



## Questioned Documents Section – 2004

### J16 An Introduction of the Current Forgery Chinese Seals in the Digital Age

*Kun-Chi Cheng, MSc\* and Hwang Liu, PhD, Forensic Science Laboratory, Ministry of Justice Investigation Bureau, PO Box 3562, Taipei, Taiwan, ROC; Hu-Sheng Chen, PhD, and Hsien-Hui Meng, PhD, Central Police University, 56 Shu Jen Road, Taoyuan, Taiwan, ROC*

After attending this presentation, attendees will understand the changes of current forgery Chinese seal types in the digital age in Taiwan, and proposes a valuable method for the examination of current forged Chinese seal impressions.

This presentation will impact the forensic community and/or humanity by demonstrating the changes of current forgery Chinese seal types in the digital age in Taiwan, and proposes a valuable method for the examination of current forged Chinese seal impressions.

Oriental Chinese and Japanese usually use personal seals for the purposes of authentication or as tokens of social status. The ease of fabricating forged seal poses a security problem in Chinese societies. Personal seals are commonly used for authenticating important documents such as bank cheques in lieu of signatures. This paper points out the changes of the different kinds of current forgery Chinese seal types in the digital age.

Generally, the identification of seals authentication was made by comparing the detail line of characteristic differentials between the impressions, which made with different forgery Chinese seals replicate. Forged Chinese seals were mostly produced by photoprinted zinc plate, which was etched chemically to form the surface plate pattern. As impression of this type lacks the three-dimensional attribute, the major character of the knife-carved seal, differentiating it from the genuine seal impression should not be difficult. Another forgery Chinese seal was made by carving machines. Carving machine-made seals were discernible from others in the needle exertion position, framing lines and angles. However, for those forged seals, which made with photopolymer relief plate and polymer injection molding machine, the employment of genuine impression as the template for platemaking renders them hardly distinguishable. Factors, such as different incident angle of the seal upon imprinting or different degree of inking, constituted the natural range of variation in impressions. The forged seal replicates could be distinguished from the originals in respect of print density and stroke morphology. The possibility of reproducing two identical Chinese seals with photo-polymer relief plate had been confirmed. Document examiners should insist on the submission of the seals. It was the prerequisites for a fruitful examination. In order to ascertain that any observable difference will be an actual natural variation and reach a conclusion, a sufficient quantity of questioned and specimen impressions were necessary. Comparing with various forged methods of Chinese seals, meanwhile, the digital skill edit for print was much popular and easily used for criminals.

Today, the popular personal computer made various Chinese seals and stamp impressions have been easily scanned in to images and used directly to print out on the document. Now and then, the forgery Chinese seal or stamp impressions made by silkscreen were rarely seen because their complicate procedures. Therefore, the ink-jet printer or photocopied machine became the newest implement. This new crime type of forged seal or stamp was proposed to be a new challenge to document examiner.

This paper not only illustrated current crime types of different forgery Chinese seals or stamp but also offered a valuable method for the examination of current forgery Chinese seal impressions from point of view of printing.

#### **Forgery Seal Impressions, Inkjet & Photocopied Printing, Documents Examination**