

RESTORATION AND REPRODUCTION OF TEXTILES IN THE SHOSAIN TREASURE HOUSE USING SILKWORM *KOISHIMARU*

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Since Kawashima Textile Manufactures, Co. Ltd. was assigned to take charge of a reproduction project in the spring of 1993 in the 10-Year Restoration Plan for the Treasure Textiles in the Shosoin Treasure House, 19 pieces of textiles in total have been reproduced, including 10 pieces of *Ashiginu* (plain-weave silk), 4 pieces of *Ra* (complex gauze), 2 pieces of *Aya* (twill damask), 1 piece of *Tatenishiki* (warp-faced compound twill), and 2 pieces of *Nukinishiki* (weft-faced compound twill).

Extreme care was taken in the choice of material and dyeing and weaving methods in the reproduction procedure, in accordance with the policy adopted by a series of reproduction projects for the Shosoin. Taking particularly special care, the silkworm *Koishimaru*, which was closest to ancient threads and is still produced at the Imperial Palace for the purpose of preserving ancient species, was selected. With regard to dyeing, suitable degumming agents, mordants and coloring agents were selected to revive the original hues according to the color names recorded in old literature. With regard to the reproduction of patterns, the characteristics features of the treasures, including surface scratches made by the weaving techniques adopted in those days, were successfully reproduced by making relevant modifications on handlooms, weave controllers and jacquard weaving machines.

It took 3 years to reproduce one item, the time schedule of which consisted of the survey of the item in the 1st year, various basic researches in the 2nd year and the actual reproduction process in the 3rd year. The present report deals with the review and summary of this 10-year reproduction project.

CLASSIFICATION OF OLD TEXTILES IN THE SHOSAIN TREASURE HOUSE

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In the recent years, research studies on old textiles, or *kogire*, in the Shosoin Treasure House have made significant advances, which should be attributable to the progress of the classification project. Most of the Shosoin treasures, which consist of various goods used by the Imperial court circa the mid 8th century and important articles of Todai-ji, have been kept in large storage chests made of Japanese cedar. Nowadays, it has been confirmed that inventory check records of Shosoin treasures were compiled in Nara, Heian, Kamakura and Edo periods. These records reveal that the old textiles in the storage chests had already been damaged at the end of the Heian period, and that the deteriorating dyed textiles were later called “*jinkai*” and were rarely subject to checking (source: Inventory Check Records in 1693 (Genroku era), 1833 (Tempo era), and 1872 (Meiji era)). However, the *jinkai* old textiles were not ignored in a treasure classification project called Shosoin’s Imperial Property Classification (*Shosoin Gyobutsu*

Seirigakari) (the 25th to 37th year of Meiji era).

When the textile classification work was transferred to the Shosoin Section of the then Nara Imperial Museum (1914 to 1945), the textiles were subjected to a thoroughgoing classification processes, in which even a very small piece is classified by such methods as pasting it in a bound book or storing it between glass plates. Those that had kept their original forms were restored for exhibition by lining them with plain silk or Japanese paper using the paperhanging technique.

After the Second World War, the classification project was transferred to the Office of the Shosoin Treasure House, who stopped the efforts to make them available for exhibition but instead focused on restoration that would impose less stress on the textiles by lightly attaching thin Japanese paper to the damaged regions using weak glue. In recent years, the technique of stretching tightly tangled textiles and aligning their fine lines by wetting them with water is progressed gradually. It is now necessary to invent better method of classifying fragile old textiles.

AN X-RAY ANALYTICAL STUDY OF PIGMENTS USED ON SCROLL ROLLER ENDS OF *JINGO-KEIUN-KYO* SUTRAS

Masakazu Naruse and Takehiko Iida

Jingo-Keiun-Kyo Sutras were transcribed during the late 760's at the request of the Regnant Empress Shotoku, of which 742 scrolls have come down to us today. The roller ends of these scrolls have been colored in white, red or green by pigments.

This report presents the results by X-ray diffraction (XRD) and X-ray fluorescence (XRF) analysis performed on the pigments used in the 15 scrolls of *Jingo-Keiun-Kyo* Sutras.

The following compounds were identified by the analyses:

White: (1) Hydrocerussite (basic lead carbonate), (2) Laurionite (Lead chloride hydroxide), (3) Lead sulfate compounds such as lanarkite and (4) Calcite. (Calcium carbonate).

Green: (9) Malachite (Basic copper carbonate).

Red: (5) Red lead (Trilead tetroxide), (6) Iron compounds, (7) Cinnabar (Red mercury sulfide) and Calcite and (8) Red lead, cinnabar and calcite.

The scroll roller ends painted with calcite such as (4) (7) and (8) were probably repaired or retouched between 1920 and 1943. Others remain in their original state.

By the XRF analysis, a trace amount of lead was detected from scroll roller ends with (6) and (9). The presence of lead is possibly attributable to the siccative of drying oil used together with the pigment.

CALLIGRAPHY OF RECORD OF THE NATION'S RARE TREASURES

Takako Kawakami

Calligraphic research often points out that some calligraphy work is in the so-and-so style or it is influenced by so-and-so, but rarely discusses any reasons why such an influence is observed or why it was written in such a style. This paper focuses on the Record of the Nation's Rare Treasures (*Kokka Chinpo-Cho*, hereinafter "the Record"), which can be regarded as one of the documents to represent the greatest state authority, and examines the possibility that the letter shape (hereinafter the "calligraphic style") in the Record was selected in a deliberate manner so that it would represent the greatest state authority. The Record was compiled as an inventory of goods treasured by Emperor *Shomu* to be dedicated to the *Rushanabutsu* (Vairocana, or Roshana Buddha) of Todai-ji Temple to mark the 49th day after his death. It is now kept in the Shosoin Treasure House. While the influence of *Ouyang Xun* in the early Tang Dynasty and *Zhiyong* in the Sui Dynasty of China had been pointed out, the results of calligraphic style analysis showed that the calligraphic style used in the Record shared common features more with stele inscription in Duobao-ta pagoda (752 AD), an early work by Yan Zhenqing 顏真卿 (709 to 785) in the early Tang Dynasty of China. The calligraphy of Yan Zhenqing used to be underestimated as the works of a minor bureaucrat in the history of calligraphy after the Beisong Dynasty of China. However, it is assumed that his calligraphic style was recognized as a proper style those days, already regarded as innovative in the T'ien-pao period in Tang Dynasty. Therefore, it is assumed that the Japanese missions to Tang Dynasty, who had been back from China two years before commencing the compilation of the Record, introduced the early Yan Zhenqing style as the latest Tang Dynasty calligraphic style to the court in the Nara period. This latest style was also observed in the "*Ojomu*", a famous large-character sutra copy written in the Nara period. It was confirmed that the style had deliberately been created by overwriting, a fact that seems to prove the early Yan Zhenqing style actually existed in the Nara period. The Zenko Entire Sutra Canon (or *Zenkoshuin-kyo*, hereinafter "*Shuin-kyo*"), which was written in the sutra copying house managed by *Shibichudai* (the Empress Dowager's Household) around the same time as the Record, also used the same style. It is highly likely that the *Shuinkyō* was written in a calligraphic style regarded as suitable to be used by Hokke-ji Temple, the top of provincial nunneries established by the state. Given this, it also seems highly likely that the calligraphic style of the Record had also been deliberately selected as a suitable style to be used for a document of the greatest state authority.