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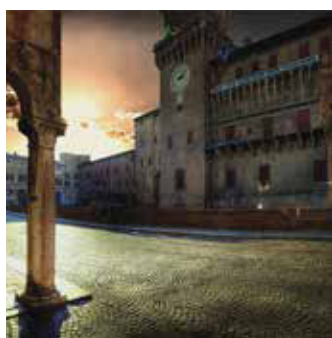
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MARCH2018

RESTORATION OF CULTURAL HERITAGE: TECHNIQUES AND SUSTAINABILITY

18TH-24TH MARCH 2018



18
20 MARCH
MILANO



21
22 MARCH
FERRARA



20 MARCH
PIACENZA



23 MARCH
PADOVA



21 MARCH
MIRANDOLA
S. BENEDETTO



23
24 MARCH
VENEZIA

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IN BENI ARCHITETTONICI E DEL PAESAGGIO

INDEX

■ SPONSOR PRESENTATION

| | |
|--|---|
| _ PRESENTATION OF "ICE AGENCY" | 4 |
| _ PRESENTATION OF "ASSORESTAURO" | 5 |

■ WORKSHOP SESSION

MILANO | 18-20TH MARCH

| | |
|--|----|
| _ MILAN AT THE ROMAN TIMES - Soprintendenza Milano | 6 |
| _ SALA DELLE ASSE - Elen spa | 14 |
| _ FONDAZIONE PRADA - Fondazione Prada | 20 |
| _ PALAZZO DELLE SCINTILLE - Studio Berlucchi srl | 26 |

PIACENZA | 20TH MARCH

| | |
|--|----|
| _ CARMINE WORKSITE: AN OPEN-LAB INSIDE THE SPACES OF THE EX-CHURCH OF THE CARMINE - Kairos Restauri snc, Ibix srl | 30 |
|--|----|

MIRANDOLA /SAN BENEDETTO PO | 21TH MARCH

| | |
|---|----|
| _ POST-EARTHQUAKE RESTORATION OF THE CLOISTER OF THE "SECOLARI" IN THE COMPLEX OF SAN BENEDETTO IN POLIRONE - Studio Berlucchi srl | 34 |
| _ RESTORATION AND SEISMIC IMPROVEMENT OF THE CHURCH OF SANTA MARIA MAGGIORE IN MIRANDOLA - Bottoli Costruzioni | 40 |

FERRARA | 21-22TH MARCH

| | |
|--|----|
| _ THE BASILICA OF SAN FRANCESCO IN FERRARA - Studio Leonardo srl | 44 |
|--|----|

PADOVA | 23RD MARCH

| | |
|--|----|
| _ INTRODUCTION OF THE RECENT INTERVENTION APPLIED TO CAPPELLA DEGLI SCROVEGNI - Kimia spa | 50 |
|--|----|


VENEZIA | 24- 23RD MARCH | VENEZIA ARCHITETTURE LAGUNARI

| | |
|--|----|
| _ THE CONSERVATION OF PONTE DELL'ACCADEMIA IN VENICE - Studio Berlucchi srl - Studio Be.Fa.Na. | 56 |
| _ A HISTORY OF LA SCUOLA GRANDE MISERICORDIA IN VENICE AND ITS CONSERVATION - Lithos srl - Setten | 60 |

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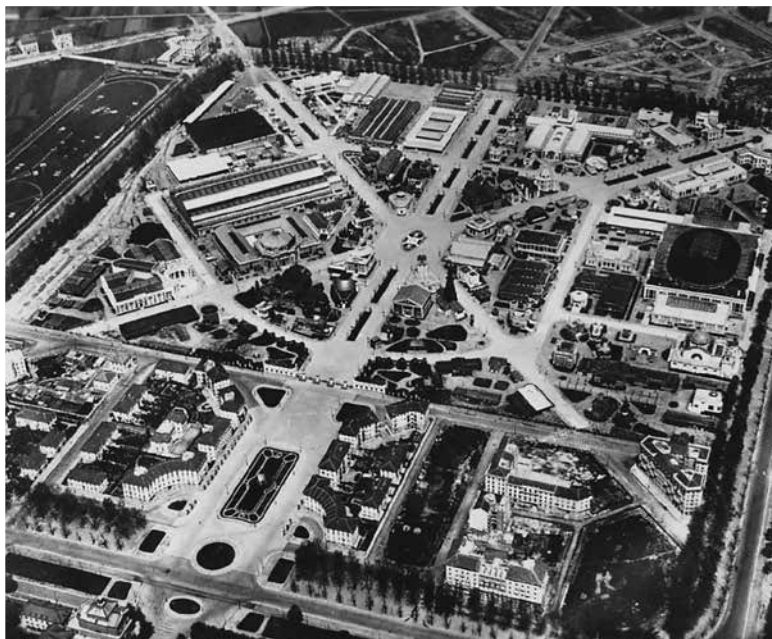
PALAZZO DELLE SCINTILLE

A connection between old Milan and the new skyscrapers city

The Palazzo delle Scintille was built between 1922 and 1923, inaugurated celebrating the annual car show and the realisation of a permanent and autonomous Fair Company. The building, also known as Sports Palace or Pavilion 3, was designed to be a link between the surrounding urban area and the new exhibition centre, nevertheless keeping its own independent drawing. It is a free-standing element inside the infrastructural modernization which has involved Milan during the 1920's and the 1930's and has resulted in the establishing of a sport village. Its construction was the occasion to display how the Italian building technique had reached the same level of foreign countries.

The Pavilion 3 is extended for 10.000mq on a rectangular diagram (104m x 81m with a mixed concrete-bricks structure) covered by an iron and glass dome described as an "inventive technical conception" where the iron structure was supported by a glass tambour. The dome was rebuilt after the Second World War bombing. This architecture was conceived likewise the industrial ones, based on a rigid structural grid softened with decorative cement items. Those reshaped classical forms into charming Art Nouveau tested elements. Facades were designed to be symmetrical, where windows scan a regular lands and grooves play. The interior was planned by the architect Paolo Vietti Violi to be a mul-





tifunctional space, a big empty room adaptable as showroom, racetrack but also concert and conference hall. It was a modern space, comparable to major expo spaces around the world (Paris, London, New York) shaped full-height by a ring of slender *béton fretté* pillars (9,50m height and 0,50m diameter).

Over the years the Palazzo delle Scintille has been involved in several changes, addition and demolition, which changed its main aspect absorbing the building inside the neighborhood and leaving visible only the East Front, facing VI Febbraio Square.

The demolition of the exhibition centre has freed the three facades which now play a connection role between the old city and the new district of CityLife, characterized by its unbridled modernity.

To give new glory and to safeguard the Pavilion 3 inside the fast evolution of this area in March 2017 started the requalification proposal which involved Studio Berlucchi (architectural project) and Italiana Costruzioni - Arup Italia (consultancy) with the aim of a preservative project able to enhance this extraordinary architecture after years of neglect, restoring its part as active player in citizens public life.

The project focused on the four facades working on their decorative items and on the window frames, fundamental for the building compositional balance and its relation with the neighborhood.

In the first instance an experimental worksite has been realized on a 5m full-height area located on the front East side. The pilot worksite was divided into three stages:

phase 1: investigation, mapping, generic material sampling and laboratory testing in order to understand main surface deteriorations and alterations;

_ phase 2: representative samples realization on surfaces and window frames, by applying different techniques, due to ensure operations compatibility and feasibility;

_ phase 3: surface cleaning and restoration, pilot worksite conclusion.

After this preliminary study the project has been developed to answer the building damage necessities, most of whom produced by anthropic activities. The different facades presented more or less the same decay typologies and a general surface degradation with deposit, biological colonization, efflorescence, staining and soiling due to metal components

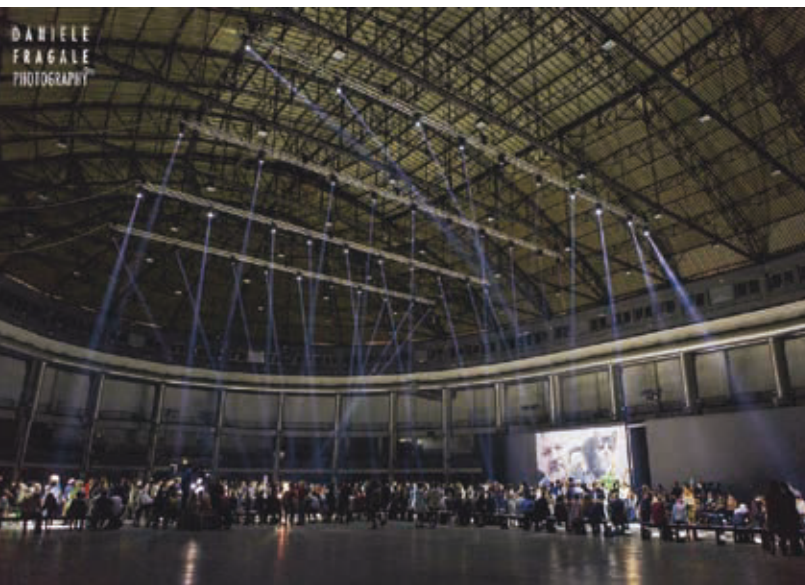


presence, but also hair-crack on finishing cement plaster layer, improper grouts operations or scratches. Decorative elements have been frequently subject to missing part and disgregation, which compromised the original shapes recognizability, added to this an ochre acrylic paint had been laid out in the recent past and has quickly formed a film, boosting the decay situation. The West front presents also stains and spurts caused by bitumen application on the surfaces and degradations are marked by addition and demolition operations. In the same way fronts South and North present signs of improper anthropic action that led to a strong presence of decaying structures, loss of modeled parts and irregular grouts or shaves.

In order to begin effectively the restoration, all the past additions have been removed starting cleaning operations, articulated into three accuracy levels:

1. Plasters typing, which needed bandages using acrylic resin or animal glue and overrun micro and macro flora removal by the application of a selective action exterminator;
2. Salt extraction through compress, deposit and paint removal by using a elicoidal micro air abrasion cleaning system assisted with manual dry-cleaning;
3. Chemical cleaning by reagent application through pad or brush for oxides removal and through compress for oil, paint and wax.

The next steps of the restoration project envisaged the surfaces consolidation using ethyl silicate, applied by brush or by pad, and consolidating injection if necessary. Those preliminary proceedings have allowed the conclusive operations: material loss reintegration with compatible mortar and plaster, hair-cracks grout and decorative missing parts replacement with off-site realized new elements. New ones are characterized by a topcoat comparable to the existing finishing layer, made recognizable shaping them as simple volumes. A parallel project has involved the iron window frames which present a heterogeneous state of conservation, those have been restored or replaced with identical ones. To guarantee natural micro-ventilation and prevent the detachment phenomena acceleration the creation of specific splits have been made in proximity to lower and higher elements.



The Palazzo delle Scintille is a perfect example of how well an old building is able to innovate itself, playing a new active role as public space inside the urban contest in which it is located, thanks to an efficient restoration project.

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