

## **Modern Monuments: The Revitalisation of Asian Port Cities through Iron and Steel-framed Buildings in the early 20th Century**

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### **Dissertation Abstract**

A number of monumental civic buildings in former British colonial cities remained treasured today. Most originated from the early 20th century. Their grandeur, intricate building ornaments and advanced modern construction technology using structural iron and steel set them apart from vernacular buildings and structures constructed earlier by the British colonisers.

My PhD dissertation aims to firstly, provide a historical understanding of how structural iron and steel frame construction played a key role in creating a golden age of British colonial architecture during the early 20th century, particularly in cosmopolitan port cities such as Calcutta (now Kolkata), Rangoon (now Yangon), Singapore and Hong Kong. Secondly, the research aims to uncover technical details of how construction technologies were transplanted from the UK to her colonies in the early 20th century, particularly the factors crucial to the initial geographical relocation and the subsequent technical knowledge transfer. Thirdly, the dissertation will use these prior historical and technical understanding of steel and iron construction to develop an urban revitalisation strategy for iron and steel framed buildings in Asia cities.

The proposed dissertation has the following objectives:

- Compare urban and architectural development among principle port cities, namely Calcutta and Rangoon (part of the former Bengal Presidency), Singapore and Penang (formerly the Straits Settlements), Hong Kong and Shanghai. In particular, we will explore how cities were constantly shaped by technological advancements and trade environments.
- Understand how the definition of port cities had changed over the last century.

- Uncover how building legislation, design specification and other forms of communications were necessary to facilitate the global process of prefabrication and shipping of iron and steel components
- Conduct on-site surveys of existing iron and steel buildings in port cities to develop a deeper understanding of the construction of iron and steel structures in early 20C and to inform possible means of conservation and adaptive reuse of colonial buildings which is sensitive to the character of port cities and its urban development.

Keywords: Colonial Cities, Historic Ports, Construction History, Urban Planning



Lam Qua, Harbour at Hong Kong, c. 1830, The Bridgeman Art Library, Boston, MA