

Bridge Aesthetics: Two examples from India

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Abstract

On seeing aesthetically pleasing structures, we are touched if we are sensitive to beauty. Such structures do enrich us and elevate our soul. Aesthetic quality of design (beauty for an artist) in form and shape is defined & there are rules for achieving the beauty. However, simple application of rules may not be enough, an artistic talent and sense of beauty matters, which designer has been bestowed upon by HIM. When proportion, Order and symmetry are applied well, the object so produced has aesthetic value. Five important aspects form, character, detail, scale and proportion must be considered from first principles. [1]

Two Arch bridges have been recently completed / nearing completion in North East India, which will pave way for changing preferences for accepting aesthetics as preferred solution:

- Sanjenthong Bridge at Imphal: 4 lane Bow String Arch bridge, span 56m
- Bridge over river Wahrew in Meghalaya: Steel latticed arch bridge, span 150m.

Principles devised by Dr Fritz Leonhardt, which are very effective in objectively assessing the aesthetical appeal of a bridge are used.

Sound Engineering is necessary for good design of lasting value, but may not lead to beauty in itself. Beyond rational thinking of an Engineer, objective must be there to create beauty. Artist, when engaged, should work for purpose of the structure rather styling it! Beauty of design will reach lasting value only if the bridge achieves its purpose.

Key words: Aesthetics; Bridges; Arch; Steel trussed arch; Bridge design; Composite deck; Steel box section arch; Hangers; HTS bars; Steel Bow String Girder