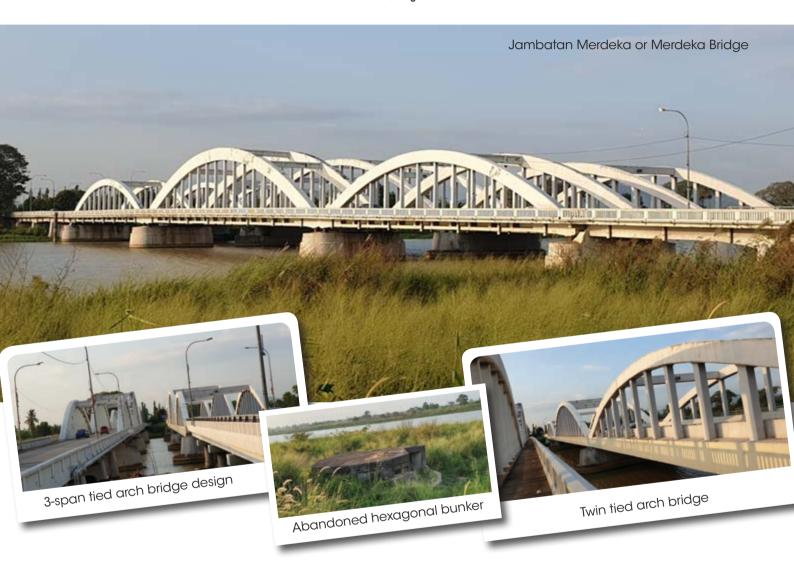
## ENGINEER'S LENS

## **JAMBATAN MERDEKA**



Ir. Dr Oh Seong Por



ambatan Merdeka or Merdeka Bridge spans Sungai Muda at Federal Route 1 from Jalan Butterworth to Sungai Petani and marks the border between Penang and Kedah. The original bridge, built by the British before World War 2, linked Penang to the other northern states. They built a hexagonal concrete bunker near the river to protect the bridge. It still exists today but is abandoned and covered by overgrowth.

In 1942, when the Japanese Imperial Army marched on to Penang, the British blew up the midsection of the bridge, hoping to stop their advance. But the Japanese repaired the bridge and invaded Penang. In 1955, after the war, the Public Services Department of Jabatan Kerja

Raya reconstructed the 100m-long bridge. The 3-span tied arch bridge, built of concrete and steel, could carry motor vehicles and pedestrians. The arches allowed weight to be spread evenly and prevented excessive concentration of stress on fixed supporting structures.

Since the arch was a curved shape, it created compression and, over time, the materials became more compact and strengthened the bridge. Completed in 1957, it was officially opened by our First Prime Minister, Tunku Abdul Rahman, and named Jambatan Merdeka.

In 2008, a second bridge was erected alongside the first one. The twin white coloured tied arch bridges over the calm Sungai Muda make a wonderful sight.