## The Art of the Harappan Microbead – Revisited

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## PRESENTATION SIGNIFICANCE

Few items in the corpus of Harappan material culture reflect the technological prowess of Indus Civilization craftspeople and their penchant towards miniaturization as much as the steatite "microbead." These sub-millimeter sized ornaments have amazed and confounded archaeologists going back to the first one to describe them in detail - Ernest Mackay, who, in the 1930s, excavated examples at Chanhu-daro in Sindh, Pakistan. At the 23rd Conference of the European Association for South Asian Archaeology & Art in Cardiff, Wales I presented the results of a new study of these important artifacts from Pakistan's ancient past. This study utilized modern scientific techniques including scanning electron microscopy (SEM), X-ray diffraction (XRD) and electron microprobe analysis (EMPA). In his seminal paper entitled The Art of the Harappan Microbead, the late Indian archaeologist K.T.M. Hegde proposed that such microbeads were fashioned from a talc-clay paste, which he posited was first extruded through a specialized beadforming device and then hardened by firing at an extremely high temperature. An experimental study were conducted in attempt to replicate Hegde's "plausible" paste bead-forming device and procedure but was not successful, however. The results of the analytical study lead me to conclude that the microbeads discovered at Chanhu-daro and multiple other Harappan sites were most likely made using a talc reduction process and that, thus far, there is no credible evidence to support a model of "paste" bead production. The most compelling for evidence talc reduction comes in the form of minute sawn steatite bead blanks and the remnants of cotton fiber (on which the microbeads were ground and then heated) that were found among the Chanhu-daro materials.