T/E/S/S ATELIER D'INGÉNIERIE



Bourse de Commerce

Location : Paris 1er

Architect : Pierre-Antoine Gatier (ACMH), Tadao Ando Architectes Associés, NeM Architecture Client : Collection Pinault

Package : Structures, verrières, ouvrages spéciaux

Scope : Diagnostic structurel de la coupole, conception et suivi de réalisation du clos-couvert et des parois vitrées intérieures Date : 2016-2019

The existing structure comprises the former Wheat Exchange, an 18thcentury circular stone building with a dome covering the internal central hall. The building was given to the Bourse de Commerce in 1885, who restored it after a fire and gave it the form that we know today: the galleries enclosed by brick partitions and the buildings reclad in stone. The cast-iron and glass dome was modified. The building was occupied by the Chamber of Commerce until 2016.

The City of Paris has conceded use of the building to house part of the Pinault Collection, requiring the restoration and transformation of spaces.

The internal central space was unheated, and has now been transformed into a temperature-regulated exhibition space.

The exceptional dome constitutes the first example of the structural use of metal on this scale for a building. The dome's structure and the fresco on the inner wall of its lower section have been listed as Historical Monuments since 1989.

The framework for the dome's glazing is comprised of mullions or rafters with angles, all in steel and attached to the bracing pieces of the main structural frame with occasional fixings. The glass panels are arranged like roof tiles. The new project reproduces the existing arrangement, but making it significantly more energy efficient.

The windows have been replaced by similar elements but motorized and linked to the BMS (centralized ventilation) and to the central fire alarm control panel (heat and smoke vents for fire protection).

The glass of the central skylight at the top of the dome was replaced using principles similar to those applied to the rest of the dome, with the panels arranged like roof tiles. However, unlike the dome, the glass panels of the skylight were placed directly onto its steel structure

T/E/S/S was responsible for the diagnostic of the existing metal structure as well as the glazed roof as part of the feasibility study, and subsequently for studies for their design and restoration in order to accommodate the collections, receive the public and to allow for a varied programme that combines visual arts, music, theatre, literature and film.