the abandonment of a rational technique in construction. Architecture becomes senseless when creative liberty has to be sacrificed.

It is just as regards this desire for adaptation that this building displays its weak points: it is sited between the river and a sloping meadow and to make it less visible bottle-green cladding has been chosen.

Seeing that architecture must of necessity contrast with greenery, an intelligent form of integration cannot consist in the selection of matching colours.

The new part of the works buildings has been brought up against a structure with a hipped roof although at first the latter was to have been flat. The two buildings together contain the offices, the workshops, the stores and the municipal garages.

Reinforced concrete structure using a 1.65 m module. Curtain wall elevation made up of two levels of aluminium and parapets faced with bottle-green glass.

Eero Saarinen

International Business Machines, Rochester, Minnesota

(pages 427–430)

The architect had to bear two main requirements in mind when designing this IBM complex for administrative and factory purposes:

1) maximum extension to be possible in the future
2) friction-free conditions of work.

The solution is lucid and free of gimmicks.

In the production sector the factors that lead to extension are arbitrary and unpredictable. For this reason many less recent factories have had to have wart-like structures added on to them. Careful study by IBM showed that an autonomous production area amounted to about 5,520 m², which corresponded to an administrative sector of about 3,700 m², and that extensions would usually be carried out when approximately the same area was required.

The architectural innovation put forward by Saarinen was a system of pavilions grouped round a core and extendable in every direction. A production unit requires 23 m² on one level and will develop towards the east whereas the administration unit covers two 24x75 m levels and will be built westwards. At the centre of each unit there is an installation core containing the air-conditioning plant, lavatories and lockers. These units have an inner courtyard between them. Two corridors linking the various units act as a form of spinal column. Parking space surrounded by trees is allotted to each pavilion and is set outside. These car parks can be extended laterally should the need arise.

This system allows for maximum extension and sets up extremely agreeable working conditions, as each unit forms an individual and intimate whole on a human scale. By setting up installation cores in each pavilion, it has been possible to cut down movement and this holds good as regards the distance between the workpoints and car parks.

The pavilions are lit by strip windows 1.20 m wide set 1.20 m above the floor. This ensures good lighting and an agreeable view on to the inner courtyard directly accessible from each pavilion. All these courtyards have trees, walks, tables and chairs.

At the present time 4 production and 4 administrative pavilions have been built.

The central core contains the reception hall, the lounges and the dining-rooms.

On the north side there is a small entrance for visitors. As the workers are of paramount importance in this complex, this entrance is in no wise monumental in character and is allowed no more importance than the others; dungarees are as important as white collars, for no distinction is made between workers and staff.

Construction

The pavilions consist of curtain walls of thin strips of aluminium surrounding an asbestos core. The enamel work outside consists of vertical strips of electric blue and Pader blue. The interior is a pale, almost, duck-egg blue. These strips have been called the thinnest in the world for they are only 7.94 cm wide, and yet their insulating properties are those of a 40 cm brick wall and they provide good protection from the severe Minnesota winter. These 1.20 m wide panels are carried by vertical aluminium profiles. Neoprene joints make for watertightness and are used for attaching the window elements and parapets. These window elements (1.20× 6.90 m with a window strip of 1.20 m for a production unit and 1.20×7.50 m with two window strips for administration) are the cheapest of their kind. The projecting 2.5 m aluminium supports make for variation in the blues depending upon the angle from which they are seen. In this way monotony is avoided for the complex will look different as distance and seasons vary. Looking at it from a long way off, it seems to be one dark strip of blue linking the green of the countryside with the sky; in winter the pavilions contrast with the snow.

The interior spaces have been geared to the occupants. This is true of the colours even: the walls of the production pavilions are light blue as are the ceilings so as to avoid a stifling and prison-like effect. The visible metal structure is painted white. The machines making electronic brains are dark blue. The 20–30 containers for machine parts allotted to each workpoint are in six colours and the play of the latter varies like a mosaic in the course of production.

The offices also have the same light colours and here the focal points of colour are the waste-paper baskets and the desks. Two large corridors separated from the workpoints by partitions of tinted glass and glazed on the side of the inner courtyards lead to the canteen, where the workers and staff members meet. Continuity is thus assured. Walnut flowerbaskets separate the cafeteria from two lounges; the kitchen is in the middle of the canteen. All the walls are a dark, tobacco-coloured clinker. The hanging electric lights lend a warmer light to the canteen than that given by the strip lighting in the work areas.

In one of the administrative pavilions there is a lecture room and an auditorium to seat 160 where films can be shown.

All the areas except the points where heat is employed in production are air-conditioned.

The complex of low buildings is sited in rolling country and covers 56,292.4 m².

Helmut Hentrich
Hubert Petschnigg

Unilever High-rise Building in Hamburg

(pages 431–432)

Site and Flow

This building has been constructed between Dammtorwall, Valentinskamp and Caffamacherreihe. It will be 76 m high and its three wings have been planned to open out in three directions. The building is sited near the north-east boundary of the land and this allows for generous dimensioning towards the south-west. A private drive leads from Dammtorwall to the entrance. This drive passes under the building and is taken up on a ramp to the basement storey, where there is a staff car park and the service entrances.

Construction

The plan takes the form of an equilateral triangle, the core being a reinforced concrete tube, to which the various ceilings are attached by means of steel supports and girders. The force of the wind is taken by the core, the foundation of which is a raft whereas the supports will have individual foundations.

Architectural Design

The basic idea was to supply a freely divisible working-area set round a service core. Much of the lofty ground floor is glazed, which renders the core clearly visible. This will be faced with stone throughout its height. The upper floors have uniform elevations consisting of metal frames and windows set behind the horizontal slats acting as sunbreaks.

Organization

The ground floor will form the reception hall and waiting-area. There are 3 wings of offices, each adjoining the core and having a large office at the end. The office space is continuous and can be partitioned off at will. The core contains 6 lifts, one goods lift, 3 emergency staircases, lavatories, a porter's office with a lift for documents, a tea-kitchen, a utility room and the supply leads (water, drainage, air-conditioning, electricity, telephone).

In addition, there is a cafeteria on one floor (staff self-service canteen), a staff restaurant on another and another two storeys for technical purposes. The machinery is housed in a roof superstructure. In the basement there will be an auditorium with subsidiary rooms which will be reached from the ground floor by way of an independent staircase. This floor will also house the central files, goods reception, store rooms and technical plant.

Hecker, Hornschuh and Kiechle

Achern Town Hall, Black Forest

(pages 433–434)

Site

The town hall, the centre of the municipal administration, stands by itself on the market square, which is fringed by low buildings. These block the untidy building going on in the outskirts from view. The town hall has been set against these lower buildings and faces the main street, so that there is a continual change in spatial relationships as one goes round the square building.

Traffic

Apart from this main street, cars are not allowed to move through the square. When the weekly market is held, the stands are set round the town hall.

Organization

The most frequently used offices (taxes, land registry office, bureau of vital statistics) are reached directly from the entrance. The council chamber is higher and is on the first floor. The second and third floors are grouped round a central hall and on them are the mayor's office, the main administrative offices, finances, the registry office, the clerk of works and the social services.

Construction

Steel and ceilings of reinforced concrete supported on the ground floor by reinforced concrete pillars and as from the first floor suspended from an external metal structure. This allows the council chamber to be free of supports.

Otto Apel and Hannsgeorg Beckert, Gilbert Becker

Indoor Swimming-bath in Mainz
(pages 435–440)

Planning begun: October 1959
Building begun: September 1960
Period of construction: 19 months

In the course of the festivities to celebrate the 2,000th anniversary of the foundation of Mainz, the first indoor swimming-bath to be built there since the time of the Romans was opened (14 April, 1962).
The site chosen seemed to be a suitable one despite its narrowness and the difficulty of finding firm ground for the foundation, because the fact that it was next to the already existing open-air baths made it possible for them both to be centrally supervised and joined in summer.
As the swimming-bath is in a new residential district near the university, slipper and remedial baths have not been provided.
In the region around Mainz there are several competitive pools and for this reason no expensive grandstands and platforms have been built. The final programme adopted is capable of being used as a prototype for a swimming-bath for sport and recreational purposes and will meet any town's requirements.

Capacity

The swimming-bath has been planned for a town of 150 000 inhabitants. It is expected that it will be used by 375,000 people in a year. The following, therefore, have been planned:

66 cabins
190 lockers
10 personal cabins
180 places in the common changing-rooms, $^2/_3$ of which are for men and $^1/_3$ for women.

Project

Full use has been made of the sloping land. The basement contains the entrance hall and the rooms for plant, the upper level contains the changing-rooms and the pool. The entrance is below the road and the pool is favourably sited facing south-west at the height of the lawns round the open-air swimming-pool.

The checkpoint is at the beginning of the entrance hall and movement subsequently is automatic.

The section containing the changing-rooms and showers is blind on the exterior. Light comes from skylight domes and a central inner courtyard.

Equipment

A 15×25 m multi-purpose pool ranging in depth from 1.10 to 3.5 m.
A 7.5×15 m pool for tuition.

As they have been sited one after the other, the large pool begins with a relatively deep section. In order to obtain a gentler shape for the bottom no 5 m diving-board was installed. This makes the hall seem agreeably high and helps towards good acoustic properties and the cutting down on costs.

400 seats can be placed round the pool when competitions are being held; these seats are accessible from a separate entrance.

Materials

All pools, floors und walls have been faced with ceramic products. Every ceiling is in the form of an arrangement of light metal slats in order to insulate and reduce noise.

Colours

These are discreet: light grey for the floors, chocolate brown for the partition walls, white for the ceilings; the outer walls of the changing-rooms are bright red to stress the spaciousness of volume.
Movement and dazzle on the water make it impossible to use a multitude of colours in a swimming-bath. It is for this reason that the colours are discreet. What are necessary are large areas of colour and strong contrasts.

Technical details

Volume of large pool	920 m^3
Time taken to change water completely	5 hours
Volume of tuitional pool	110 m^3
Time taken to change water completely	2 hours

Open filter with 3 chambers and 45 m^2 filtration surface.

Ventilation

3 areas:
a) Swimming-bath:
Continuous circuit system – air taken along the glazed surfaces, intake through the ceiling.
b) Showers:
Intake and exhaust via the ceiling.
c) Changing-rooms:
Closed circuit system – intake of air at the ceiling, taken off at the lockers. In summer ventilation is effected naturally. For this purpose the glazed walls of the inner courtyard have been made in the form of sliding doors through which the air can enter – this is then taken off at the ceiling, using apparatus for this purpose. This ventilation produces little or no draughts. The pool requires 2,400,000 Kcal/h for heating, ventilation and the warming of water.

Heating

2 coke burners,
1 oil burner.

Lighting

The ceiling and walls of the swimming-bath are lit indirectly with a light strip working in conjunction with the ventilation channels. Swimming is therefore dazzle-free.

Cost of construction

Preparatory work on site	52,000.– DM
Construction of building	2,907,000.– DM
Equipment and plant	1,135,000.– DM
Work outside	190,000.– DM
Subsidiary construction costs	410,000.– DM
Apparatus and maintenance appliances	71,000.– DM
	4,765,000.– DM

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