THE MASTERWORKS OF CIVIL ENGINEERING



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MIDAS Project Applications

BRIDGE

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MIDAS Project Applications

BRIDGE

MIDAS IT always strives for constant growth and progress with midas users who have made us a trusted leader in technology.

This project application book was published by MIDAS IT, but what MIDAS IT did was just collecting the masterworks of midas users. This book is dedicated to the midas users without whom it would not exist.

MIDAS IT will keep providing the world with utilitarian values that support human pursuit of happiness with our creative technology.

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Contents

- 06 Russky Island Bridge
- 08 Sutong Bridge
- **10** Stonecutters Bridge
- 12 Incheon Bridge
- 14 Sultan Abdul Halim Muadzam Shah Bridge
- 16 Korabelny Fairway Bridge
- 18 Lange Wapper Bridge
- 20 Nanjing Eye Footbridge
- 22 Aramchan Bridge
- 24 Temburong CC3 Bridge
- 26 Weirton-Steubenville Bridge
- 28 China and North Korea Yalu River Bridge
- **30** Lazarevsky Bridge
- 32 Skrecon Bridge
- **34** Three Sisters Bridges
- 36 Thuan Phuoc Bridge
- 38 Liede Bridge
- **40** Freeway D47, Section 9
- 41 Greystone Footbridge
- 42 Serny Bridge
- 43 Wujiang Bridge
- 44 Tapi Cable-stayed Bridge

- 45 Tulur Aji Jejangkat Bridge
- 46 Balang Bridge
- 47 Jinshajiang Jin'an Bridge
- 48 Miaoli Xin-Gang Bridge
- 49 Fuling Wujiang Bridge
- 50 Yangluo Yangtze River Bridge
- 51 Xiangjiang Sanchashi Bridge
- 52 Luding Dadu River Bridge
- 53 Pearl Harbor Memorial Bridge (Q Bridge)
- 54 Nga Tu So Flyover Bridge
- 55 Povazska Bystrica Bridge
- **56** The Basarab Overpass
- 58 Bedew Bridge
- 60 Byker Viaduct
- **62** Lee Roy Selmon Flyovers
- 64 Buttim Bridge
- **66** Third Orbital Expressway
- 68 Nitra Bridge
- 70 Kostivarska Junction
- 71 Mumbai Monorail (Line 1)
- 72 Expressway R1
- 73 Mistecka Junction

-

- 74 Turda Motorway Bridge
- 75 La Jabalina Bridge
- **76** Tarango Bridge
- 77 North Road Corridor Flyover Interchange
- 78 Lusail Marina Interchange
- 79 Delhi Metro Bridge
- 80 Truckee River Bridge
- 82 Roath Dock Viaduct EAV and WAV
- 84 Decking of Sungei Ketapang
- 86 Portishead Skew Bridge
- 88 Nowolazurowa Flyover
- 90 Shibanpo Yangtze River Bridge
- 92 No. 05561 Bridge
- 93 Fruit Street Bridge
- **94** Freeway D47, Section 8
- **95** River Devon Viaduct
- 96 Bridge Over SJ near Stuvsta Station
- 97 I-95 Bridge
- 98 Connel Bridge
- 100 Crescent Bridge
- 102 Nanning Bridge
- 104 Missouri River Bridge

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- **106** Bridge Across R1
- **108** National Palace Museum View Bridge
- 110 BangHwa Bridge
- 112 San Ignacio Bridge
- 114 Nanjing Dashengguan ChangJiang Bridge
- 116 Inner Harbour Bridge
- 117 Foshan Dongping Bridge
- 118 Bahia Honda Bridge
- 119 Pedestrian Bridge
- 120 Caiyuanba Bridge
- 121 Hangzhou Xinjing Expressway Qiandao Lake Extension Jinzhu Bridge
- 122 Ireland Young Hurling & Football Spectator Stand
- 123 Monorail Station

Russky Island Bridge

Vladivostok, Russia

Owner

General Contractor Engineering Consultant Construction Period Type of Project Size of Structure Russian Federal Road Agency-Directorate for Construction of Road Facilities in Vladivostok SK Most / Mostovik Mostovik 2009 - 2012 Cable-stayed Bridge 1.1km Main Span, 3.1km Total Length









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Main features used in this application

- Unknown load factor and lack of fit force for cable optimization
- Construction stage analysis with composite action
- Moving load analysis

Description on this project

The bridge to the Russky Island is one of the world's largest cable-stayed bridges with the 1,104m long of the central span and it establishes a new record of bridge building practice in the world. The bridge also has the highest bridge towers and the longest stayed cables.

Mostovik	
Address	Mira prospekt 5 Omsk, 644080, Russia
Introduction	NPO Mostovik offers construction contract services which includes construction of roads and bridges. Also, it was founded in 1982 and is based in Omsk, Russia. As of 2016, it is in reorganization.
Website	www.mostovik.ru



Sutong Bridge

Suzhou, China



Owner Engineering Consultant Construction Period Type of Project Size of Structure Jiangsu Provincial Communications Department Jiangsu Province Communications Planning and Design Institute Completed in 2008 Cable-stayed Bridge 1.1km Main Span, 8km Total Length





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Main features used in this application

- Construction stage analysis with time-dependent effects
- Cable tension optimisation
- Thermal & buckling analysis

Description on this project

The Sutong Bridge crosses the Yangtze River upstream from Shanghai and carries a six-lane highway with emergency lanes. The total length of the bridge is 8km. The main bridge is a cable-stayed bridge with a world record-breaking 1,088m main span. A concrete bridge with a main span of 268m provides a secondary navigation span. The approach bridges have spans varying between 42m and 75m.

Jiangsu Province Communications Planning and Design Institute

AddressNanjing Qinhuai District Ziyun Avenue on the 9th 210014, ChinaIntroductionIt is a comprehensive engineering consulting group, formerly known as the
Jiangsu Province Transportation Planning and Design Institute built in 1996.
The firm has won more than 300 awards with excellent engineering survey
design and consulting Achievements.Websitewww.jsjty.com





Stonecutters Bridge

Kowloon, Hongkong

Owner General Contractor

Engineering Consultant Construction Period Type of Project Size of Structure



Hong Kong Department of Highways Hitachi Zosen / Yokogawa Bridge Corporation / Maeda Corporation / Hsin Chong Group Ove Arup & Partners 2004 - 2009 Cable-stayed Bridge 1km Main Span, 1.6km Total Length





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Main features used in this application

- Construction stage analysis with time-dependent effects
- Cable tension optimization
- Geometric nonlinear analysis

Description on this project

Stonecutters Bridge is the world's second longest spanning cable-stayed bridge with a main span of 1,018m. The bridge straddles the Rambler Channel at the entrance to the Kwai Chung container terminals, providing a landmark gateway to Hong Kong, one of the world's most vibrant trade centers. The 1.6km long crossing is the centerpiece of the new Route 8 strategic link, a 7.6km long, dual three-lane expressway linking Cheung Sha Wan and Tsing Yi Island. The route improves access between the International Airport and the urban areas of West Kowloon, and provides enhanced links to the container port.



Ove Arup & Partners

Address	Level 5 Festival Walk 80 Tat Chee / Hong Kong	Avenue Kowloon	Tong Kowloon 2265 5000,
Introduction	Arup is a multinational professional provides engineering, design, pla services for all aspects of the buil based in 92 offices across 42 count 160 countries.	l services firm he inning, project r t environment. T tries. Arup has p	eadquartered in London which management and consulting he firm has over 14,000 staff articipated in projects in over
Website	www.arup.com	Email	hongkong@arup.com



Incheon Bridge

Incheon, Korea



Owner General Contractor Engineering Consultant Construction Period Type of Project Size of Structure Incheon Bridge Corporation Samsung Engineering & Construction Seoyoung Engineering / Chodai 2005 - 2009 Cable-stayed Bridge 800m Main Span, 11.6km Total Length







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Main features used in this application

- Construction stage analysis with time-dependent effects
- Cable tension optimization with geometric nonlinearity
- Moving load analysis with concurrent member forces

Description on this project

Incheon Bridge is the longest cable-stayed bridge in Korea and ranked the 5th longest in the world with the main span of 800m. It is not only accumulated technological capabilities and know-how through the construction of the cable-stayed bridge, but also manages to leave behind numerous historical footsteps including the technologies in cable supported bridges, format of the execution, design, construction, and maintenance of the project. The design is executed in the format of limit state design(LSD). It is challenging to complete the maritime bridge with length of more than 10km within 5 years. However, manufacturing and installing the structures through automated manufacturing processes for the majority of the processes including the application of FSLM construction executed in Korea for the first time shorten the construction period and to overcome the differences in the tides.



Seoyoung Engineering

Address 246, Hwangsaeul-ro, Bundang-gu, Seongnam-si, Gyeonggi-do 13595, Korea

IntroductionSince the company was established in 1991, Seoyoung has been successfully
providing consulting services for key infrastructure projects on highways,
transportation, geotechnical, tunnels, bridges, railways, urban planning, land
development, landscape architecture, environment, water resources, and harbors.

Website www.seoyoungeng.com

13



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