



THE CATHEDRAL OF CINEMAS

The completed project of the Arcadia multi-projection hall, created by the architectural studio of Giancarlo Marzorati in Sesto San Giovanni, includes nine cinema halls, eight of which twin halls (four completed and four still being built). Each of these can seat 220 people with a further larger hall with a seating capacity of 630. Also under the cover of the large hall there is an outdoor cinema for 1200 people which can be reached from the outside by an independent stairway.

The façade of the building, located in the area where the Tudor factory produced car batteries, had to take the existing urban reality into account; the architecture (classical elements such as archways, the wood in the entrances, the coatings and many more) had to avoid the creation of an abstract composition; the architects wanted to bind it tightly to the history of the city, as the portico, the stairway, the piazza, the gallery would suggest. The industrial warehouses were knocked down and to seal the underlying lead-rich ground, a layer of bentonite was placed to make the ground impermeable. The foundations of the complex were based on a network of 1300 cement pillars thus avoiding excavations and underground constructions. The main structure consists of pre-fabricated cylindrical cement pillars, roofing tiles, buffering panels with granite surfaces in Zandobbio marble.

Every part of the building has been developed to correspond with the idea of a 'hall for entertainment and films': a huge machine for cinema to be discovered gradually as one proceeds inside and continues through the various areas that are integrated horizontally and vertically with openings, transparent and prospective views. The involvement of the spectator begins outside the structure with the external columns that support the arch shaped panels interrupted by the entrance hallway with a huge area enveloped by the transparency of the glass allows outsiders to taste the magic in this building. The external arched porti-

co supports the upper piazza: an area of 1500 sq.m. open to the sky, placed at a height of 5 m above ground and accessible to the general public by an external stairway. From this piazza, also accessible from the projection rooms, the stairways which lead to the open-air arena, which is likely to be used for events, meetings and entertainment during the summer months.

The entrance gateway is integrated with the communication areas carved out of the areas underneath the stairs - here we find the shops, two bars, a restaurant, a bookshop, a video-store and an emporium where one can find everything related to the cinema and its culture. Again on the ground floor, we have the four main entrances placed in positions directly opposite to one another.

On the upper floor, where the escalators, the panoramic elevator and the traditional stairways come to an end, there is the lobby for access to the various cinema halls; and here the spectator, with his ticket and seat booked through a computerized system at the ticket desk, is directed as the show begins. A ray of light guides him here from the ground floor with recognition of the hall by means of each one: the four smaller halls are called Fire, Water, Earth and Air, the larger one is Energy. Structurally the five halls are adjacent but each one is completely independent, with separate partitions and covers; this also applies to the foundations, which are not joined in any way to avoid negative acoustic interference. All the halls are built along the lines of the gradual amphitheater of different heights, starting from a more accentuated height difference, which are progressively reduced, and which takes on the primitive shape of a spoon, allowing perfect generalized vision. The ceilings of each hall have been treated with an unalterable synthetic fiber.

In addition to the spatial investigation, the technological aspect is fun-



damental which will distinguish the operations of this futuristic projection center. Each hall is fitted with the very latest equipment for film projection and sound diffusion. The projection plants - for 35 and 70 mm films, were produced by Cinemeccanica, also involved in the perfection of the automatic projection system that allows the same film to be shown in several halls at the same time, and they are fitted with Dolby, Dts (Digital Theater Systems), Sony processors for the digital reproduction using sound-diffusers and Elettrovoce special effects by Texim, with amplification and cables used for the sound diffusion was supervised by Cineproject Italia. The definition of the positions and the orientation of the diffusion system was installed according to plans by LucasFilm that issued the Thx certification for the quality of the sound, acoustic and environmental quality. The screens measure 18x9.55 m for the smaller halls, while in the larger hall it measures an exceptional 30x16.5 m, the largest - produced in Perlux, in a single sheet with no joins.

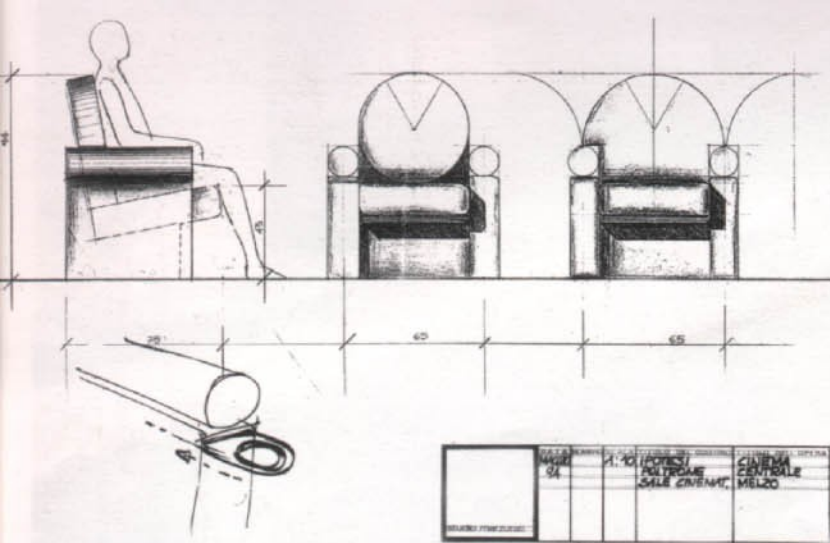
The lighting system for the complex was created by 3M that produced the new Olf system (Optical Lighting Film) for both the halls and the projection rooms. Olf also involves a limited use of cables and necessitated low energy consumption.

In the entrance hall there is a series of candle-like tubes each five meters high. They are coated with a film that transports light by total reflection along the entire length of the tube. The light sources of the Olf system have been used to a lesser degree to illuminate the halls; the lateral stairways and the back of the armchairs are also lit with this sy-

stem that, not being invasive gives low-level lighting that can be used during the projection to guide the public when they have to move around in the dark.

From the entrance lobby it is possible to see how the Arcadia machine ticks. The projection cabins are visible through the transparent fire-proof glasses which face the public allowing them to be party to the movement of the films, the action of the projector, the plants for acoustic reproduction and all the maneuvers required for the success of a show.

Sound-proofing has been inserted between adjoining halls and outside the various halls. Each hall is fitted with its own air-conditioning plant; the inside of each hall is covered with polyester fibers, Fiberfon by Biobyte. These fibers are produced with a biocompatible processes and replace the natural and artificial mineral fibers; the sound-absorption treatment was finished with a Liuni fabric in fire-proof elasticized polyester, similar to velvet, and in the areas closer to the ground that are subject to greater deterioration, with flat sheeting treated with anti-reflection paint. All the other materials chosen for the complex are also bio-compatible: wood, inert materials, glass, polyester, water-based glues; the use of carpet in the halls has been restricted to the stairs and the area in front of the screen, the flooring used under the armchairs is pvc with veneered with cherry wood (Liuni). Even the plant of air conditioning, supplied by Panzeri, has been studied to guarantee the maximum level of air exchange, even with partial recycling depending on the number of people in the hall.



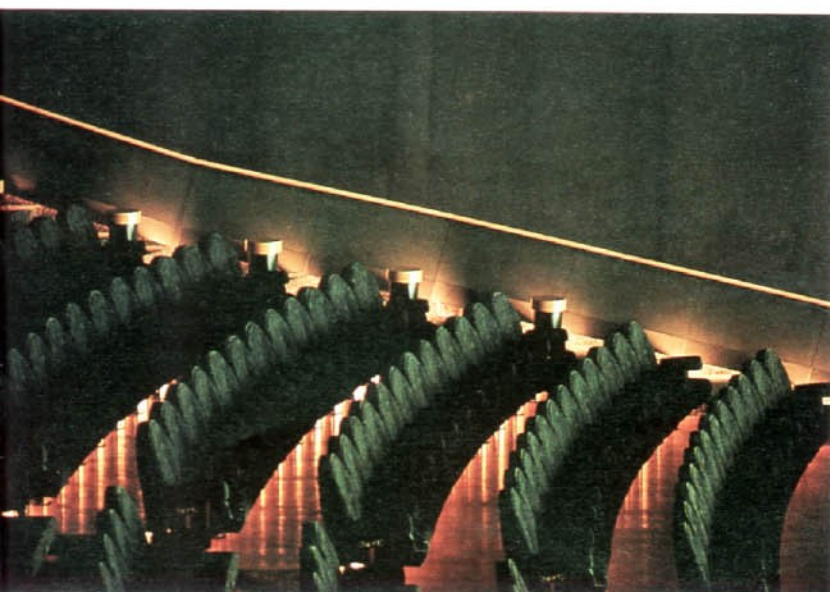
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CONTRACTOR

La realizzazione progettuale e la direzione lavori dell'intera opera è stata affidata all'architetto Giancarlo Marzorati, che con i suoi collaboratori di studio in Sesto San Giovanni, realizza strutture architettoniche con diversa destinazione d'uso. La torre sospesa e tonda di Sesto San Giovanni, edifici per il terziario come le sedi delle società Novell, Oracle, At&t e Alitalia di Sesto, progetti di sedi bancarie e strutture sportive e per il tempo libero sono solo alcuni degli importanti progetti realizzati in trent'anni di carriera. L'ultima impresa nella quale l'architetto si è cimentato è appunto Arcadia, con la quale si è specializzato nella realizzazione tipologica della multisala: grazie all'esperienza affinata è stato chiamato a operare per il progetto di altre sale cinematografiche e teatri, sia per il recupero e il frazionamento che per costruzioni ex novo.



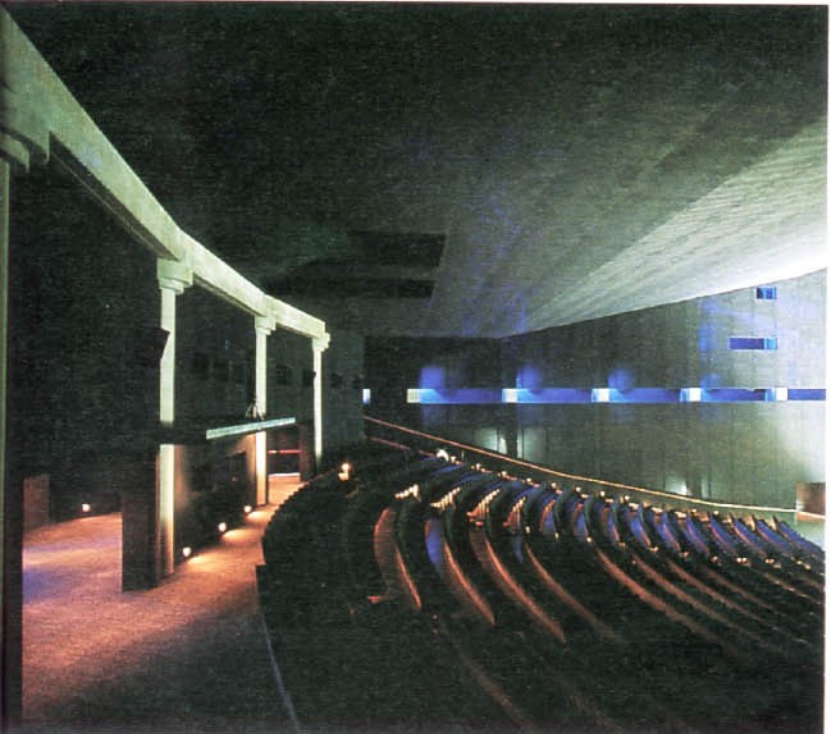
The project and the supervision of the operations was entrusted to the Architect Giancarlo Marzorati. With the people who work with him in the studio in Sesto San Giovanni, near Milan, he designs architectural structures for a wide-range of uses. The suspended and round tower of Sesto San Giovanni, buildings for contracting out to companies like Novell, Oracle, At&t and Alitalia of Sesto, plans for bank headquarters and sports and leisure centers are just some of the important projects he has completed in the three decades of his illustrious career. And his latest masterpiece was Arcadia. With this project he specialized in the realization of multi-projection halls; thanks to his highly specific experience, he has been called on to design other cinemas and theaters - both for re-development or fractionating of the existing units and for brand-new constructions.



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COMMITTEE CLIENT

L'imprenditore di Melzo Piero Fumagalli, 50 anni, sognava un cinema perfetto: questo è sicuramente l'input principale che ha dato inizio alla colossale operazione Arcadia. Il furore creativo, il coraggio, una grande conoscenza tecnica del cinema, la sfrenata passione nata quando fin da ragazzo si cimentava a proiettare in casa, sono stati il motore di questa grande scommessa costata (il budget è stato sforato di pochissimo) poco più di 20 miliardi. Questo faraonico progetto era già in embrione nell'inconscio di Fumagalli quando, nel 1979 rilevava sempre a Melzo un cinema, trasformato poi in una doppia sala. In tutte le scelte operate ha perseguito, in perfetta sinergia con l'architetto Marzorati, l'obiettivo di presentare il film nel migliore dei modi, dimenticando la strategia commerciale per offrire al pubblico un prodotto il più possibile di qualità. A constatare il grande successo significativo è il bacino d'utenza che interessa buona parte della Lombardia e dell'Emilia, con lunghi tempi di prenotazione.



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The entrepreneur from Melzo, Piero Fumagalli, 50 years of age, always dreamed of the perfect cinema and this was almost certainly the main driver behind the colossal operation that resulted in Arcadia. The creative fury, the courage, the depth technical knowledge of cinema and related subjects, an unbridled passion which began when he was still a child had him projecting films at home - but it was the combination of all these factors that fueled this huge personal challenge which cost slightly in excess of 20 billion lire (slightly over the budget). This colossal project was lying dormant in Fumagalli's mind when he took over a cinema in Melzo in 1979, transforming it into a two-hall complex. In perfect harmony with Architect Marzorati, he strove towards his objectives of presenting films in the best way possible, leaving the commercially-based strategies behind, giving absolute priority to the presentation of the films with the best sound and projection quality. As confirmation of the enormous success of his enterprise is the enormous catchment area that includes a large part of Lombardy and Emilia, with long advanced booking times.



Ph. Federico Brunetti

Sedute Arcadia

Nella multisala Arcadia, il meglio del comfort, direttamente apprezzabile dal pubblico, è dato dalle poltrone, realizzate in esclusiva, su progetto dell'architetto Giancarlo Marzorati, da Destro, collaborativa azienda del padovano che ha saputo interpretare al meglio gli input non solo formali ma anche tecnologici che ruotano intorno a un prodotto così innovativo.

Sicuramente l'aspetto più insolito è dato dal supporto della poltrona, supporto dotato di un diffusore di aria condizionata che viene immessa nella sala rendendo individuale il microclima, liberandosi con una velocità molto ridotta, quasi impercettibile, intorno a ogni singolo spettatore, assicurando così un'elevata garanzia di igienicità.

La forma avvolgente ed ergonomica contrasta con una certa rigidità della linea sedile-schienale, concepita per permettere tempi lunghi di fruibilità: schienale alto per consentire l'appoggio della testa, sedile basso per l'allungamento delle gambe, grazie anche al distanziamento tra le file di 130 cm da schienale a schienale (la poltrona è profonda 80 cm). Il largo appoggio per le braccia e un portaoggetti per il contenimento di bicchieri sono requisiti che fanno concorrenza alla poltrona di casa; concepita con materiali non nocivi, ha una struttura completamente metallica, lo schienale è provvisto di cinghie elastiche con imbottitura in poliuretano autoestingente stampato con alveoli per garantire maggiore comfort, il tessuto di rivestimento è il tipo Trevira con lavorazione jacquard, antigraffio, simile alla ciniglia. Infine, con una differenza di altezza fra una fila e l'altra che varia da 10 a 40 cm e lo sfalsamento degli schienali, la visuale dello schermo è sempre completamente libera.

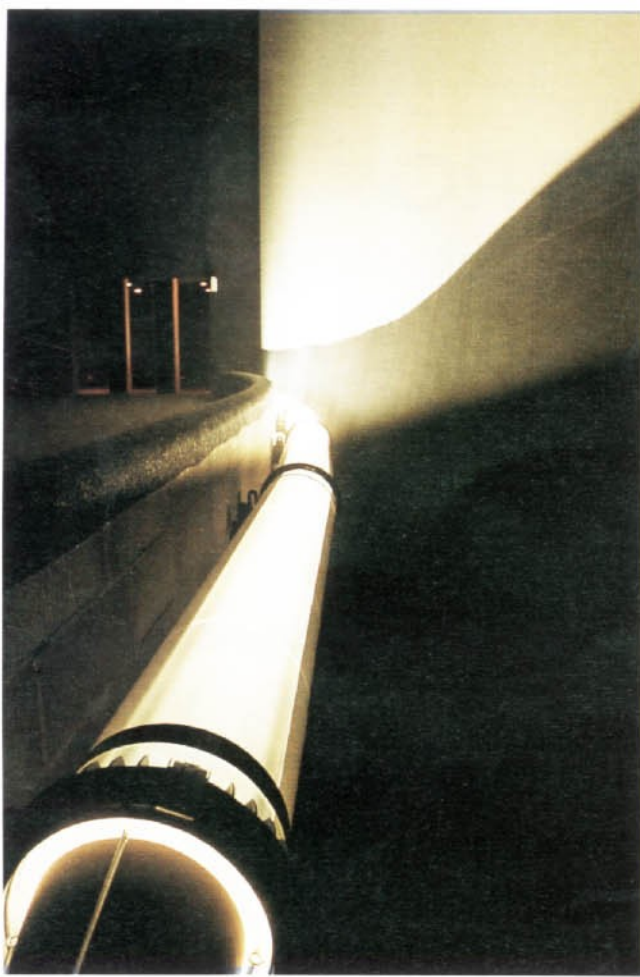
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In the multi-hall Arcadia, maximum comfort is provided by the armchairs, and don't the public just love it! They were produced by Destro - a company near Padua - in exclusive, on a project by the architect Giancarlo Marzorati. The company provided first class input not only on the formal aspects but also the technological content that rotates around such an innovative product.

Unquestionably the most unusual aspect is the armchair frame, which is fitted with an individual air-conditioning device that can be used to adjust the immediate micro-climate. The air is released around each spectator at such a low speed that it is almost imperceptible, producing a high guarantee of hygiene.

The comfortable ergonomic shape contrasts with the rigidity of the seat-backrest, designed for prolonged sitting times: the high back-rest means that the head can be rested, the low level of the seat means that the legs can be stretched out, in the ample space between each rows - 130 cm from backrest to backrest (the armchair is 80 cm deep). The large armrest and the tray for a drinking glass are details which allow this innovative unit to compete with the armchair at home; manufactured with non-toxic materials, it has a metal frame, the back-rest is fitted with elastic belting which supports padding in fire-resistant polyurethane molded with open cells to provide greater comfort. The cover fabric is snag-proof Trevira with jacquard design and an appearance similar to chenille.

And finally, thanks to the height difference between one row and the other - ranging between 10 and 40 cm, and the alternation of the position of the backrests, the spectator is guaranteed a clear view of the screen.



The lighting-viewing project for the multi-hall Arcadia proved to be extremely complex and sophisticated, supervised by Vittorio Storaro with Fabrizio and Francesca Storaro. It goes without saying that special light fittings were required, some of the most avant-garde technological devices on the market.

For this reason the commissioner Piero Fumagalli called-in 3M, the multinational company that operates in a number of sectors. In the past it perfected a fiber optic illumination system which was originally used on the motorways. This illumination system is based on the use of a film with a prismatic cross-section - called Olf (Optical Lighting Film) which is then wrapped around a pipe. It had already been used to illuminate Leonardo da Vinci's 'Last Supper' in the Refectory of the Church dedicated to Santa Maria delle Grazie and is ideal for this purpose because it provides light without producing heat.

In the specific case of Arcadia, the objective was to provide minimal lighting in a room that was basically in complete darkness. The light had to create as little disturbance as possible, but at the same time would allow the spectators to move as easily as possible. So guiding lights were developed. They looked like long light bulbs, invisible to the naked eye but which provide powerful light. The prismatic section of the Olf film conducts the light that originates from a sodium-based light source located at one end (inside the tube itself) allowing the diffusion of the light along the entire length. This has a two-fold advantage: on the

one hand it provides homogenous, constant light, on the other, low-tension light sources which saves energy with good yield.

The technology of the guiding lights is the only type of illumination used for the projection halls, but it has also been used in the lobbies in combination with another system to produce a particularly scenographic effect.

A series of guiding lights, 100 mm in diameter, have been installed under the rows of armchairs; these are fitted with low tension sources. These serve to light the floor and help orient the spectators. At the side of the halls we have two lines of guiding lights which highlight the stairs and outline the shape of hall. These lateral devices are 16 meters long in the smaller halls and 24 meters long in the main hall where there is also a third additional device.

For general illumination, large runs have been used 300 mm in diameter. The lightbulbs are Sulfur Lamp, sulfur vapor lamps of 1000W. In this case, the light guides are placed directly below the screen, hidden by a flat shield level with the flooring transforming the screen into the unquestionable protagonist. A total of 12 runs are used for each of the smaller halls and 47 in the larger halls. Eight 'candles' were used in the foyer; they were designed specifically for the purpose and were created from transparent tubing of 200 mm diameter and are 3.5 meters high which contains the Olf film. At one end of the candle there is an inclined mirror that directs the light beam to the center of the room providing 360° lighting.