An analysis of mother-of-pearl inlay techniques used in lacquerware exported in the 19th century

HIDAKA Kaori, KOSETO-HORYU Emi

Lacquerware is a representative form of Japanese art work, and has become highly valued as an art form that was exported to Europe as long ago as the end of the 16th century. Most of the lacquerware exported as part of trade between Japan and Holland was made in Kyoto, though lacquer art from Nagasaki became popular at a later stage, leading to exports of Nagasaki-made products as well. One special feature of lacquer art made in Nagasaki was the use of inlaid mother-of-pearl colored on the underside. Lacquerware made using this underside-colored mother-of-pearl was exported in large quantities from the early 19th century, and though in recent years research has been undertaken from an artistic perspective, there is still much that is not known about the techniques and the materials used for the underside-colored mother-of-pearl inlay.

The research described here involved an analysis of the techniques and the materials used for lacquerware made using this mother-of-pearl underside coloring technique by using a stereoscopic microscope, metal optic microscope, and an energy dispersion X-ray analyzer (SEM-EDAX). These analyses resulted in the observation of a number of different methods, and it also became clear that not only were dyes used as materials, but that pigments were used as well. In light of these observations, it may well be appropriate to call this mother-of-pearl inlay technique carried out in the 19th century "underside-colored mother-of-pearl" rather than "dyed mother-of-pearl".

Results revealed some extremely interesting findings. For example, they indicated use of an ultramarine blue pigment that had been imported to Japan. A technique used in western painting that used extender pigments was also observed. The discussion within this paper is somewhat restricted due to the limited number of samples used in this study. Various compounding factors (workshops, place of origin) need to be taken into consideration in future studies. We believe that by continuing with this study it will be possible to provide information that will be useful in forming a chronology of objects in this area, something that is extremely difficult to achieve through an examination of style alone.