



NEW ARCHITECTURE

SPORTS FACILITIES

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MEAZZA-SAN SIRO STADIUM

GIANCARLO RAGAZZI AND ENRICO HOFFER

ESTADIO MEAZZA-SAN SIRO

In the summer of 1990, Italy was for a moment the most emotionally charged of world sports. The attention of all the football fans in the world was focused on one of the most important sporting events of our times, the football World Cup, which aroused so much passion. In the event of this type of event, the Italian football federation provides a perfect opportunity for the host country to renovate its sports infrastructure, modernising its installations as much as possible. Italy's experience of hosting the 1990 World Cup provided the occasion for a complete renovation of the stadium, the reconstruction of three new stadiums, and the remodelling of nine other existing facilities in the most important Italian cities. For two months these cities were the setting of

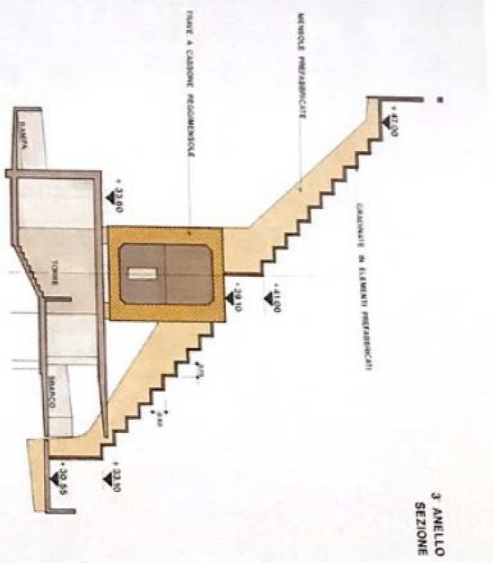
some of the most emotionally charged moments in the recent history of football. After eleven years, the stadium was to be renovated because of the cost and time involved. Milan City Council decided to modernise the existing Meazza-San Siro stadium, which was thus added to the long list of stadiums remodelled for this important competition.

The stadium has a long history starting with the original structure built between 1925 and 1926 on the initiative of the industrialist Piero Pirelli. During the years that followed, the stadium was renovated and enlarged on various occasions. The present day stadium is, therefore, representative of the history of Italian sport. The original Meazza Stadium had four stands

built out along the four sides of the field and seating for 35,000 spectators. In 1955 the stadium was renovated to accommodate 55,000 spectators by enlarging the end stands, and by inserting four curved corner sections linking the existing stands. In 1964, a much more radical renovation was carried out by the addition of a second tier of terraces resting on a support structure running round the outside of the original stands. This extension brought the theoretical capacity of the stadium to 80,000 spectators. The actual figure was later reduced to 80,000 to comply with safety regulations. The most recent reform, which took place during the summer to prepare the venue for the World Cup, not only dealt

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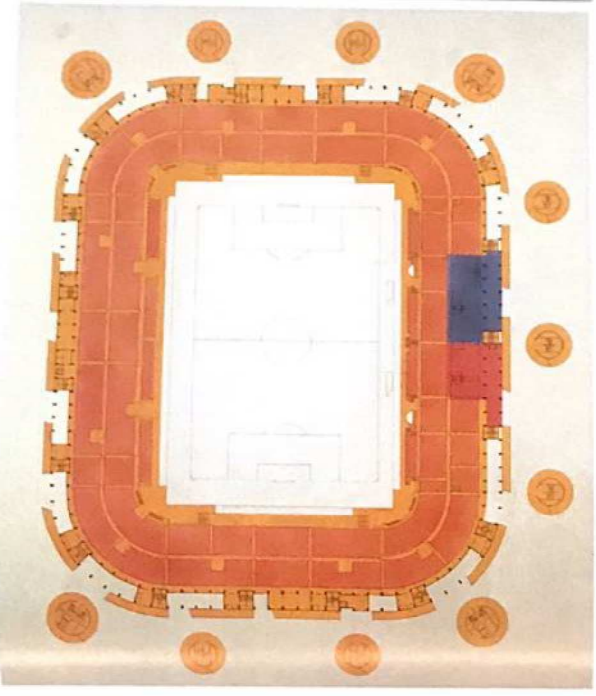




3 ANELLO SEZIONE

Cross section of the third ring of seats

Plan of the stadium showing the arrangement of the eleven support pillars



with aspects relating to the capacity of the stadium, but also took into account other considerations which went beyond merely economic and sporting dimensions. They made the stadium a truly versatile facility capable of fulfilling the cultural, social and recreational needs of the city, including the representation of every type of entertainment spectacle. This much more ambitious project affected the formal and functional aspects of the structure and considerably extended the range of its possible uses.

This reform was carried out under the direction of Enrico H. Architects Gruppo, these two architects have followed the same paths. Both received degrees in Architecture from the Politecnico di Milano in 1963 and began their careers with the Gruppo Architetti, working with Marvelli and Possa. During this initial phase of their professional career, both architects worked on projects of great importance: projects for 4,000 housing units (1963), Milan 2 Square for 10,000 occupants (1970), and Milan 3 Baggio for 11,000 occupants (1975). Other interesting projects by this team include television production facilities in Madrid, Milan and Rome, shopping centres and office buildings in Milan, and a large number of houses in numerous national and international conferences and workshops in architecture. In 1967, their experience and reputation won them the commission to expand and renovate the Meazza stadium for the company which owns the Milan Athletic Club, A.C. Milan. The stadium was inaugurated in 1991.

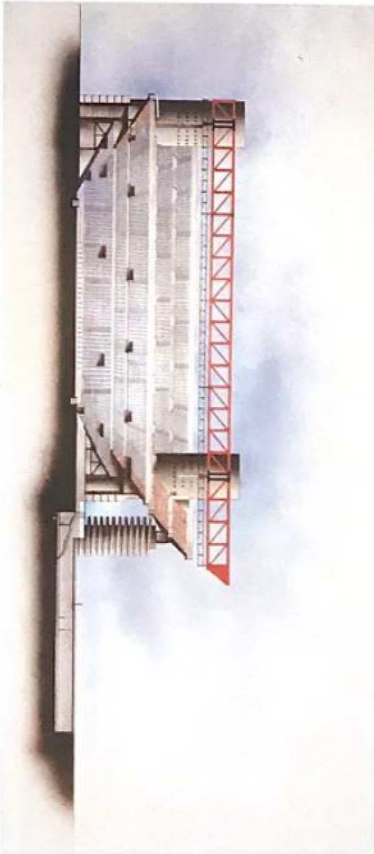
The site of the existing stadium could not be enlarged by taking over adjacent land since all the sites around the building

had been developed. Thus the only option open was a vertical enlargement which would not directly affect the surrounding urban fabric. One of the fundamental considerations which had to be taken into account, however, was the relationship between the stadium and the urban fabric and its skyline, as well as the need to create a new urban environment dominated by high-rise developments and private houses with gardens. It was, therefore, necessary to create a design which would reconcile technological and architectural innovation with the urban environment. The design was marked by assistance (represented by continuity), and dissonance (owing to the technological innovation) in the traditional language of a football stadium.

The Meazza '90 project consisted in the addition of a third level of terraces increasing the total capacity of the stadium to 85,000 seats. The celebration of the

World Cup obviously led to a massive increase in the number of spectators who would not directly affect the surrounding urban fabric. One of the fundamental considerations which had to be taken into account, however, was the relationship between the stadium and the urban fabric and its skyline, as well as the need to create a new urban environment dominated by high-rise developments and private houses with gardens. It was, therefore, necessary to create a design which would reconcile technological and architectural innovation with the urban environment. The design was marked by assistance (represented by continuity), and dissonance (owing to the technological innovation) in the traditional language of a football stadium.

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ance of the new stadium, an in-depth analysis of the structure and function is certainly in order. These towers, which were constructed to hold a pragmatic objective, have become the emblematic, esthetic, and functional elements of the stadium. They define the work because of their form, their scale, and formal configuration and give it its individual personality. The four corner towers stand perpendicular to the top level in order to support, in addition to the weight of the new stands, the new roof structure. These monumental columns are, therefore, the present made the stadium strengthening the structural coherence between the interior and exterior.

In addition to their role as support elements, these columns contain the stairs leading up to the new stands, which are completely independent from the access

structural elements of the building. That is, the towers and external facades. The use of this material contributes to the building's appearance of continuity and wholeness.

The positioning of the towers, supporting the two-tier structure of the third level, the line of the canopy and the curve of the spiral ramps, moving and rhythmic, and material dialogue with the existing structure, without leaving any doubt as to the new roof's function, which have affected massive modification.

Perhaps the most daring and innovative element of this project is the roof. The structure is supported by the towers. It protects all of the stands and ensures that all the spectators are sheltered from the event of adverse weather. The major load in the roof is a completely different from those used in the other parts of



Detail of the new tower and roof structure.
Detalle de la torre nueva y estructura del techo en metal fabricado.

roofs to the older part of the structure. In the design of these towers, the architects took into account both aesthetic and functional aspects of the existing structure, and the new structure emerged by many of the architects' decisions. Since the 1955 renovation, the entire exterior facade had been defined by spiral ramps—rising with a 10° grade, and while defining the main connecting element of the structure, which resembled a huge staircase, construction of the new structure. The architects used this device as a formal model for defining the aesthetic of the new structure, without, however, altering the appearance of the old structure, which was well integrated into its urban environment. For the same reason, continuity was maintained in the use of reinforced concrete for the first match of the World Cup. In

addition to using a completely different material in the roof, the architects chose to paint some of these spiral ramps in shades of red to match the metal structures in the lower part of the building. Like the towers, therefore, the roof plays both a functional and esthetic role, making it one of the most important elements in this project.

From this short description it can be seen that the appearance of the San Siro Stadium is the result of a recent expansion and renovation project which, from the point of view of architecture and composition, is part of a continuous process of evolution of the building. From the functional point of view, it is clear that the architectural project have been simply modified. This has resulted in a structure which was an appropriate site for the

En el verano de 1990 Italia fue por primera vez una céntrica intencional de la dirección deportiva mundial. Las miradas de todos los aficionados de la fútbol estaban dirigidas hacia uno de los equipos más importantes de la actualidad: el Campionato Mundial de Fútbol. Los arquitectos de la estructura, un equipo de arquitectos y ingenieros, se enfrentaron a una tarea muy difícil: la renovación de un estadio que, desde su construcción en 1925 y 1926, ha sufrido a lo largo de los años sucesivos transformaciones y ampliaciones que han hecho de él un espacio contemporáneo y al mismo tiempo representativo de la historia del deporte italiano. Originalmente, el estadio de Mazzini se proyectó con cuatro gradas rectilíneas con capacidad para 35.000 espectadores. En 1935 se amplió esa capacidad hasta los 55.000 espectadores aumentando la grada sur y se le dio un aspecto más moderno. Años más tarde, en 1954, se realizó una transformación mucho más radical al ser construido un segundo anillo de gradas apoyado en una estructura per-



Detail of the new stadium showing the spiral ramps and the existing structure.
Detalle de una de las torres nuevas y estructura existente del edificio.

luna, que a lo largo de los meses han sido escenario de los más emocionantes encuentros futbolísticos. Una tercera de este estadio que, construido entre 1925 y 1926, ha sufrido a lo largo de los años sucesivos transformaciones y ampliaciones que han hecho de él un espacio contemporáneo y al mismo tiempo representativo de la historia del deporte italiano. Originalmente, el estadio de Mazzini se proyectó con cuatro gradas rectilíneas con capacidad para 35.000 espectadores. En 1935 se amplió esa capacidad hasta los 55.000 espectadores aumentando la grada sur y se le dio un aspecto más moderno. Años más tarde, en 1954, se realizó una transformación mucho más radical al ser construido un segundo anillo de gradas apoyado en una estructura per-

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The new extension to a solid, open, layered concrete structure.

The structure of the mental model affects and influences all the operations.

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bierto, al igual que las fuerzas externas, posee una responsabilidad histórica, política y económica que la convierte en uno de los elementos clave de la agenda de los elementos desafiados de la

De hecho lo dicho anteriormente se des-
prende la conclusión de que la economía
actual del mundo está sufriendo una
revisión de los valores fundamentales
evaluado de forma fundamentalmente
nueva que desde el punto de vista social
manera y composicion, se puede ver
del edificio de la historia evolutiva que la historia
del edificio de la historia evolutiva. Y desde el
punto de vista de la historia evolutiva, se puede afirmar
que los cambios previos a la revolución
delo hacia los que resultan desde las
transformaciones, tales como los cambios
transformaciones.

