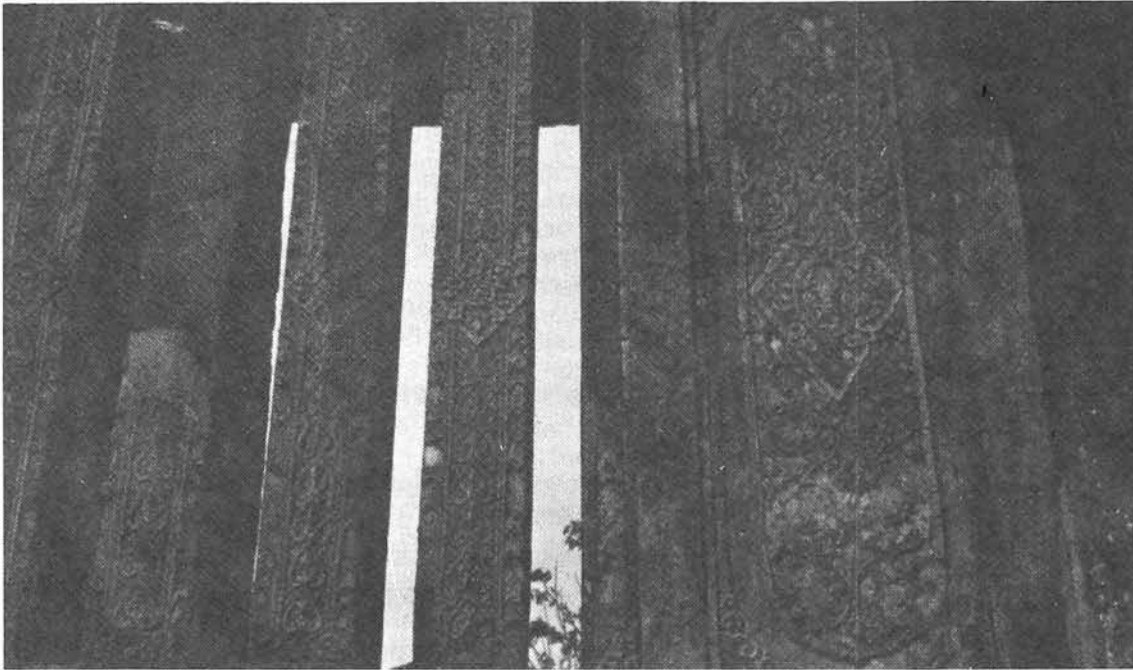


CONSERVATION OF ANCIENT STUCCO

by Sirichai Wangcharoentrakul



The stucco ornamentation in Wat Nang Phaya

Wat Nang Phaya, a temple located at the southern side of the city wall of Srisatchanalai in the Sukhotai Province, was reputed to be constructed by a queen around the 16th century.

The temple is noted for its stucco ornamentation. The motifs range from half-man and half-animal figures to creeping vines. Inside the temple are numerous columns decorated with devas (angels) in prayer. Its windows have long narrow openings, typical of Sukhotai architecture, which allow shafts of light to enter and illuminate the buddha image.

At present, only the west side of the temple still stands. Approximately 25.5 square meter of this is covered with ornamental stuccoes. They were extremely brittle and weak, especially in the small and narrow extremities, when first



brought to the attention of the Conservation Division of the Fine Arts Department. Their surface was also covered with algae and lichen, thus hiding the original details. The ceramic representations of the devas were also in serious state of decay.

The broken pieces in the design are joined using paraloid B72.

Conservation Procedures

The condition of the temple prompted the Fine Arts Department to execute conservation work. It proceeded using the following steps: all details of the ornamentation were recorded before the cleaning process began. Excess dust and grime were cleared using a soft dry brush. Then the surface was brushed again and washed with distilled water. When it was already dry, a solution of 5% paraloid B72 in acetone was sprayed. This served to consolidate the stucco as the solution penetrated its porous sections and held them together. Finally, when the stucco was strong enough, moulds were made using silicone rubber (silastic ERTV). These were used in restoring missing designs.

Recommendations

Based on their experience, the staffmembers involved in the conservation of Wat Nang Phaya forwarded these observations and recommendations. They admitted that the work done was, at best, only temporary. Owing to the importance of the stucco ornamentation, extremely delicate chemicals were avoided. Yet, certain chemicals with reversible reactions

were used for lack of a better substitute.

Looking back, they also discovered that it would have been better to use photogrammetry, rather than moulds, in replicating the designs. Certain parts of the ornamentation had extremely intricate designs which did not appear in the moulds and were easily destroyed as the latter was removed.

They also recommended the construction of a roof over the structure to contain damages caused by temperature change and humidity. The rising damp, they said, may not bring about serious problems because the stucco panel lies on the base of the temple constructed with laterite. Still, if algae and lichen appear, suitable biocides can be used to destroy them, they added.



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1. The conservator uses silicone rubber to make moulds.

2. Extreme care is required in duplicating the design.

3. Reproductions of a stucco panel

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