

「本物の価値」の継承に取り組み、保存・復原工事

東京駅丸の内駅舎保存・復原工事の最大の特徴は、復元ではなく、復原であること。創建当時の姿に戻すために、当時の材料や工法を駆使しています。たとえば、丸の内駅舎のシンボルともいえる赤レンガ。保存される100年前のレンガと現代のレンガとの、色合いの違いを違和感なく調和させるデザイン上の工夫が取り入れられています。また、復原されるドーム内観の3階から上の創建当初の重厚なデザインの部分と、駅コンコースやホテル、ギャラリーに利用される1階・2階の機能的なデザインとの調和を図る工夫も随所に施されています。詳細な写真や図面などが残る駅舎外観に対し、図面や資料の少ないドーム内観の復原にあたっては徹底した調査や資料収集が行われました。また、駅舎の耐震性能を向上させるために、現存する駅舎の構造体への補強を極力少なくする工法として免震構造を採用しています。このプロジェクトがめざした、東京駅丸の内駅舎保存・復原工事の目標、それは本物の生きた文化財にふさわしいオーセンティシティ(信憑性)を高めること。生きた文化財として大切に保存し、未来へと活用できる、「本物の価値」を継承・保存した丸の内駅舎にすることを最重要テーマと位置づけました。

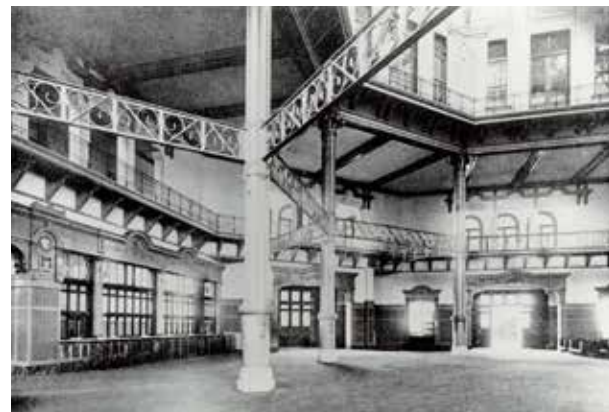
※「東京駅周辺の再生整備に関する研究委員会」資料及び工事関係者インタビューに基づき構成しました。

One of the most significant features of the project is preservation and restoration of the station building. This means that we make the maximum use of the materials and methods needed to bring the building back to its original state. The best example is restoration of its signature red brick walls. Efforts are under way to use new bricks that are very similar to the bricks of 100 years ago used in the original construction, and to preserve and restore the building by following designs and procedures that will make the new bricks look the same as the original ones. The design and layout also meticulously combine the restored dome on the third and upper floors with the concourse, hotel and gallery functions on the first and second floors. We have fewer blueprints and other materials for the inside of the dome than for the exterior building appearance, for which detailed photos and drawings are available. Accordingly, we conducted thorough study of the dome and collected relevant information materials for it. We are also using a base-isolation technology that will improve earthquake resistance with minimum reinforcement to the existing structure. The most important goal for the preservation and restoration project being pursued by the personnel in charge of the design was to retain and improve the worthwhile authenticity of this cultural asset. Our top priority issue was to carefully preserve and restore the building as a cultural asset to hand down its authenticity to future generations.

※ Source: the documents prepared by the research committee on Tokyo Station restoration and interviews with the personnel concerned with the work.



創建当初の南口ドーム内部
「記念写真帖 大正三年一月」1914年(大正3)
Inside the dome of the South Entrance just after its completion
"Commemorative Photo Album: December 1914"



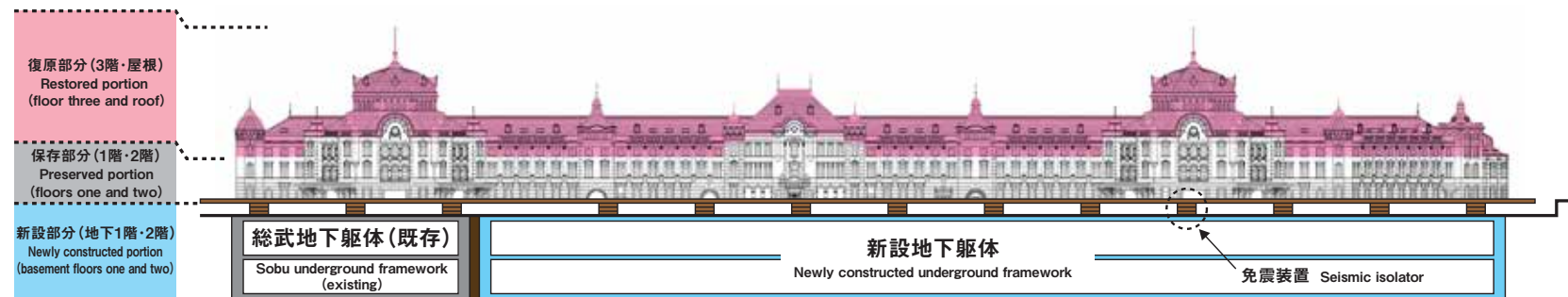
丸の内南口ドーム見上げ部分の竣工写真
Perspective view of the completed dome ceiling at the Marunouchi South Entrance



丸の内南口ドーム竣工写真
Perspective view of the structure below completed dome ceiling at the Marunouchi South Entrance



創建時の正面写真
Front photo from just after of foundation



復原後の立面図及び工事概要
Post-restoration elevation view and construction overview

●免震装置 Seismic base isolation system



免震アイソレーター Seismic isolator



オイルダンパー Oil damper



丸の内駅舎保存・復原 I

保存復原計画【基本方針】

- 未来へ継承すべき貴重な歴史的建造物として、残存している建物を可能な限り保存するとともに、創建時の姿へ復原。
- 【保存】
 - ・ 1,2階の既存レンガ躯体と鉄骨及び広場側1,2階の既存外壁を保存。
- 【復原】
 - ・ 広場側、線路側の3階外壁は新躯体を設置の上、化粧レンガ、花崗岩、擬石で復原。
 - ・ 線路側1,2階外壁は既存モルタルを撤去の上、化粧レンガ、花崗岩、擬石で復原。
 - ・ 屋根は天然スレート、銅板で創建時の姿に復原。
 - ・ ドーム3,4階の内部見上げを創建時の姿に復原。

Preservation and Restoration Plan (Basic Principles)

- As a historic architectural structure to be passed down to future generations, the parts of the building that remain must be preserved in the best condition possible, while restoring the station to its original design.
- [Preservation]
 - The brick building frame and the steel structures of the existing first and second floors will be preserved, as will the existing external walls of the first and the second floors facing the station forecourt.
- [Restoration]
 - The walls for the third floor facing the station forecourt and the tracks will be formed by constructing a new building frame, and the exterior wall will be restored using decorative blocks, granite and cast stone.
 - The existing external walls made from cement mortar on the first and second floors facing the tracks will be removed and restored using decorative blocks, granite and cast stone.
 - The roof will be restored to its original appearance using natural slate and copper plates.
 - The interior of the third and the fourth floor of the dome, as seen from below, will be restored to its original appearance.

構造計画【基本方針】

- 丸の内駅舎を駅・ホテル・ギャラリー等として恒久的に活用するために必要かつ十分な安全性・耐震性を確保し、免震工法を採用。
- 重要文化財建物を永続的に保存するため、免震工法にするほか、レンガ壁や床組鉄骨などの既存架構を極力活用し、新たな補強を軽減。

Structural Plans (Basic Principles)

- A quake-resistant structure will be adopted to ensure adequate safety and to provide earthquake protection measures so that the Marunouchi Station Building can be used as a station, a hotel and a gallery, and for other purposes.

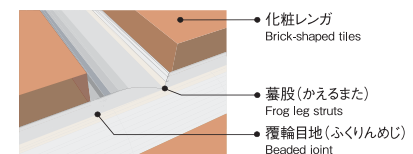
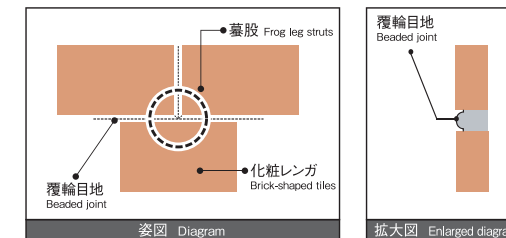
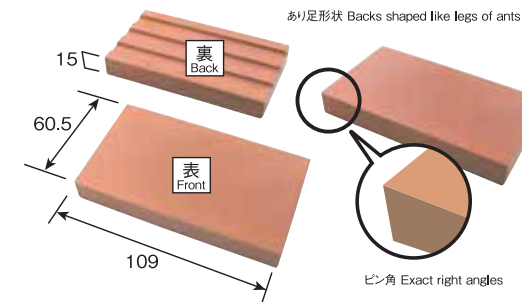
- To preserve this important cultural architectural asset in perpetuity, the existing brick walls and steel floor support structures will be used along with the quake-resistant structure, reducing the need for additional reinforcement.

■化粧レンガの再現

Reproduction of brick-shaped tiles

化粧レンガは創建時のものに近づけました。

The brick-shaped tiles were made to more closely resemble the original bricks.

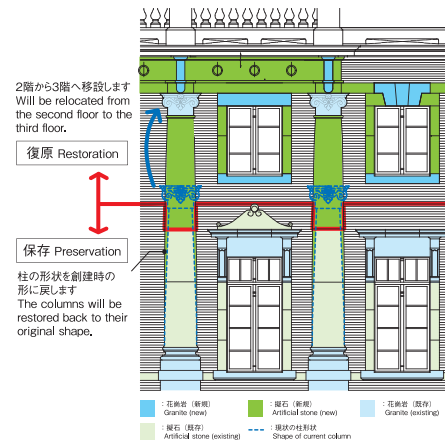


■3階外壁の復原

Restoration of the external walls on the third floor

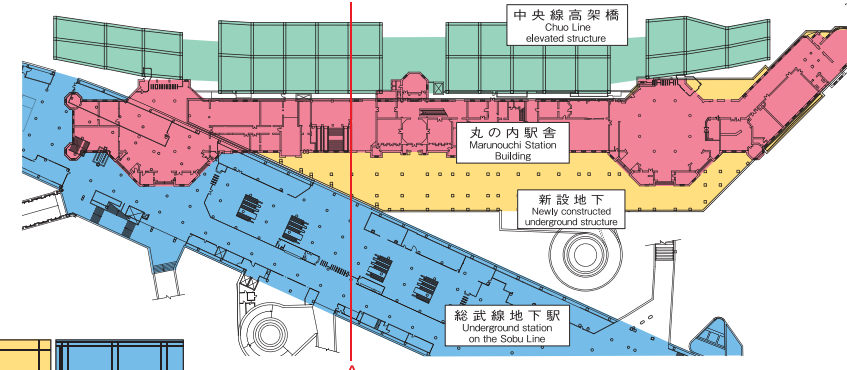
3階外壁の復原に伴い、柱の形状も創建時の姿に戻しました。

The pillars and columns were restored to their original shape, together with the restoration of external walls on the third floor.



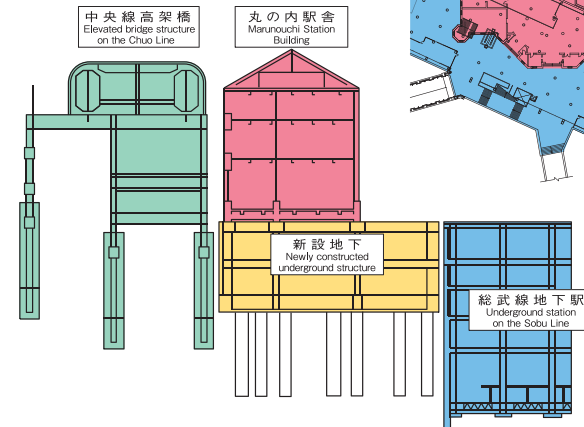
■建物配置図

Building layout plan



■A—A 断面図

A—A cross-section



■天然スレートによる復原

Restoration using natural slate

天然スレートは今あるものを最大限活用し、創建時の葺き方に復原しました。

Maximum use was made of existing slate, replicating the original roofing technique.



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■ドーム見上げ部の復原

Restoration of the dome ceiling as seen from below

ドーム内の3・4階と天井は創建時の姿に復原され、干支や約2.1mの大きさにもなる鷲の彫刻など見事な造形が甦りました。

The interiors of the third and fourth floor and the dome ceiling were restored to their original splendor, with decorative sculptures of oriental zodiac signs and eagles up to 2.1 meters high.

ドーム部天井見上げ The dome ceiling as seen from below



ドーム部展開図(3階以上) Interior Elevation Drawing (above the third story)

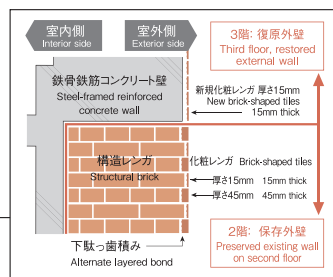
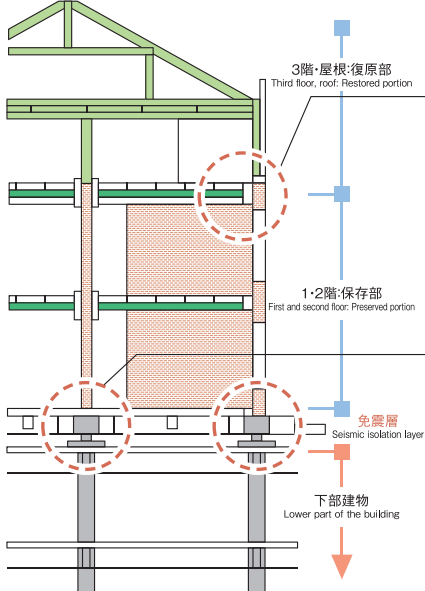


■復原部の躯体

Structural frame of the restored portion

復原する3階の躯体は鉄筋コンクリート壁でつくりました。

The structural frame on the third floor was rebuilt with reinforced concrete walls.



採用する免震工法は新設される地下部分と現在の丸の内駅舎との間に約350台の免震アイソレーターと約160台のオイルダンパーを設けました。これにより丸の内駅舎の耐震性能の向上を図るとともに、隣接構造物への影響を小さくすることができます。

The quake-absorbing approach to be adopted will involve the use of approximately 350 seismic base isolator and approximately 160 oil damper between the existing station building structure and the new underground portion to be built. This will improve the quake-resistance properties and also reduce the effects on the surrounding buildings.