J22 Photo-Polymer Stamps: Their Examination and Identification

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Learning Overview: The goal of this presentation is to introduce attendees to the examination of defects in a stamp impression made from a photo-polymer stamp for the purpose of identification.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by providing awareness of the forensic document examination of photo-polymer stamps that the questioned document examiner may encounter.

Questioned document examiners may encounter diversity in the makeup of the stamps in this class of devices. "The diversity is not limited to classification based upon makeup. The actual material from which the stamp is constructed, and its mode of manufacture adds to the possible verities."[1] A forensic document examiner must not only be aware of the many factors that can cause individual or unique features in a photo-polymer stamp and its impression, but also must be able to evaluate and interpret the significance of any specific characteristic and the relevance it may have to the question or problem under examination. The Scientific Working Group for Forensic Document Examination (SWGDOC) has produced standards that supersede the *ASTM E 2289-03 Standards*, published by the American Society for Testing and Materials, International. These published standards provide the procedures that should be used by forensic document examiners when conducting examinations and comparisons involving rubber stamps and their impressions. These standards are of great importance to the questioned document examiner for it is the questioned document examiner who must be "able to interpret the significance of any particular feature, the relevance it has to the problem in hand, the weight of opinion it merits and the depth of knowledge that can be gained from it."[2] Of consideration to the forensic document examiner should always be the possibility of the existence of a duplicate stamp. Because of the existence of this possibility, often the forensic document examiner should maintain a conservative approach when rendering his or her opinion on examinations. Oftentimes, an inconclusive finding will need to be rendered instead of a positive identification of a specific stamp.

This presentation will provide an overview of the process involved in the manufacture of photo-polymer stamps. Additionally, this presentation will discuss the results of research conducted by the presenter in evaluating the results of the attempt of several forensic document examiners to examine and compare stamped impressions from a specific photo-polymer stamp manufactured for this purpose and the accurateness of their opinions in comparison with the ground truth solution of the problem provided.

Reference(s):

1. Hilton, Ordway. *Scientific Examination of Questioned Documents*, rev. ed., Elsevier Science Publishing Co., New York, 1972, p. 72.
2. Herkt, A. Rubber Stamps. Manufacture and Identification. *Journal of Forensic Science Society*, Volume 25, Issue 1, January 1995), pp. 23-38.

Rubber Stamps, Photo Polymer, Manufacturer