

Usage of Stone in Road-Building: An Industrial Archaeological Perspective

Kusumsiri Kodithuwakku¹, Chandana Rohana Withanachchi²

Abstract

Stone is a prominent geo-material used for various necessities in the evolution of human culture for quite a long time. The usage of stone in the history of road-building has been in practice since circa 4th and 5th century A.C. It was practiced in Sri Lanka until the first half of the 20th century. The type of stone used was granite, commonly known among the locals as 'Black Stone', Gneiss or Charnokite with a high degree of hardness used for constructing roads, bridges, culverts and other superstructures. In the late 19th century the Telford and Macadam methods were introduced for paving at ascertained sizes and strata. At the inception, rollers made with granite driven by oxen or elephants were used to press the paving. One of such rollers is exhibited in the Highway Museum at Pilimathalawa. Thereafter, steam and diesel-powered rollers have been used respectively. In the municipal areas, setts were used for paving roads. Granite bars had been used for the construction of bridges called *SilaSetuin* in Anuradhapura period. These bridges are of two types namely, beam bridges and slab bridges. Stone beam bridges are largest bridge type and remains of several bridges have been identified in the Anuradhapura region. Masonry arch-bridges are the earliest example for the stone bridges used in British Colonial Period. Foundations, piers, abutments and wing walls of the arch-bridges have been made using granite. In the second half of 19th century, several segmental arch-bridges using stones emerged. The dressed stone blocks have been used to build parapet walls with coping of iron bridges. Apart from these, stones have been used to carve mile posts, guard stones of culverts and manhole plates. The objective of this paper is to examine and identify the usage of granite for road construction. A field survey *in situ* has been conducted to achieve the positive results.

Key Words: *Stone, Granite, Road construction, Paving roads, Stone bridges, Mile posts*

¹ Museum Keeper, Jethawana Museum, Central Cultural Fund and Visiting Lecturer, Rajarata University of Sri Lanka

kusumsiriko@gmail.com

² Senior Lecturer, Department of Archaeology and Heritage Management, Rajarata University of Sri Lanka