

## Shanghai (People's Republic of China) Residence of Shi Liangcai

MASONRY RESTORED AT THE FORMER RESIDENCE OF AN IMPORTANT FIGURE FROM CHINESE HISTORY USING A COMPLETE CYCLE OF MAPEI SOLUTIONS

Shi Liangcai (1880-1934) was a prominent figure on modern China's industrial, historical and political scene. Renowned educator and entrepreneur in the textiles sector, he is particularly remembered for his role as editor of one of the leading newspapers in the Chinese Republic: *Shen-bao*. Under his guide the paper took on a more radical reformist, liberalist and anti-Japanese stance, something that then led to the death of Shi Liangcai at the hands of an assassin sent by Chiang Kai Shek.

His residence, built in 1916, is still standing and open to visitors in the Sonjiang district of Shanghai. After being rebuilt in 1926 in typical Qing dynasty style, it then underwent restoration work on several occasions before being officially declared a Chinese Heritage Site in 2000.



In 2021 further restoration work was carried out, this time using a complete and specific masonry restoration system supplied by Mapei.

### Restoration work to the highest standard

The primary aim of the 2021 project was to safeguard the authenticity of the building and to restore it to its original condition. Restoration of the masonry was an important part of the project and, unlike what is still a widely used practice in China, hydraulic lime-based mortar was chosen instead of cementitious mortar. This type of product was employed to prevent the risk of cracking and detachment caused by shrinkage, often connected to the use of cementitious products leading, not uncommonly, to the deterioration of masonry.

In the case of the former residence of Shi Liangcai, the masonry was rebuilt using MAPEWALL MURATURA FINE high-strength, fine-textured, natural hydraulic lime-based, transpirant mortar with very low emission of volatile organic compounds (VOC) and ideal for building masonry, including reinforced masonry, and for touching-up and plumbing walls. Thanks to its particular composition almost no hygrometric shrinkage occurs, which drastically reduces the risk of cracks forming in the mortar. It also has properties that make masonry resistant chemical and physical aggression phenomena.

MAPESTOP was then applied to prevent any further damage due to the presence of rising damp in the internal walls: a concentrated, silane and siloxane-based micro-emulsion that creates a chemical barrier against rising damp.

Before applying MAPESTOP, the masonry was treated with MAPE-ANTIQUÉ RINZAFFO cement-free, salt-resistant, lime and Eco-Pozzolan-based transpirant mortar, used as first layer when creating de-humidifying, transpirant and "structural" renders.

MAPE-ANTIQUÉ MC was then applied over the surfaces, a cement-free, lime and Eco-Pozzolan-based mortar used to create macro-porous dehumidifying render and to restore old masonry, including in buildings, as in this case, of historic significance. This product has properties that protect masonry against various chemical-physical ag-



gression phenomena, such as soluble salts, freeze/thaw cycles, the leaching action of rainwater, alkaline-aggregate reactions and the formation of cracks from plastic shrinkage.

The final step was to apply a layer of MAPE-ANTIQUÉ FC cement-free, fine-grained, lime and Eco-Pozzolan-based mortar to skim the render to perfection.

Thanks to the use of innovative and reliable Mapei materials, the restoration work left this historic building in optimum condition with spaces that more than do justice to the memory of its former owner.



Find out more  
MAPEWALL MURATURA FINE

1. The former residence of Shi Liangcai, built in 1904, is located in the Sonjiang district of Shanghai.
2. The internal walls, damaged by the effect of rising damp, were restored with MAPESTOP.
3. MAPE-ANTIQUÉ MC and MAPE-ANTIQUÉ FC were applied on the masonry to create de-humidifying render and restore the masonry.
4. The external masonry was restored with MAPEWALL MURATURA FINE high performance, natural hydraulic lime-based breathable mortar.

**TECHNICAL DATA**  
**Former residence of Shi Liangcai**, Shanghai (People's Republic of China)  
**Period of construction:** 1916  
**Period of the restoration intervention:** 2021

**Intervention by Mapei:** supplying technical support and products for restoring masonry and renders  
**Main contractor:** Shanghai Shanshun Environmental Protection Building Technology Co.,

Ltd.  
**Mapei coordinator:** Terry Pu, Mapei Construction Materials (Guangzhou) Co. Ltd

**MAPEI PRODUCTS:**  
Chemical barrier against rising damp:

Mapestop  
Restoring masonry walls:  
Mape-Antique Rinzafo, Mape-Antique MC, Mape-Antique FC, MapeWall Muratura Fine

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