VOL. 11, NO. 1 (2025)

THE INDUSTRIALIZATION OF CONSTRUCTION IN THE SECOND HALF OF THE XX CENTURY

TEMA
Technologies
Engineering
Materials
Architecture

e-ISSN 2421-4574
DOI: 10.30682/tema1101

Cover illustration: MBM factory in Trezzano sul Naviglio (Milan), Italy.

TEMA
Technologies
Engineering
Materials
Architecture

e-ISSN 2421-4574
ISBN online 979-12-5477-596-7
DOI: 10.30682/tema1101

Vol. 11, No. 1 (2025)
Year 2025 (Issues per year: 2)

Publisher:
Ar.Tec. Associazione Scientifica per la Promozione dei Rapporti tra Architettura e Tecniche per l'Edilizia
c/o DICATECH - Dipartimento di Ingegneria Civile, Ambientale, del Territorio, Edile e di Chimica - Politecnico di Bari
Via Edoardo Orabona, 4
70125 Bari - Italy
Phone: +39 080 5963564
E-mail: info@artecweb.org - tema@artecweb.org

Publisher Partner:
Fondazione Bologna University Press
Via Saragozza 10
40123 Bologna - Italy
Phone: +39 051 232882
www.buponline.com

TEMA: Technologies Engineering Materials Architecture
Vol. 11, No. 1 (2025)
e-ISSN 2421-4574

POST-WORLD WAR II PREFABRICATION AND INDUSTRY IN CENTRAL-SOUTHERN ITALY: TWO CASE STUDIES, IN CAMPANIA AND LAZIO

Stefania Mornati, Laura Greco, Francesco Spada

TEMA Technologies Engineering Materials Architecture
e-ISSN 2421-4574
Vol. 11, No. 1 - (2025)

DOI: 10.30682/tema110013

Abstract

The paper presents two emblematic examples located at the extremes of the most significant phases of building industrialization in Italy. The first example, in Campania, is the *Pozzi Ginori* complex in Sparanise (1960-1963) by Luigi Figini and Gino Pollini; the second, in Lazio, is the *IBM Italia* factory in Santa Palomba (1979-1984) by Marco Zanuso. These industrial complexes both belonged to a program for the industrial development of the most disadvantaged socio-economic areas in Italy. These two industrial plants, resulting from studies by well-known designers, represent the transition from formal and technological experimentation to an adaptation to standard production. They involve the whole project and the construction site and are characterized by the concentration of various innovative aspects, such as the treatment of finishing materials and a sophisticated relationship between building typology and landscape context.

Keywords

Industrialization, Figini and Pollini, Marco Zanuso, Italy, Factories.

Stefania Mornati*
DICII - Dipartimento di Ingegneria Civile e Ingegneria Informatica, Università degli Studi di Roma Tor Vergata, Roma (Italy)

Laura Greco
DINCI - Dipartimento di Ingegneria Civile, Università della Calabria, Rende, Cosenza (Italy)

Francesco Spada
DINCI - Dipartimento di Ingegneria Civile, Università della Calabria, Rende, Cosenza (Italy)

** Corresponding author:*
e-mail: mornati@ing.uniroma2.it

1. INTRODUCTION

These two case studies mark the extremes of the most relevant phases of building industrialization in Italy. They summarize the developments of this theme in the field of factory buildings, represented on different scales, from design and construction experimentations to innovation in the treatment of finishing materials, and the exploration of the relationship between the production site and the landscape in transformation.

The *Pozzi Ginori* complex in Sparanise (1960-63) took shape in the early Sixties, within a framework characterized by the use of components inaugurating the development of prefabrication in the industrial sector after the spread of French systems in the residential field. On the one hand, the mature phase of the Seventies and Eighties marked the profile of the *IBM Italia* factory in Santa Palomba (1979-1984), where relationships replaced the minute scale of construction detail with the surrounding landscape. On the other hand, the settlement scenario was common in Central and Southern Italy, where the process of industrialization was slower than in other areas, and the distance from the poles of Northern Italy was more marked. The *Pozzi Ginori* complex in Sparanise was, in fact, part of the industrialization program developed by the *Cassa per il Mezzogiorno* for the socio-economic and industrial growth of the regions of Southern Italy, such as Abruzzo, Molise, and some areas of Lazio and Marche, through the establishment of public and private industries. The district of Sparanise, in the countryside of Caserta, was one of the active hubs in Campania and hosted some episodes of significant construction

interest [1]. It is worth mentioning, as contemporary experiences of the *Pozzi Ginori* production site – all based on the use of reinforced concrete and with a widespread presence of prestressed solutions – the *Siemens* factory in Santa Maria Capua a Vetere (1961-62) by Antonio Antonelli and Manfredi Greco, with the structural consultancy of Elio Giangreco and Giuseppe Giordano, the SIAG (*Società italiana per la produzione di agglomerati di sostanze vegetali o minerali*) plant with housing and social services (1962) by Angelo Mangiarotti and Aldo Favini in Marcianise, up to the subsequent cases of the *Olivetti* factory of Edoardo Vittoria and Marco Zanuso (1968-70), also in Marcianise, and the *Kodak* factory in Caserta (1976) by Gigi Ghò and Favini. These works «constitute the tangible testimony of the unexpected confrontation of the most cultured Milanese circles, with the inviolate territories of the *ager campanus* ("costituiscono la testimonianza tangibile dell'inatteso confronto, tra gli ambienti nilanesi più colti, con i territori inviolati dell'ager campanus")» [2].

On the other hand, the architectural project designed by Zanuso for *IBM* belongs to the *ager romanus*, which was part of the process of constant and often disorderly growth that, since the Sixties, has involved the suburban areas of the capital. Some rare autonomous demonstrations of architecture for the industry stood out in an area populated by an anonymous building fabric. For example, the *Reliability and Qualification* building of the large *Enea Research Center* at Casaccia, by Gregotti Associati (1985-88), belonged to this category. It was the only other space for work in those years in the Roman area that critics recognized. The building was qualified by the elegant simplicity of the solution that resolved the theme of the amorphous, full-height container typical of laboratories. This was also the context of the Santa Palomba complex, located in a south-eastern area of the Roman countryside, which housed an industrial sector of about 100 hectares, thanks to the good connections and opportunities offered by the capital's market.

In addition, an element that united the two factories was the Milanese cultural matrix of the designers. Their influence extended throughout the country, intervening to varying degrees in the Italian debate on the industrialization of construction and marking the two settlements with the stylistic features of the different cultural seasons to which they belonged.

The first, by Figini and Pollini, coincided with the founding phase of rationalism and modern construction in Italy, whose influences supported developments in the post-war period; the second, by Zanuso, corresponded to the later debate and the mature formation of the scenarios of the second half of the twentieth century, connotated by the theme of industrialization.

The consultation of bibliographic sources, investigation in public archives, and the archives of designers and companies, which preserve the original materials of the projects and the site documentation, allow for reconstructing some currently unpublished aspects relating, in particular, to the technical and construction peculiarities of the works.

Finally, both cases show the relationship between the designers and the industrial sector. The designers are attentive to the market's needs and are often directly involved in the study and production phase of the industrialized component. Also, they are interested in experimenting with the possibility of renewing the architectural language through the adoption of new ways of building and adherence to the updating of production processes. Companies are oriented toward confirming the validity of construction systems by reducing time and costs and showing sensitivity to the renewal of the image.

The study is part of a project funded by the European Union – Next Generation EU – PRIN 2022 "Light prefabrication: knowledge, monitoring, and redevelopment of the architectural heritage of the second half of the twentieth century in the regions of Calabria and Lazio".

2. THE *POZZI GINORI* COMPLEX IN SPARANISE (1960-1963)

In the Italian architectural and construction experimentation conducted in the Fifties and Sixties, modular roofs with standard spans between 15 and 20 meters assumed importance in the industrial building sector. They distinguished those situations where the processes of structural conception and morphogenesis of space were combined in a synthesis in which «the structure

results as a form of expression» [3]. In these cases, the designers translated the structural theme into a construction matter affecting the functional flexibility and the adaptability of the planimetric layouts, as well as the environmental factors (lighting and internal ventilation). The technique of prestressed reinforced concrete supported this research and suggested solutions for larger spans, finding, from the mid-1950s, applications in cast on site and prefabricated roofs using thin vaults, sheds, and domes schemes [4].

The *Ceramica Pozzi* complex (1960-63) in Sparanise, near Caserta, belonged to this background. It occupied an area of about 850,000 m^2 and was realized according to an urban architectural plan to ensure the conservation of large pre-existing green areas. The creation – with the material from excavations – of an artificial hill, and the composition – through recurring techniques and materials – of the buildings were comprised in a master plan aspiring to invest «the land with itself» and to give «a new face to the landscape of Caserta» [5] (Fig. 1).

The master plan and the architectural project were developed by Luigi Figini and Gino Pollini, who here expanded their architectural research on the industrial spaces outside the *Olivetti* microcosm of Ivrea, where they had worked since the 1930s. Silvano Zorzi and Gianluca Papini developed the structural design, while technicians of the engineering society *Tekne*, headed by Carlo Rusconi Clerici, took care of executive planning and supervision of the works. The complex was built by the company *Sogene*. Gianluca Papini was the pivotal figure of the group, which interacted in that period both with Figini and Pollini and *Sogene* itself for collaborations, including the *Avon* factory in Olgiate Comasco.

The Sparanise complex consisted of four industrial groups, briefly called "Vernici", "Laminati", "Calandrati" and "Ceramica", which were flanked by the buildings of the common services (central offices, workshop, and entrance). Each building was planned on the basis of functional requirements with specific technical-construction schemes and details without losing the system-

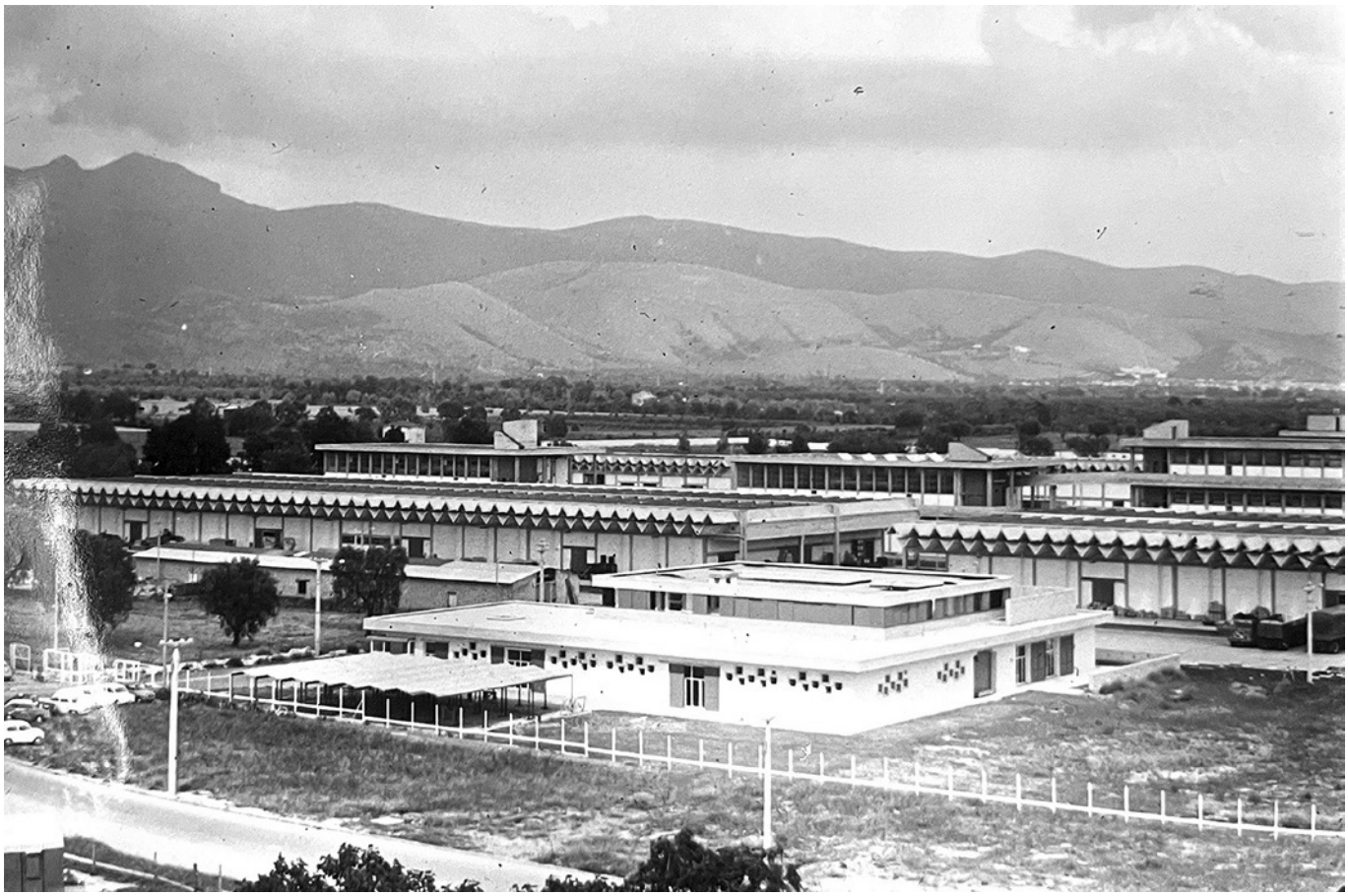

Fig. 1. Pozzi Ginori *complex in Sparanise, view of the industrial plant. Source: courtesy of Ministero della Cultura-Archivio Centrale dello Stato, SGI-Sogene collection (subsequent citations ACS-SGI, authorization for use n. 2877/2024), folder 4091-266.*

atic vision of the complex, underlined by the materials and techniques selected: exposed concrete contrasted with traditional and prefabricated external walls. The examination of some of the buildings of the complex clarifies the analysis and indicates the relationships between structure, construction and space in the composition of the industrial volumes. The "Vernici" group was the first to be built and covers an area of approximately 27,000 m^2, distributed in four multi-story buildings, one two-story office building and services volume, and six single-story industrial buildings. The multi-story buildings have exposed the cast on site reinforced concrete structure, external walls made of concrete blocks, flat slab floors, and roofs solved with hollow tile floors.

The "Laminati" and "Calandrati" units occupied a total area of 21,000 m^2. The construction and aesthetical system arranged by the designers was based on the cast on site reinforced concrete structure organized on the standard span of 20 m, on which the roof was placed (Fig. 2). Its structure consisted of prefabricated prestressed reinforced concrete beams (B.B.R.V. system), with a T-shaped section, 90 cm high at the supports and 1 m high in the centreline, arranged with a center distance of 2.50 m [6] (Fig. 3). The "Ceramica" group occupied an area of 38,000 m^2, divided into four buildings, of which the two largest had a structure of cast on site pillars and omega section beams placed on a square grid (10 m x 10 m), on which the roof was arranged. The complex, which is still in use, although not in its entirety, is no longer managed by *Pozzi Ginori*. In 2008, it was declared a work of significant interest by the Italian Ministry of Culture and subject to protection restrictions.

The one-story buildings of the "Vernici" group are distinguished for their construction interest in the roof and are capable of generating a relationship between the construction scheme, functional needs, and definition of the industrial space. In fact, although two of the buildings were storage spaces, the solution adopted stood out for the elegant composition of the prefabricated components and the full compliance with the microclimatic conditions required inside. The warehouses were intended for the storage of paint packs that were of considerable volume and low weight. To maximize storage capacity, no windows were planned on the perimeter walls to increase the stacking height of the packages, and given the high flammability of the products, to avoid the incidence of direct light inside whilst ensuring good thermal insulation. The most common option, the shed roof, would have required the adoption of sunshades to screen the windows and the insulation of opaque and transparent surfaces. Therefore, designers chose to use prefabricated components, reducing the execution time and becoming the hallmark of the project. The Sparanise complex is, in fact, emblematically identifiable with the iconic series of prefabricated prestressed reinforced concrete large tiles with a V-shaped section used for the roof structure. The large tiles were placed, on the standard span of 20 m, on perimeter beams set on the pillars arranged at a distance of 5 m or, in the case of buildings with greater depth, on intermediate supports, also organized on a modular layout of 5 m. The V-shaped components had asymmetrical arms with a thickness of 6 cm for the long arm and 8 cm for the short one. They were arranged in two orders: the lower one formed by V with the vertex placed at the bottom and the upper one composed of rows of upside-down elements (Fig. 4). Skylights that diffused the light inside were positioned between the two layers.

To facilitate the connection between tiles and beams, the section of each element was equipped with a 20 cm thick concrete raised part. The connection was completed by means of two bars protruding from the beam that crossed the tile for the entire height. Once the components had been assembled, the connection was completed with cement mortar poured to join the large tiles to the metal bars [7]. The prefabricated components, which had an overhang between 1.5 and 5 m, were finished on the head with a dripstone, cast on site using formworks supported by the same tiles.

The roof construction system also affected the composition of the façade. The rhythm of the prefabricated elements was underlined by the play of lights and shadows, marking the succession of large tiles, and corresponds with the rhythm of the external walls, arranged between exposed concrete pillars and advanced compared to the walls to define a thin shadow [5]. Downpipes make a third and thinner pattern. In this composition of lines and planes, it is possible to read the essential design of the façade, all based on the figurative use of the elementary

Fig. 2. Pozzi Ginori *complex in Sparanise, view of the "Laminati" building. Source: ACS-SGI, authorization for use n. 2877/2024, folder 4091-72.*

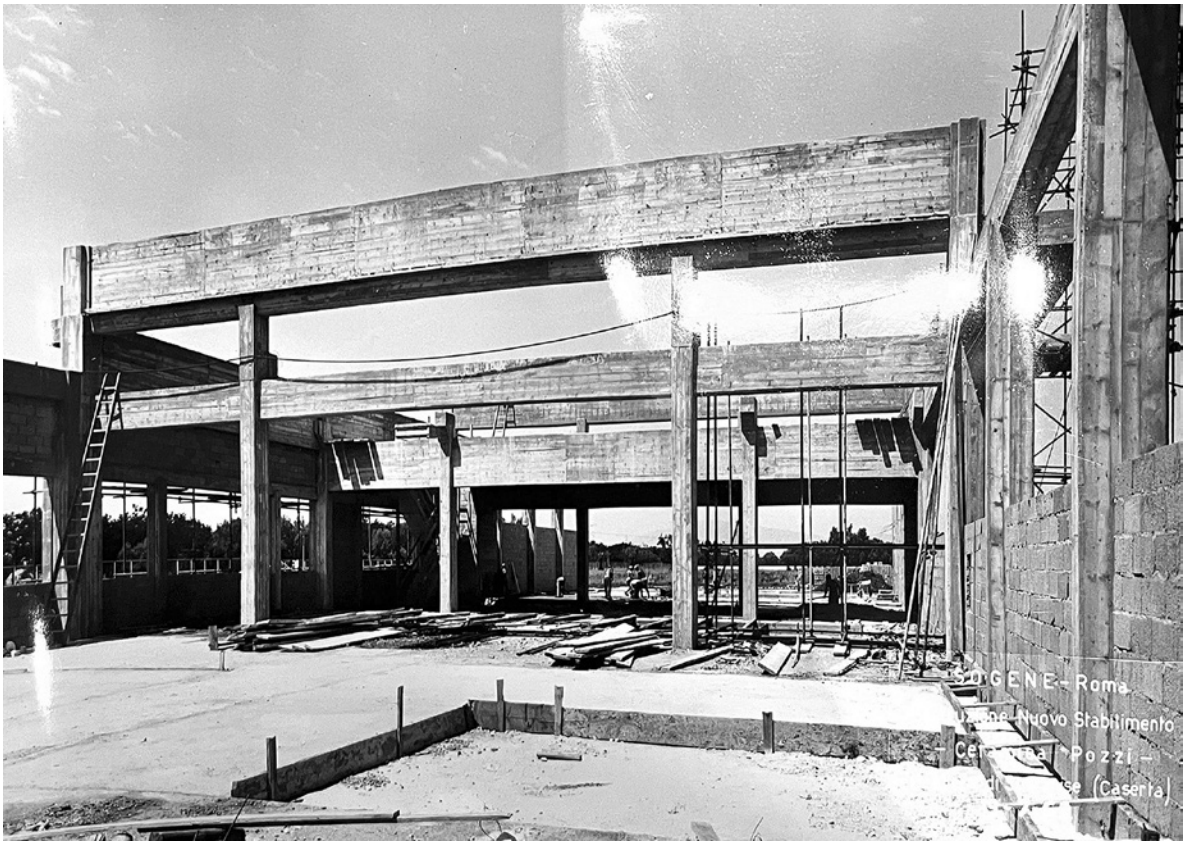

Fig. 3. Pozzi Ginori *complex in Sparanise, view of the "Calandrati" building site during assembly of the T-shaped roof beams. Source: ACS-SGI, authorization for use n. 2877/2024, folder 4091-71.*

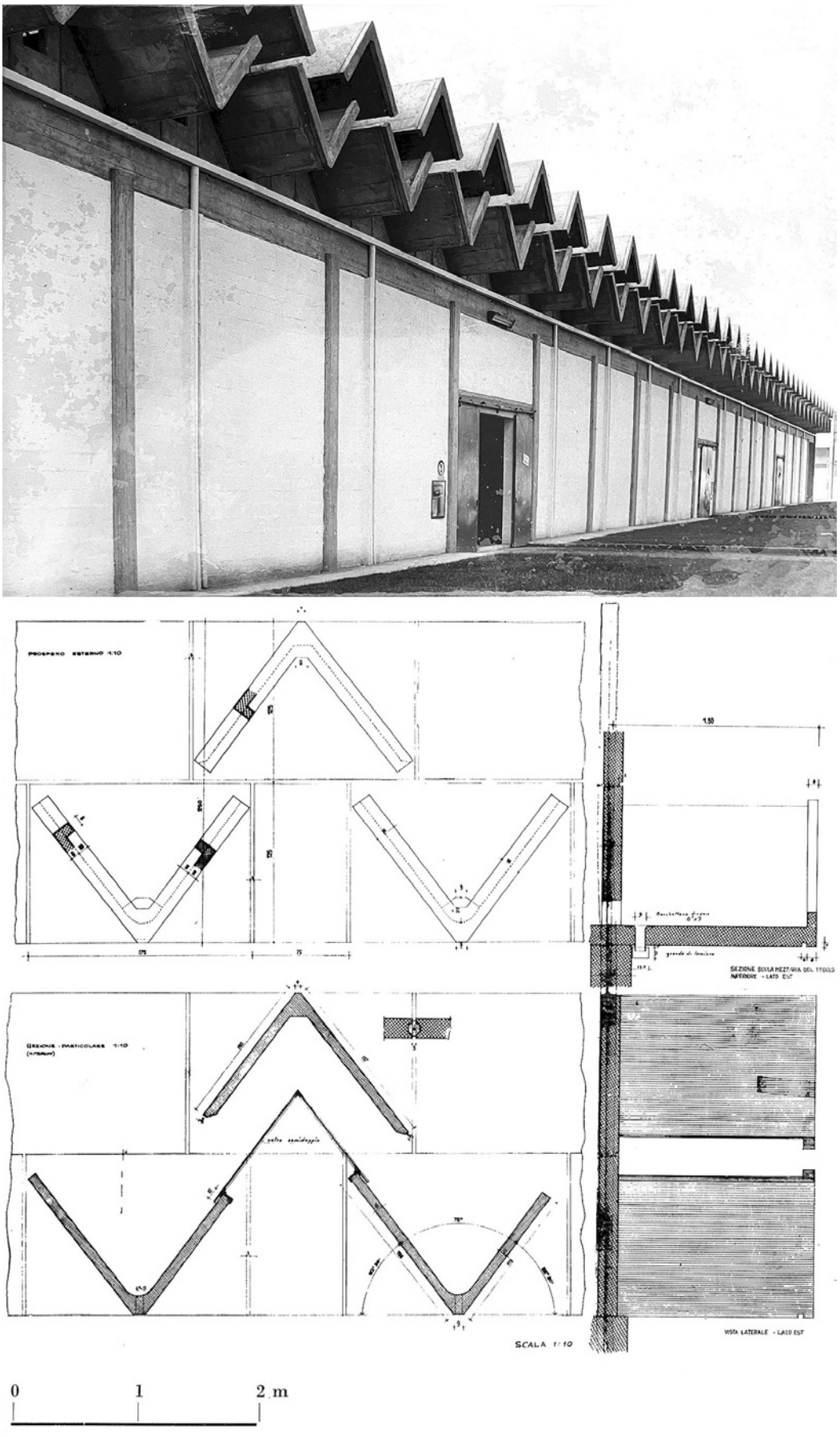

Fig. 4. Pozzi Ginori *complex in Sparanise. Top: view of the "Vernici" building. Source: ACS-SGI, authorization for use n. 2877/2024, folder 4091-72). Bottom: details of the V-shaped roof tiles. Source: [5].*

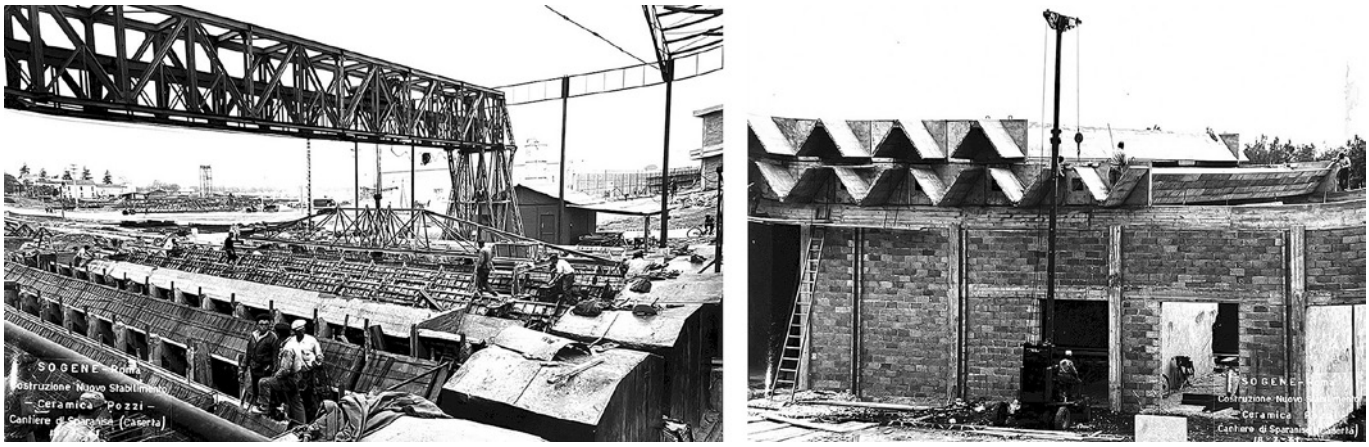

Fig. 5. Pozzi Ginori *complex in Sparanise, "Vernici" building. Left: view of the V-shaped roof tiles prefabrication site. Right: assembly of the V-shaped roof beams. Source: ACS-SGI, authorization for use n. 2877/2024, folder 4091-71.*

construction parts: large tiles, pillars, walls, and downpipes. The key element is the large tile, an expression of the design of the prefabricated component that marked the development of industrial buildings in the 1960s, tracing one of the evolutionary lines of prefabrication in Italy. Thanks to the elegance of the component resulting from the design awareness of Figini and Pollini and the mastery of Zorzi, the buildings of the "Vernici" group of the Sparanise complex participated in this experience, testifying to an evolutionary phase of Italian prefabrication that preserved the construction site as the main context for the production and assembly process of components.

The large tiles were produced in a prefabrication area inside the construction site, where three to four components were produced daily (Fig. 5). The prefabrication machine set up in Sparanise contained in *nuce* the features of building components' industrial production that Zorzi, considering the buildings of the "Vernici" group, indicated as the following: reuse of molds (those for the tiles were metal elements), the use of vibrators applied to the formworks and the concrete vacuum technique (introduced in the complex to reduce execution times and allow the contemporary construction of the different groups of the *Pozzi Ginori* factory), the pre-stressing of the elements with adherent wires (for each tile there were twenty strands with seven steel wires with a diameter of 3.15 mm). In brief, the system of techniques and tools distinguishing the industrial production of building components was anticipated in Sparanise, indicating the evolutionary phase of the traditional building site that enriched its layout and organization in this period [8]. In Sparanise, the devices for handling the components and the internal service paths related to the two poles of the building site (the production area and the construction one): each large tile, once taken from the storage area, was transported by truck (each tile weighing, in reason of its length, between 12.8 and 14.5 tons) to the construction area, where it was lifted by cranes for assembly.

3. THE *IBM ITALIA* FACTORY IN SANTA PALOMBA (1979-1984)

Ten years after the project for the IBM offices in Segrate (Milan, 1968-1976), the prestigious multinational corporation commissioned *Studio Associato Marco Zanuso e Pietro Crescini* to design a new plant in Italy intended to produce computer equipment. The theme of the industrial building has been recurring in the repertoire of Zanuso's works since 1951, with the design and construction of the warehouses and offices of the SIMA company in Jesi (Ancona). In Italy and abroad, with important commissions, the architect's thirty-year commitment alternated the study of the factory with industrial design, whose reflections also flowed into the technological declination of architectural projects. His interest in the workplace developed through his prolific journalistic production and his academic commitment at the Faculty of Architecture of *Politecnico di Milano*, where, since 1961, Zanuso had been teaching courses dedicated to construction materials and design for industry. The results of this incessant work, confirmed by continuous awards [9], testified to Zanuso's interest in a building typology in which he

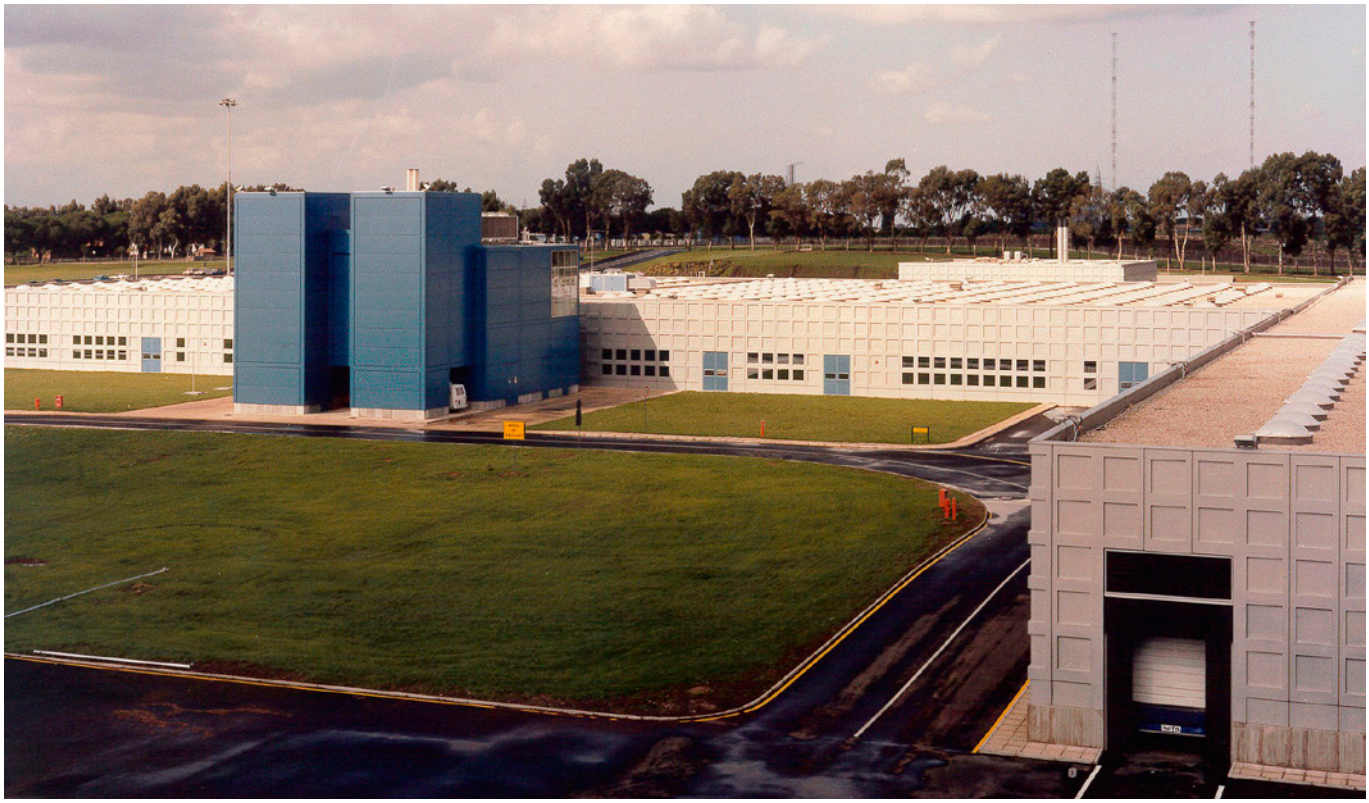

Fig. 6 – IBM Italia *factory in Santa Palomba, view of the industrial plant. Source: courtesy of ICRAS S.R.L., http://www.icras.it.*

could experiment with technological updating. This topic has been investigated for a long time, referring to the theme of modernity in the industrial age.

Also, in this new role, the client shared a meta-design program with the designer, which the company organization strictly conditioned. The Santa Palomba headquarters was inaugurated in 1983 and confirms the premises that had marked the Segrate complex (Fig. 6) and were dictated by the American multinational corporation. On that occasion, Zanuso affirmed that IBM was an entity consisting of «open systems of superior complexity, characterized by strong flexibility in the coordination of roles and significant dynamism in transformation and development for adaptation to accelerated technological innovations ("sistemi aperti di complessità superiore, caratterizzati da forte duttilità nel coordinamento dei ruoli e di rilevante dinamicità nella trasformazione e nello sviluppo per l'adeguamento alle accelerate innovazioni tecnologiche")» [10].

The concept was also validated for the Santa Palomba program, which had a development forecast up to 2000. The subsequent project refinements determined the final layout: the industrial complex had to include a plurality of functions (areas for production operations of automation systems for companies, administrative workspaces, general services, and warehouses) and ensure maximum flexibility and versatility of the workspaces. The use of a wide structural mesh and building components that could be delivered quickly to the construction site was necessary to meet the company's requests to respect the 18-month construction timeframe and construction and affordability needs [11].

The design perspective required by IBM was therefore perfectly aligned with the architect's thinking, who never failed to support the need «to intuit, in an appropriately short time, any changes that may occur, both in terms of production and research» and consequently «it is necessary to have a design system and a provision of design standards that allow us to intervene, in a short time, and with maximum efficiency» [12]. In addition, the natural integrity of the site, its «wide undulations», and «the ancient plastic of the Lazio countryside» engaged Zanuso in a «program of spatial organization ("programma di organizzazione spaziale")» that had to include such suggestions and establish a relationship between architecture and nature [13].

With the request to open the industrial complex to subsequent expansions, Zanuso set the structural scheme on an ordinary module of 14.14 m x 14.40 m, which is considered suitable for integrating and accommodating the space to produce computer equipment and administrative work. The iteration of the module determined the size of the buildings: seven parallelepipeds with a square base of 57.60 m on each side for an area of 3,300 m^2, developed on a single floor (the original program provided 17 for a total area of 200,000 m^2 [14]). In addition to the buildings, arranged side by side or staggered, there were four other pure volumes: the technical towers, 13 m high, which host the refined distribution scheme of the fire-fighting systems, the connection with the database, and differentiated conditions of comfort in all functional areas. Three towers each served two parallelepipeds, while the last served one. The connection with the towers was entrusted to ducts, passages, and walkways that freely crossed the open space. Supporting the concept of plant decentralization that would have allowed more manageable growth of the industrial settlement, the association of two low parallelepipeds and a tower was configured as a macro-module, an "organic and autonomous unit" destined for serial repetition.

The essentiality of the spatial and functional organization corresponds to the ordinariness of the prefabricated reinforced concrete structure, deduced from current production. Produced by *Vibrocemento* from Perugia [15] (now *Generale Prefabbricati S.p.A.*, https://www.generaleprefabbricatispa.com), the frame was formed by pillars with a square section of 60x60 cm, supported by pocket foundation cast in place (Fig. 7). The infill

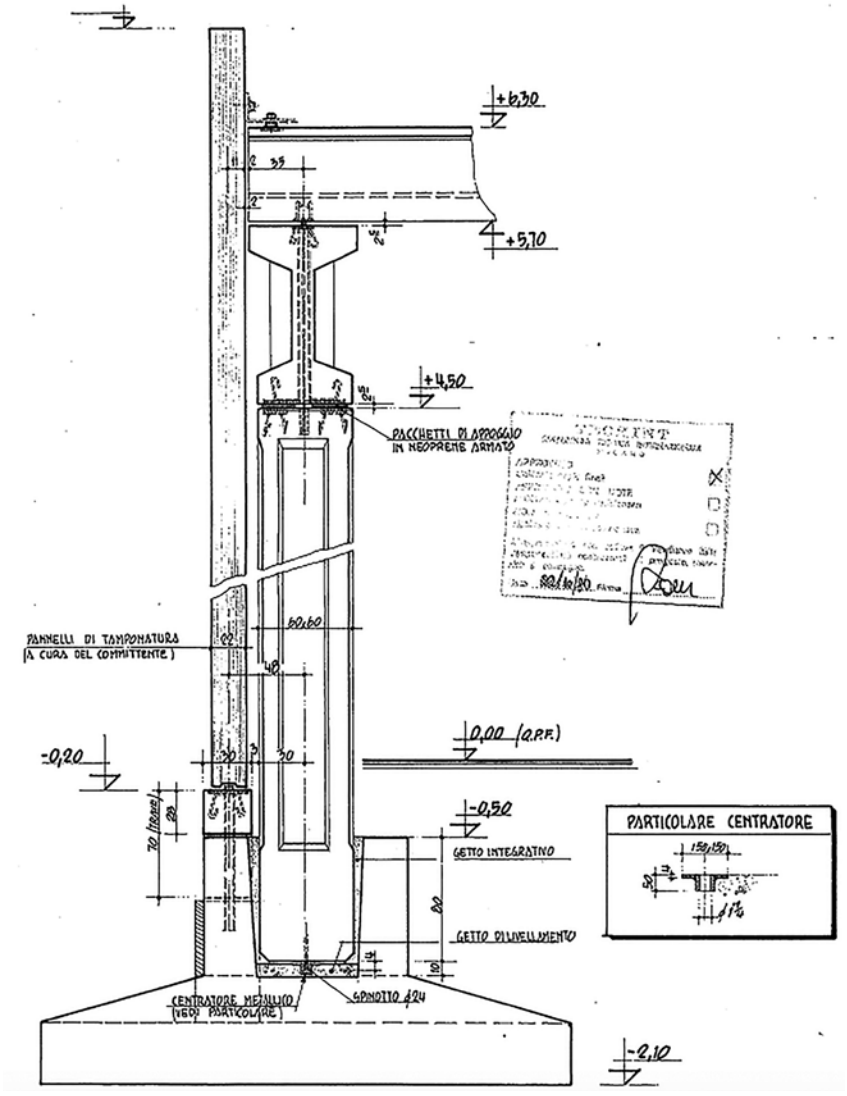

Fig. 7. IBM Italia *factory, a section of the structure: details. Source: courtesy Generale Prefabbricati S.p.A.*

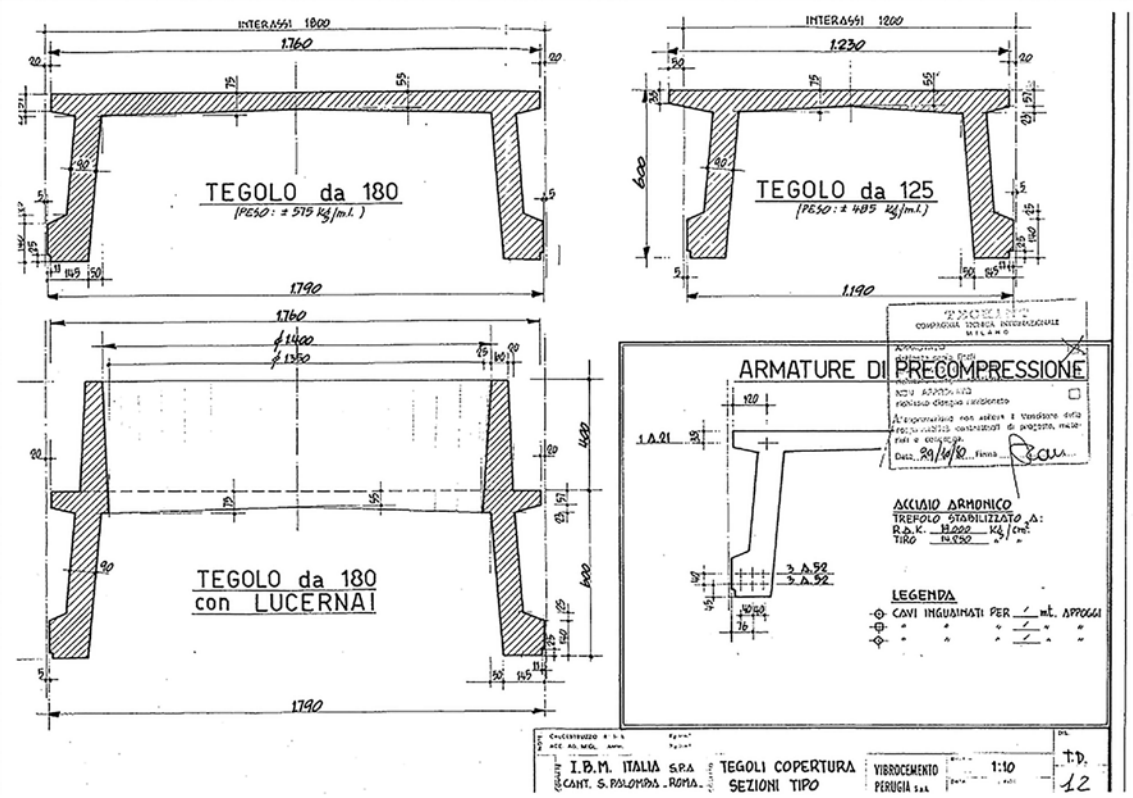

Fig. 8. IBM Italia *factory, a typical section of the roofing tiles. Source: courtesy Generale Prefabbricati S.p.A.*

panels laid on base beams made of vibrated reinforced concrete, while the roof beams had a double-T geometry and were made of prestressed reinforced concrete. The roof tiles, always in prestressed reinforced concrete, had a U-shaped geometry and were equipped with metal plates to create sliding supports (Fig. 8). The structural expansion joint is arranged on the side of two buildings. The only modification to the industrial production line concerned the tiles, some punctuated by a regular series of holes, closed by transparent resin domes with a double cavity (Fig. 9). The zenith rays of light accentuating the frame direction and the systems' texture became the only plastic elements of the interior spaces, which were left open and delimited by the walls.

Unlike Zanuso's previous experiences, where the integration between the structural part and plants' ducts emerged with an eloquent language expressing the architectural image [16], in the *IBM Italia* factory, the architect proposed not to exalt the technology [17]. Following the themes of flexibility, large planimetric extension and future expansion, he concealed static devices within pure stereometries, relegating the load-bearing elements to choice in the catalog (Fig. 10).

Fig. 9. IBM Italia *factory, view of the building site during assembly of the U-shaped roof tiles. Source: Archivio del Moderno, Fondo Marco Zanuso, Balerna.*

Fig. 10. IBM Italia *factory, the bearing structure during construction. Source: Archivio del Moderno, Fondo Marco Zanuso, Balerna.*

Moreover, this solution made it possible to speed up the administrative procedures, start the contract for the execution of the load-bearing structure during the design phase, and, consequently, commence the execution in parallel with the development of the executive design and the definition of the other main contracts [18].

The attention paid to the buildings' envelopes was different. Their prefabrication process was contaminated by targeted interventions decorating the components and redeeming the standardization of the catalog, providing an identity image.

Therefore, the perimeter closure of the net prisms for production was made with prefabricated modular concrete panels, thermally insulated with extruded polyurethane. 2.40 m wide and 6.90 m high, they were defined by a regular square grid of opaque and transparent parts; the latter was arranged by considering the activities executed inside. The reduced durability of concrete, which «does not resist over time, having a surface that degrades quickly and does not allow maintenance» [19], had recommended the use of polyurethane paints integrated with very light aluminum pigments, obtaining a mixture like that of paints generally used for cars [20]. The treatment gave the façades a silvery white color that enhanced the effect of the reflection of natural light, which varies at different times of the day in relation to the angle of incidence on the surfaces.

Today, unfortunately, with the transfer of ownership to another company, the buildings have been standardized with an anonymous grey color. The towers, true hinges of the composition and prevalent from an architectural and chromatic point of view, technologically character-

ized the entire complex. Unlike the low volumes, the towers had a reinforced concrete structure cast in place. The cladding was made of modular multilayer aluminum panels with horizontal development, framed within a large weave of uprights and beams, anchored to a galvanized steel substructure that guaranteed the movements necessary to absorb the expansion. Produced by *ICRAS S.R.L.* of Rovereto, the panels were dark blue with a semi-glossy effect and consisted of two sheets coupled to a central core in thermoplastic resin with mineral padding. The panels were subjected to milling and subsequent bending techniques to obtain large backgrounds in absolute flatness. The abstract character of the cladding was enhanced by the hidden fasteners, made possible by the particular flap of the side edges that emphasized the sharp edges and the Cartesian matrix of the joints, ranging from 7 mm to 30 mm [21].

4. CONCLUSIONS

Among the different types of buildings, the industrial building is perhaps the one most constrained by both the complexity of the production and organizational processes and the associated services. Nevertheless, many authorial examples and authentic monuments of modernity can interact with and contribute to their development on the territory. The two complexes presented here are exemplary cases of industrial architecture in Italy, not only because they have polarized the attention of critics and outlined new research paths but because they represent the cultural and professional phases accompanying the theme of prefabricated buildings in our country. In the Sixties, prefabricated building systems were essential for optimizing construction processes and economic requirements, particularly in production buildings.

The Sparanise factory seemed to attest to the most enthusiastic technological and formal experimentation expressions. The prefabricated component of prestressed concrete – anomalous compared to the production of Figini and Pollini – was exhibited to obtain an architectural value. On the other hand, at the end of the following decade, Zanuso testified, through the revision of the language, to the downsizing of expectations, moving towards an approach less contaminated by trends and confronted himself with a simple, almost anonymous construction scheme, with ordinary structural spans, reserving the completion and finishing parts for experimentation.

Acknowledgements

We would like to thank *ICRAS S.R.L.* and *Generale Prefabbricati S.p.A.* for the images and technical information contained in the text.

Authors contribution

Conceptualization, methodology, validation, S.M, L.G.; writing, review & editing, S.M, L.G.; resources and data curation, F.S; editing, F.S.

Funding

This study is part of the research project "Light prefabrication: knowledge, monitoring, and redevelopment of the architectural heritage of the second half of the twentieth century in the regions of Calabria and Lazio" (PRIN 2022), funded by European Union Next Generation EU, Missione 4 Componente 1 CUP H53D23006790006, developed by the University of Calabria and by the University of Rome Tor Vergata. These funds cover publication costs.

References

[1] Di Donato D, Abita M, Tosone A, Morganti R (2023) Le fabbriche a struttura d'acciaio nel Mezzogiorno d'Italia. In: Fatiguso F et al (a cura di) In transizione: sfide e opportunità per l'ambiente costruito. Edicom Edizioni, Monfalcone, pp 299–313

[2] Castanò F (2010) Architetture per l'industria: modernità nella continuità? In: Giannetti A, Molinari L (a cura di) Continuità a crisi. Ernesto Nathan Rogers e la cultura architettonica italiana del secondo dopoguerra. Alinea, Firenze, pp 179–180

[3] Carputi U (1966) Edifici e opere varie. In: AITEC (a cura di) Realizzazioni italiane in cemento armato precompresso 1962-66. AITEC, p 37

[4] Carputi U (1966) Edifici e opere varie. In: AITEC (a cura di) Realizzazioni italiane in cemento armato precompresso 1962-66. AITEC, pp 36–71

[5] Blasi C (1963) Figini e Pollini. Edizioni di Comunità, Milano

[6] Carputi U (1966) Edifici e opere varie. In: AITEC (a cura di) Realizzazioni italiane in cemento armato precompresso 1962-66. AITEC, pp 49–50
[7] Papini G (1965) Il nuovo complesso della Ceramica Pozzi a Sparanise (Caserta). L'Industria italiana del cemento 12:825
[8] Zorzi S (1995) Il calcestruzzo precompresso nelle opere civili e negli impianti tecnologici. In: Villa A (a cura di) Silvano Zorzi ingegnere 1950-1980. Electa, Milano, p 123
[9] De Giorgi M (a cura di) (1999) Marco Zanuso Architetto. Skira Editore, Milano.
[10] Zanuso M (1976) La sede centrale (Headquarters) della IBM Italia a Segrate. Il nuovo cantiere 10:34–35
[11] Rocco R (a cura di) (1983) Il complesso produttivo IBM Italia spa a S. Palomba (Roma). Nava, Milano, p 31
[12] Zanuso M (2013) La cultura del progetto: dal meccanicismo all'organicismo. Now in: Grignolo R (a cura di) Marco Zanuso. Scritti sulle tecniche di produzione e di progetto. Mendrisio Academy Press, Mendrisio, p 290
[13] Zanuso M (n.d.) Typescript. Archivio del Moderno, Marco Zanuso collection, folder MZ ATDP SCR S 4
[14] Red. (1983) Tecnologia sì, ma ordinata. Costruire per Abitare 11:80–83
[15] Stucchi S (1983) Il nuovo stabilimento IBM-Italia nei Colli Albani. L'industria delle Costruzioni 145:5–10
[16] Porta M (1982) La progettazione. Fabbriche del paesaggio. L'Architettura. Cronache e storia 322-323:636–641
[17] Gangemi V, Ranzo P (a cura di) (1987) Il governo del progetto. La tecnologia per la formazione dell'architetto; contribution to the conference Formazione del progettista architetto nell'indirizzo tecnologico, session Progetto e industria. Edizioni Luigi Parma, Bologna, pp 97–104. Now in: Grignolo R (a cura di) (2013) Marco Zanuso. Scritti sulle tecniche di produzione e progetto. Mendrisio Academy Press-Silvana Editoriale, Mendrisio, pp 284–293
[18] Rocco R (a cura di) (1983) Il complesso produttivo IBM Italia spa a S. Palomba (Roma). Nava, Milano, p 32
[19] Zanuso M (1987) Nuovi ruoli e competenze professionali nella progettazione tecnologica. Il caso IBM di Santa Palomba. In: Crespi L (a cura di) La progettazione tecnologica. Alinea, Firenze, pp 145–167
[20] Rossi PO (2012) Roma. Guida all'architettura moderna 1909-2011. Laterza, Roma-Bari, pp 335–336
[21] Belli G, Baffa Rivolta M (1992) Una cittadella tecnologica. AxA Alluminio per architettura 3:32–39