Accès en voiture aux garages, à la station service avec pompes à essence et à l'hôtel par des rampes partant de routes internes au terrain qui débouchent perpendiculairement sur la route de transit.
Hôtel: (Convention-Commercial-Hôtel): Grand nombre de locaux communs: salles de conférence et de banquets, restaurants, rôtisserie, bars, restaurant public, 6 jeux de quilles; au sous-sol: piscine, sauna, massages; au rez: magasins, bureau de voyage.
Arrivée à l'hôtel en voiture, réception de la clef, indications pour le parcage, montée directement en ascenseur à la chambre.
Etage courant de l'hôtel à plan triangulaire avec les escaliers dans les angles et des couloirs courts; noyau central comprenant 4 ascenseurs publics, 1 ascenseur de service, des offices (raccordés directement aux cuisines centrale située au premier niveau), dépôt de literie, cheminées et de canaux d'installations; 18 chambres par étage facilement transformables en appartements. Les 2 derniers étages grouvent les appartements de l'hôtel.

Enrique de la Mora y Palomar, Mexico-City
Conseiller pour les calculs statiques: Leonardo Zeevaert
Collaborateur: Alberto Gonzales Pozo

**Administration d'une compagnie d'assurances-vies à Mexico-City**

(pages 355–358)

Programme:
Administration, bureaux à louer (= bâtiment principal; 1200 $m^2$ de surface de planchers par étage), locaux sociaux pour employés (dans la superstructure), magasins à louer (au niveau de la route).
Installations et circulations logées dans deux piliers creux portant toute la construction. Parkings au sous-sol. Archives et centrale téléphonique au niveau de la toiture entre la structure très haute portant l'immeuble de bureaux.

Construction:
Mexico-City se situe sur un lac séché préhistorique; or le sol est très mauvais. Bien des bâtiments de toute époque se sont tassés irrégulièrement, écroulés ou fendus. Donc l'ingénieur cherche à concentrer les charges vers des surfaces minima (deux piliers creux qui portent deux sommiers faisant pont auxquelles est suspendue toute la construction).
Fondations: 55% de la surface totale du bâtiment: radier à caissons contenant des réservoirs d'eau et du lest pour équilibrer le bâtiment (dimensions: hauteur: 3,50 m; situé 7 m en dessous du niveau de la route). Ce type de fondations remplace le système à pieux habituel qui est très coûteux. Pilieux principaux creux (dimensions: surface: 5,70×5,70; épaisseur des parois: 35 cm).
Sommiers longitudinaux (dimensions: longueur: 40 m; hauteur: 5 m; épaisseur: 60 cm). La structure intermédiaire y est suspendue: poutre à treillis métalliques transversales (dimensions: longueur: 28 m; hauter: 3 m; épaisseur: 35 cm). La construction tendue visible en façade est fixée aux extrémités des poutres à treillis.
Le restaurant situé librement à cinq m au-dessus des sommiers de la couverture se compose de 11 cadres en béton (portée: 17 m) et d'une couverture en forme de chaînette pour éviter les appuis vertiaux à l'intérieur du volume.

F. W. Kraemer, Brunswick

**Salle de fêtes des usines de couleurs Hoechst**

(pages 359–366)

Premier projet entre deux guerres. 1960: concours (Aalto, Le Corbusier, Eiermann, Jacobsen, Kraemer, Nervi, Rainer, Weber, Zehrfuss): 4 projets rendus seulement à cause du délai d'éxécution trop court; ces mêmes raisons font donner la commande de construire au 2ème prix (Kraemer).
Effectivement, ce bâtiment a été inauguré en janvier 1963 ce qui demandait un effort d'organisation remarquable. Cependant, les bâtiments exécutés en si peu de temps ne peuvent pas présenter les qualités d'un ouvrage bien étudié.
Cet édifice doit servir à des manifestation culturelles pour les employés des usines Hoechst, mais il joue aussi le rôle d'un monument qui marque le centenaire de cette entreprise (actuellement 53000 employés).
Ce bâtiment unique doit se distinguer des nombreuses constructions industrielles tout autour.
Ces considérations ont mené à l'idée de cette coupole (forme concentrée) sous laquelle se trouvera la salle polyvalente. Ce voile repose seulement sur 6 appuis entre lesquels il forme des arcs de cercle de 44 m de portée pour ainsi conserver la plus grande relation avec l'extérieur. Un cylindre de verre intérieur de 6 m de haut assure l'isolation phonique et thermique.
Installations fixes de la salle de fêtes: tribunes avec 1000 places, scène de 250 $m^2$ avec équipement technique. Pour détruire ni le volume pur intérieur de la coupole, ni la forme extérieure simple du bâtiment, on crée un sous-sol, une sorte de socle de la coupole, qui abrite tous les locaux annexes en bonne liaison avec la salle principale: vestiaires pour 3000 personnes, dépôt de meubles, vestiaires des champions de sport, loges des artistes, restaurants, cuisines, salles de réunion et de conférences, dépôt de matériel, chauffage, climatisation etc.
En exploitant la pente naturelle du terraine, on obtient un éclairage du jour pour l'entrée. Entre la route et l'édifice se trouve une grande aire de stationnement qu'on essaie d'animer par des arbres et de la verdure ainsi que par la grande allée de piétons bordée d'arbres, des fleurs et de drapeaux (plus tard, cet accès mènera à un stade qui sera construit lelong de la face est du niveau du socle sous la coupole).
Des escaliers de 8 m de large donnent directement accès à la plate-forme (en été, c'est par là qu'on parviendra directement dans la salle de spectacles).
Un pylône posé sur la plate-forme, visible de très loin, s'oppose à la forme cossée de la coupole et marque les entrées.

Construction:
Premier projet:
Construction du socle et de la coupole en éléments préfabriqués (délai d'exécution court). Le voile de 86 m de diamètre et de 24 m sous le sommet (dimensions répondant au programme) est composé d'éléments hexagonaux: barres et replissages préfabriqués, assemblés sans coffrages et sans échafaudages (Finsterwalder).

Projet définitif:
Coupole: construction traditionnelle d'un voile à double coffrage, coulé sur place.
Socle: construction indépendante des 6 appuis de la coupole ainsi que des infrastructures nécessaires à la scène et aux tribunes. Champs de 8 m×8 m, sommiers préfabriqués (largeur 40 cm, hauteur 95 cm) avec 7 ouverture rondes de 55 cm de diamètre pour le passage des conduites non prévue à l'avance. Cette solution répond à la nécessité d'entreprendre le gros-œuvre avant même de posséder un plan définitif et sans aucune indication fixe d'un technicien (chauffage, climatisation, électricité, sanitaires, etc).
Plan sommaire: double circulation en croix de 7.50 m de large accessible en véhicules; au centre sous la scène: noyau comprenant les vestiaires des artistes, toilettes, locaux techniques; dépôt de sièges et tables; à l'est: vestiaires publics, caisse, administration, jeu de quilles, salles de réunion, presse; à l'ouest: restaurants, cuisines, installations techniques.
Constructions fixes à l'intérieur de la coupole: tribunes pour 1000 personnes (monte de 2.60 m à 7.60 m) au-dessus du niveau de la salle; construction à deux voiles abritant la climatisation, structure principale: 6 cadres en V en béton; voile inférieur en sommiers principaux coulés sur place, sommiers secondaires et remplissages préfabriqué; voile supérieur formant les gradins: construction réticulée greffée sur les cadres.
Scène à cintre en deux parties avec un noyau de circulation verticales et d'installations.

Variantes pour l'utilisation de la salle:
Agrandissement possible de la salle pour 2500 spectateurs; agrandissement de la scène par une avant-scène de 750 $m^2$; palais de sports avec place de jeu centrale de dimensions maxima 23 m × 45 m.
Pour des raisons phoniques, il fallait monter un plafond suspendu comprenant l'éclairage, la climatisation et l'isolation phonique ainsi que la cabine de projection et allant jusqu'au cadre de la scène pour conserver l'idée d'un seul grand volume. Depuis n'importe quel point de la salle ou du foyer, on garde l'impression d'un voile simple. Les accès de la salle et du foyer situé tout autour se font par des escaliers larges passant sous les tribunes; ces escaliers partent tous du niveau inférieur pour aboutir dans de différents points de la salle.

Matériaux:
Béton brute pour toute la structure principale; acier pour la structure secondaire; verre, bois, métal léger et surtout des matières synthétiques fabriquées aux usines Hoechst pour les détails. Il s'agissait d'appliquer d'une manière démonstrative les matières comme le »Hostalite Z« (plafond lumineux du niveau inférieur, plafond acoustique de la salle de spectacles, couverture de la coupole).
L'exécution d'ensemble est très robuste en vue d'une forte usure due au grand nombre de personnes qui fréquenteront ce bâtiment.
Couleurs: naturelles (béton gris, aluminium argent, bois brute pour escaliers et sols, lin beige clair pour rideaux) blanc pour les surfaces en matière synthétique, rouge pour le revêtement des sièges.
Eclairage: niveau inférieur et vestiaires très clair: grandes plaques lumineuses (tubes de néon) pour éviter un trop grand contraste avec la lumière à l'extérieur; salle de fêtes: lumière douce par points suspendus à lampes électrique, éclairage atténué général du plafond. Ainsi, l'attention du public est dirigée vers le lieu d'action qui sera éclairé par des projecteurs.

## Summary

Skidmore, Owings, Merrill, New York

**The Administrative Building of Reynolds Metal Company**

(pages 326–331)

The building is situated in Virginia, to the north of Richmond. The whole structure is marked by a perfection which can only be obtained when the architect is supported whole-heartedly-financially and creatively.
The general exodus from the city is noticeable here. Lower prices and a freedom of limitation allow for a more imaginative conception. Here it is possible for a modern administration building to be surrounded by landscape gardens and terraces, ponds and trees.
The main problem was parking for 1000 employees. There is no public transport out to the site. Another problem was catering for the huge staff.
The strict orientation of the building is particularly striking from the East. Two equal-sized parking areas (450 cars) lie on either side of a large pond which serves also as a reservoir. Broad roadways, interspersed with water-paths run parallel to the pond and allow direct and immediate access to the main entrance.
One's first impression is of the convincing simplicity of the entire conception. The sub-divisions of the slate-tiled parking area are carefully matched to the rhythm of the columns in the first floor. The richness of color and structure in this area provides the necessary transition from the wooded surroundings.
Ground floor: Reception hall with display units, information counter, seating units facing the inner court, some of the employees rooms, public rooms, dining-rooms for officials; the space is divided imaginatively and underlined by excellent furniture, a well-placed selection of paintings and rich curtains in striking colors.
Congress hall for 140 persons with adjoining offices and projection room; the ceiling is in reflecting aluminium, the seating units (variable) in dark blue.
1st and 2nd floors: The floor space is divided in like fashion without intermediary columns.
The roof-terrace has a solarium and a rest area for personnel.
Basement floor: Technical installation, technicians' rooms, first-aid, kitchen, coffee-bar, cafeteria, the most cheerful and unconventional room in the whole building, looking out over an intimate terrace.
Construction: Ground-floor columns are aluminium-clad. In the upper and roof floors are free girder columns on mullions (centre to centre 2,05 m.). The rigidity of the system is ensured by the soldering of ceiling panels to the top boom and by the conventional installation cores, four in number, at the corners of the inner court. Taste and restraint in the aluminium elements is evident, particularly in the reflection of the colorful surroundings in the façade.
Floors: Entrance flagstones: terra cotta; inner court: set in squares of water, greenery and trees.
Sun-breaks on upper floors towards the inner court; vertical strips (5.20 m. high, 50 cm. broad) of aluminium (eloxal) give a refreshing air with their greys and blues.
Ceilings are in luminous aluminium. The color scheme: grey, white (principally); orange, yellow and blue.

Hans Volkart, Erika Albat, Kurt Höschele, Stuttgart
Willy Motsch, Kurt Voegele

**Offices of the BASF in Stuttgart**

(pages 332–339)

In the conception of this structure the architect has succeeded in representing the large and cosmopolitan attitude of the enterprise. This he has done by carefully proportioned use of sober building materials, dominated by a sense of urban integration, avoiding the "cosmetic façade" in favour of meaningful understatement.

The 19th Century conception of "representation" prescribes a symmetrical façade, an effective profile, solid and dignified material. In this façade the main entrance is asymmetrical, there is no "profile" in the older sense of the word and the choice of building elements strives for lightness and precision rather than for weightiness and dignity. The nevertheless "noble" impression engendered by the construction seems, however, close to the idea of "representation".

The building is situated in a 19th Century villa quarter which is gradually being transformed into a business centre. The outer appearance corresponds successfully with the inner structure.

Programme: Ground floor: glass, slightly set back; one secondary entrance giving access to the rented offices. 1 principal entry, reception desk, display hall and the central core containing the lift complex and secondary offices. This is seen as an independent plastic unit.

5 Office floors: recessed roof-floor contains special offices.

Construction: Aluminium façades with a suggestion of relief through the overlapping of panels and glass sections.

The ground-floor is slightly set back and is left open, the curtain-wall not extending to the ground.

The offices are traditional yet capable of division and sub-division so as to offer a maximum of possibilities. Nothing is sensational, everything functional. The offices measure 1,875 m. from axis to axis. In each axis is a steel-concrete support which permits the addition of dividing walls at each axis.

The building is orientated lengthwise on a North-South axis. Interior sun-shades (strip), high pressure air-conditioning and induction units are of interest, especially the preference for interior sunshades which indicate that the outer skin's smoothness was felt to be an aesthetic necessity.

The building houses the sales department for Baden-Württemberg. As such it is careful to avoid the tinsel of the economic miracle in post-war Germany; indeed, it is proof of aluminium's beauty when employed properly. Architect and firm are to be congratulated on the ensuing dignified impression which implies a spiritual attitude and not false presumption.

The building is in the wake of a development from the USA. It indicates what can still be achieved with the means developed there but, at the same time, it emphasises the point that not only the means but also the application are of vital importance.

Eerko Virkkunen, Helsinki

**Insurance Company Administrative Building, Helsinki**

(pages 340–343)

The project is the result of a competition among four architects.

The building is not in the City of Helsinki proper but some 2 miles to the north. This is because the administrative activities of an Insurance Company do not demand a central position and, secondly, because building regulations are more flexible outside the City Centre.

At street-level are entrances, printing plant and store-rooms; on the first level index area and data machines, reception hall and normal offices.

Floors 2–9 contain office units grouped round a central corridor system which in turn houses technical appliances. Executive offices are on the 10th floor, workers' canteen and restroom on the 11th. On the top floor are technical installations, a sauna and a terrace with a fine view over Helsinki. This top floor is recessed.

The building's two volumes, parallel to the dwellings and perpendicular to the main road to the north, are problematic. A more efficacious solution might have been to allow the lower unit to run under the tower section.

P. Schneider-Esleben, Düsseldorf
Associates: D. Hoor and J. Ringel

**Administrative Building of the Commerzbank, Düsseldorf**

(pages 344–347)

The new building is situated beside the old in the administrative centre of Düsseldorf. The original plan – to link the two buildings by means of a tunnel – had to be abandoned owing to a previous subway plan and communication was ultimately achieved by means of a pedestrian bridge over the street.

Building regulations rendered impossible the building of this bridge at right angles over the roadway and the original interior strong-point was built out tower-wise and used as a support for the hanging bridge.

The twelve-floor office building overlooks the Kasernenstrasse at its narrow point, in contrast to the neighbouring buildings.

Several drive-in shelters are to be built at ground level; the need for ample maneuvering room at ground-floor level results in a minimum of construction elements: three concrete supports which bear the weight of the entire construction and extend down into the foundations. The rear, where sanitary installations and fire-escape are to be found, serves as a wind-break. The tower unit rests on a separate foundation. Here vertical communication and ventilation equipment are to be found. In the normal floors concrete beams are cantilevered from the middle support as ceiling bearers. The concrete parapets are necessary for fire protection and for extra perimeter support. The office rooms can be sub-divided by thin wall screens.

The tower-unit and the office-building skeleton are constructed in reinforced crude concrete and rough northern pine in varying breadths.

The suspension bridge is steadied by two steel cables and covered by plexiglas in order to emphasize the delicacy of the construction. The glass may be cleaned by means of a car which travels the length of the bridge.

The hanging aluminium façade was specially designed for the Commerzbank. Carosserie production methods inspired a departure from the common façade which necessitates as many as 10 different profiles and a countless number of soldered joints, connections etc. At a price 20 per cent less than normal, three metal sheets were preferred. These are completely flat and, including the window units, consist of three work pieces. These panels are in addition heat-resistant. All joints are neoprene, as are window fixtures. Sun-breaks on the inside of the windows are also reflectors which reduce heat between glass and within the building proper.

Horizontal slits on the roof element reduce wind-resistance.

Parking facilities for 200 vehicles are at subterranean and ground-level.

Paul Wolters, Hanover

**Office Building of the Office of Agriculture in Hanover**

(pages 348–349)

During the war the office buildings of the Office of Agriculture were destroyed. Once scattered all over the city, the offices will be concentrated on a site near the station.

The centre has 4 to 5 stories. A public roadway crosses the site on the south. Structures of 5 floors on the periphery of the site in harmony with the already existing complex of roads and buildings (ground floor facing of slate, that on upper floors of sandstone). High-rise building of nine floors on piles in V shape under which runs the public roadway; north-south orientation to permit better integration in the skyline of the city. Connecting buildings: long concave building on two levels (entrance, telephone central, area for vending machines, conference room) and short building on three levels. The best feature of this part is a grassy inner courtyard tied in optically with the surrounding gardens.

Construction details:

Foundations: standard except for the high-rise part which has two separate foundations on account of the roadway passing underneath.

Walls: reinforced concrete skeleton, masonry interstices, outer walls of masonry, slate facing, also sandstone and blocks of red sandstone for the high-rise part of glass. Construction of the high-rise building: V pilings (axial distances: 8.60 m. between pilings, 4.30 m. between the other pillars).

Installations:

High-rise building: 2 fast lifts, 1 goods lift (kitchen), 1 documents lift, 1 waste shaft. 5-storey buildings: 2 staff lifts.

Werner Stücheli, Zürich
Associate: Theo Huggenberger

**Hotel and Administrative Building of an Automobile Firm with large Garage and Service Facilities, Zürich**

(pages 350–354)

The growing importance of the automobile requires urgently that sales and service be located in the centre of the city rather than on the outskirts. The ever-increasing price of land, however, has resulted in a separation of service stations for urgent repairs and the large workshops on the outskirts for more leisurely cases. Consequently, Franz AG of Zürich abandoned their original plan for a central service station and opted for a smaller station for urgent repairs in the centre of the city, leaving major repairs to the extensive workshops in Wettwil, 10 kilometers outside the city, utilising the land rather for a hotel.

Building programme:

Stage 1 (1/4 of the available area); Basement and ground-level: display area;

First floor: Sales rooms and accessories;

2nd, 8th and 9th floors: Administration, publicity and printing;

3 basements (made possible owing to exceptional soil properties): Garages, archives, air-conditioning and heating plants;

3rd to 7th floors: Offices to let;

Top floor: Fresh air circulation plant.

Construction:

Slabs, basements and foundations in reinforced concrete, supports (reduced to a minimum) in steel.

Air-conditioning by high speed Luwa system with narrow shafts.

Floor-to-floor communication via three main and three subsidiary lifts, special lifts for documents and pneumatic post communication system.

Façades: windows aluminium with Alsec insulation, reinforced glass: thermic insulation via foam-glass. Weather-protection by means of slanted aluminium panels. Sun-shades.

Stage 2

1st level: service station with flat roof, forming an interior court with flower-beds; accessible by means of stairways and ramps from the road.

Cars have access to the garages, service station and petrol pumps via ramps leading off from internal roads which join the main road perpendicularly.

Hotel – the Convention-Commercial Hotel:

Characterised by a great proportion of public rooms, conference rooms, dining halls, grill-room, bars, public restaurant, 6 skittle alleys; in the basement there will be a swimming-pool, sauna and massage: on the ground floor, shops and tourist bureau. The arriving guest drives straight up to the reception desk, picks up his key without getting out of his car, is allotted a parking place in the basement and proceeds directly to his room via a lift.

To give the hotel a slim appearance the building is triangular with short corridors; the stairwells are placed in the corner. The central core contains four lifts for guests, a service lift, offices connected to the central kitchen in the first storey, laundry, chimneys and installation shafts. On each floor the 18 rooms are easily converted into apartments or double-rooms.

The apartments proper are in the two top floors. In the attic floor will be a grill-bar with a view over the city, lake and mountains.

Enrique de la Mora y Palomar, Mexico City
Consultant for the static calculations: Leonardo Zeevaert.
Associate: Alberto Conzales Pozo

**Office Building of a Life Insurance Company in Mexico City**

(pages 355–358)

Programme:

Management offices, office space to let (main building: 1200 m² of floor surface per floor), public rooms for employees (in the superstructure), shop premises to let (on roadway level).

Installations and lines accommodated in two hollow pillars supporting the entire structure. Parking facilities in the basement.

Records and telephone central at roof level between the very lofty girders above the offices.

Construction:

Mexico City is situated on the bed of a prehistoric lake; the ground is extremely bad for building. Many buildings of all periods have settled at crazy angles, have collapsed or crumbled. Therefore the construction engineer attempts to distribute loads on minimal surfaces (two hollow pillars in this case); these pillars support two girts constituting a bridge on which the entire construction is suspended.

Foundations: 55% of the total surface of the building: coffer bed containing water and ballast to steady the building (dimensions: height: 3.50 m., situated 7 m., above roadway level). This type of foundation replaces the ordinary piling system, which is extremely costly. Main pillars are hollow (dimensions: surface: 5.70×5.70; thickness of walls: 35 cm.).

Longitudinal stringers (dimensions: length: 40 m.; height: 5 m.; thickness: 60 cm.). The intermediate structure is suspended on them: transverse steel lattice girder (dimensions: length: 28 m.; height: 3 m.; thickness: 35 cm.). The tensile construction visible in the face is fixed at the ends by lattice girders.

The restaurant sited five meters above the roof stringers is composed of 11 concrete frames (span: 17 m.) and a linked top to avoid vertical supports on the interior of the building.

F. W. Kraemer, Brunswick

**Festival Hall at Hoechst Dying Works**

(pages 359–366)

The first project for such a building dates from the period between the two World Wars.

In 1960 a number of leading architects were invited to tender projects (Aalto, Le Corbusier, Eiermann, Jacobsen, Kraemer, Nervi, Rainer, Weber, Zehrfuss). In view of the extremely short time limit – the building had to be completed before the end of 1962 – only four projects were submitted. Zehrfuss was adjudged winner but, because of the time factor, Kraemer's project was adopted.

The building was in fact opened in January, 1963. While this is proof of remarkable organization it remains doubtful whether a building completed in such short time can be a first-class example of post-war German quality.

The construction is designed as a festival hall for the Hoechst works. At the same time, however, it serves to commemorate the centenary of the enterprise which today employs 53,000 persons. For this reason the building had to stand out from the surrounding industrial constructions.

These considerations led to the idea of a cupola above the many-purpose hall. This veil rests on only six supports, forming 44 m. arcs between them in an attempt to preserve an intimate relationship to the exterior.

Acoustic and thermal insulation is achieved by an interior glass cylinder (20' feet high).

The permanent installations include seating accommodation for 1000 guests, a 250 m² stage with the necessary technical adjuncts and – in order to retain the unity of the dome and the simplicity of the exterior – a basement area which contains all offices pertaining to the hall. These include cloakroom facilities for 3000, furniture store, changing rooms, artists' dressing rooms, restaurants, kitchen facilities, conference rooms, store-room, heating and air conditioning unit etc.

By judicious exploitation of the slope of the surrounding terrain it was possible to highlight the entrance to the hall. Between the hall and the road is a large parking area which has been brightened considerably by the addition of trees and grass. The broad pedestrian alley is also lined with trees, flowers and flags; later this alley will lead to a stadium constructed parallel to the festival hall at the same level as the hub of the cupola.

In the summer guests have direct access to the hall via 25' foot stairways. A high pylon on the platform below the dome indicates these various entrances and sets off the construction as a whole.

Construction:

The hub and the cupola are constructed of pre-fabricated elements. The planned 86 m. in diameter veil, 24 m. below the apex is composed of hexagonal elements; pre-fabricated filling panels and beams were assembled (Finsterwalder) without framework and scaffolding. (Initial project.)

(Definitive Project): traditional construction of double-form cupola, poured in situ. The hub is an independent construction: six supports from the cupola and additional sub-structures intrinsic to the stage and the seating area. A support system with a module of 8×8 m. was adopted. All frame units have 7 circular openings, each 55 cm. in diameter, for installation cables and heating pipes.

The hub-floor was planned roughly as follows: 2 main halls in both directions creating a double cross. The core was utilised for stage requisites, artists wardrobes, toilets, technical units. The eastern segment of the double cross contained public cloakrooms and box-office, executive rooms, skittle alleys; the southern segment for conference and pressrooms; the western segment for restaurants and kitchens; the northern for technical installations.

The seating area inside the dome (1000 persons) rises from 2.60 m. to 7.60 m. above the level of the hall. The double-veiled construction is of 6 V-shaped concrete beams: the main supports in the interior veil were fabricated in situ, the secondary supports and paneling pre-cast; the outer veil which forms the steps of the foundation is constructed of reticles attached to the beams.

The stage is in two parts with a central area housing technical installations.

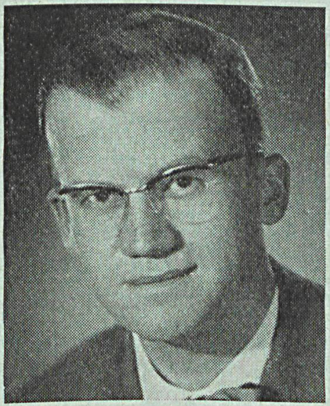
The following variations are possible in the use of the hall: possible enlargement to house 2500 spectators; enlargement of the stage to provide a 750 m² proscenium; sports arena with 23 × 35 m. central area.

For acoustic reasons it was found necessary to construct a raised platform comprising lighting units, air-conditioning, sound insulation and the projection unit. This platform extends to the stage in order to preserve the idea of a single volume. From any point in the hall this impression is maintained. Access to the hall and to the foyer is by means of large stairways from beneath the auditorium.

Rough concrete is used for the principal structure; secondary structure is in steel; minor points of structure are carried out also in wood, glass, lightweight metals and, above all, in synthetic materials from the Hoechst works. The use of Hostalite Z for the luminous ceiling of the lower level, the acustic ceiling of the hall proper and the covering of the cupola, is a case in point.

The general execution is robust in view of the many visitors to the hall. Colors are natural – grey concrete, silver aluminium, natural wood for stairways and floors, beige curtains, white for surfaces in synthetic material, red for seat coverings.

The lighting in the lower level and the changing rooms is very bright: large luminous panels (neon tubes) to avoid too direct a contrast with outside. In the hall the lighting is soft, occasionally suspended (electric lamps). In this way the public's attention is focused on the scene of the action which is spotlighted.

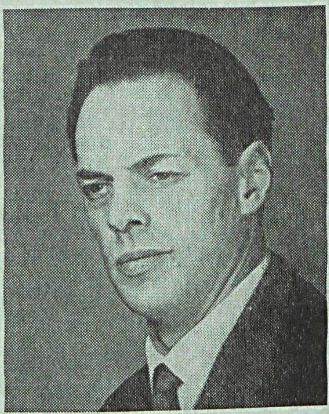


**Paul Wolters**

Geboren am 9. November 1913 in Papenburg, nach dem Abitur Besuch der Technischen Hochschulen Hannover und Charlottenburg, Schüler von Tessenow und Assistent bei Fiederling, 1937 Diplom-Hauptprüfung und 1940 »Regierungsbaumeister« Berlin, 1940 bis 1945 Soldat und Kriegsgefangener. Seit 1945 Architekt und jetzt Oberregierungs-Baurat in Hannover.

Wichtigste Bauten:

Studenten-Wohnheim, Hannover / Mensa der Technischen Hochschule Hannover / Niedersächsisches Wirtschafts- und Verkehrsministerium / Niedersächsisches Landesverwaltungsamt (Hochhaus) / Landwirtschaftskammer Hannover / Untersuchungshaftanstalt Hannover / Niedersächsisches Justizministerium Hannover.



**Eerko Virkkunen**

Geboren in Helsinki 1924, Architekturstudium an der Technischen Hochschule zu Helsinki, Abschluß 1954, Studienreisen in mehrere europäische Länder. Eigenes Architekturbüro seit 1954.

Wichtigste Bauten:

Wohn- und Geschäftshaus Torinportti, Kouvola / Bürogebäude der Versicherungsgesellschaft Aura / Kirche von Leivonmäki / Zusammensetzungsfabrik für Kraftwagen, Karjaa / Wohngebäude Neljäs Linja 17–19, Helsinki / Gemeindearbeitszentren Heinola und Lempäälä / Bankgebäude, Vammala, Kelloseppäkoulu, Tapiola / Wohnhäuser und verschiedene Industriegebäude.

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Geboren 1907 in Guadalajara (Mexico), studierte an der Escuela Nacional de Arquitectura, der Universidad Nacional Autonoma de México von 1927 bis 1931, 1933 erhielt er das Diplom, 1934 Privatpraxis. Vom 1931–1934 Architekt der Gebäudeabteilung des Verkehrsministeriums, 1934–1935 Architekt der Gebäudeabteilung des Gesundheitsministeriums, 1934–1935 Professor für Entwerfen am Polytechnischen Institut, 1943–1945 Professor für Entwurf an der Architekturschule Escuela Nacional de Arquitectura der Universidad Nacional Autonoma de México, 1956–1959 Professor für Entwurf an der Architekturabteilung der Universidad, Iberoamericana, México, D.F., 1946 Staatspreis für Architektur des Kulturministeriums.