

Construction Techniques and Development of 1st Monorail System in Thailand

Athasit Sirisonthi

Ph.D Candidate, Faculty of Engineering, Naresuan University, Thailand.
Assistant Vice President (Sino-Thai Engineering and Construction Public Company Limited, Thailand)
athasit_si@stecon.co.th
Mr. Athasit is AVP of STECON (The one of the biggest contractor company in Thailand). His engineering skill is strongly in bridge design and construction engineering, mostly of his work are in area of elevated structure construction such as MRT Project and Expressway Projects.

Phongthorn Julphunthong

Assistant Professor
Department of Civil Engineering,
Faculty of Engineering,
Naresuan University
Thailand
pop_civil@hotmail.com
Dr. Phongthorn interests in utilization of pozzolans, waste and recycled materials in cement and concrete industries, special concrete such as bullet and blast resistance concrete, radiation shielding concrete, high acid resistance and abrasion concrete, etc.

Suniti Suparp

Associate Professor
Department of Civil and Environmental Engineering,
Faculty of Engineering,
Srinakharinwirot University,
Thailand
suniti@g.swu.ac.th
Dr. Suniti Suparp has been working in bridge and structural design in Thailand. His research interests are effects of vehicular loads on bridges and bridge engineering and design.

Panuwat Joyklad

Assistant Professor
Department of Civil and Environmental Engineering, Faculty of Engineering,
Srinakharinwirot University,
Thailand
panuwatj@g.swu.ac.th

Dr. Panuwat was bridge design engineer and has been designing many eminent structures in Thailand. The research areas consist of bridge under abnormal loading, behavior of RC structures under various excitations, and development of suitable material for local construction.

Contact: panuwatj@g.swu.ac.th

1 Abstract

This paper aims to present the construction techniques and development of first and unique monorail system in Bangkok, Thailand. Bangkok is the capital and most populous city of Thailand. The city occupies 1,568.7 km² and has a population of over eight million, or 12.6 percent of the country's population. In the last decade, Bangkok has attracted millions of migrants seeking economic opportunity and city is expanding quickly. Recently, Mass Rapid Transit Authority (MRTA) Thailand has decided to adopt monorail system in Bangkok as a rapid transit system due to the limited space, narrow roads and sharp curves in the city. The design of monorail track lines permits flexible and various alignments that include curves of small radiuses and large slopes. The first two projects i.e., Pink Line and Yellow Line projects consist of elevated structure around 64.9 km long, 53 stations, 2 depots and 2 park-and-ride buildings. MRTA has awarded these projects (design, test run and construction of first two lines) to the BSR Joint Venture who invited Sino-Thai Engineering &