

Bridge Tech 2010

— **Technology Outlines a Blueprint for Future Bridge:
Perfect Combination of Aesthetics and Functionality
Prosperous Integration of Innovation and Safety**

November 30 & December 1-2, 2010, Shanghai

DAY ONE: Wednesday, December 1

Morning Session: The Current Landscape and Future Development Trend of World Bridge Industry

0830 Registration

0845 Opening Address

Fu Guanhua, CEO

Jiangsu Transportation Research Institute

0900 The Status of Bridge Construction Development and Current Investment Policies within China's Bridge Industry

- The importance of bridge construction to the infrastructure and economic benefits
- Projects snapshot into 245 planning and undertaking bridge projects

Feng Maorun, Deputy Director of the Highway Division of the Committee of Experts

Ministry of Transport of the People's Republic of China

0930 Analysis of Recent World Bridge Construction and its Development Trend

- Bridge design trend: longer span, higher suspension cable
- Bridge construction safety: balance of quality and quantity
- Increasing importance of bridge health monitoring

Sibylle Rupprecht, Director General (being invited)

International Road Federation

1000 "Technology" Breaks the Record in Bridge Industry

- Independent technology innovation of bridge engineering in China
- Technical challenges and developments in Jiangsu bridge projects: Nanjing Yangtze River Bridge; Sutong Bridge; Da Shengguan Nanjing Yangtze River Bridge etc.

Yang Genlin, General Manager

Jiangsu Communication Holding Corporation

1030 Coffee Break

1100 Bridge Safety Considerations under Technological Innovations

- Analysis of bridges collapse accidents
- Hidden danger of accidents and bridge supervision
- Seismic protection and dynamic control of bridge conditions

Myint Lwin, Director of Bridge Division

Federal Highway Administration, USA

1130 Technology Solutions of the integration of Bridge Design, Construction and Maintenance (sponsorship opportunity)

1200 Luncheon

Afternoon Session: The Worldwide Bridge Case Sharing and Engineering Technology Discussion for the New Built Bridge Projects in China

1400 Overall Plan of Hong Kong – Zhuhai - Macao Bridge: Large-scale Cross-Sea Project with High Quality

- Planning and control during the bridge design, construction, maintenance, resource management and equipments etc
- Bridge construction cooperation between three regions & the integration of island works, road bridge and tunnel Engineering

Su Quanke, Chief Engineer

Hong Kong – Zhuhai - Macao Bridge Advance Work Coordination Group Project Office

1430 Bridge Construction Development and its New Trend in Hong Kong

- Bridge construction needed for city development
- Case sharing of well-known bridges in Hong Kong: Stonecutters Bridge, Tsing Ma Bridge, etc.

Wai Chi-sing, Director

Highways Department, Hong Kong

1500 Schematic Studies on the second Bridge of Dongting Lake in Yueyang

- Project overview and evaluation of construction conditions
- Technical breakthrough in the research areas of seismic performance, wind resistance, driving comfort etc.

Chen Mingxian, General Secretary

Hunan Provincial Transport Department

1530 Coffee Break

1545 Bridge Design and Construction on the Basis of Bridge Life Cycle Analysis

- Prevention of collision and earthquake resistance of long-span bridges
- Comprehensive consideration of life-cycle cost during bridge planning, design, construction and operation

Fan Lichu, Academician

Chinese Academy of Engineering

1615 Integrated Programs of Large-scale Bridge Construction Supervision and Post-monitoring System (sponsorship opportunity)

1645 Design Concepts and Technical Support of Famous Bridges in Denmark

- The Great Belt
- Oresund Bridge
- Femer Bridge – Planning project between Denmark and German

Lars Hauge, Director of the International Bridge Projects

COWI, Denmark

1715 Panel Discussion: Technical Difficulties of New Bridges Being Construction

Moderator:

Li Wanheng, Director of Bridge Division, Research Institute of Highway, **China's Ministry of Transportation**

Panelists:

Lars Hauge, Director of the International Bridge Projects, **COWI, Denmark**

Hyun-Moo Koh, Director, **Korea Bridge Design and Engineering Research Center (KBRC)**

Zhong Hai, Deputy Executive Director, **Zhejiang Jiaxing - Shaoxing Cross-sea Bridge Construction Command**

Wang Mingluan, General Manager, **Fujian Xiamen - Zhangzhou Bridge Construction Co., Ltd.**

1745 End of the 1st day of the summit

DAY TWO: Thursday, December 2

Morning Session: The Application of Advanced Materials and Equipment in Bridge Engineering

0900 The World's Top Engineering Created by Independently Developed Equipments in China

- The whole spiral steel pipe pile
- Specific pile driving boat: the largest and most advanced piling boat in Asia
- Equipment transit above 50 meter box girder

Zhu Yaohong, Deputy Chief Engineer

Hangzhou Bay Bridge Construction Command

0930 Long-Time Experience with Carbon Fiber Reinforced Polymers (CFRP) in Bridge Reinforcement and Maintenance

Urs Meier, Deputy Director

Swiss Federal Laboratories for Materials Testing and Research (EMPA)

1000 Research and Application of Special Equipment for Steel Box Girders Lifting

- Lifting equipment for supporting span and lumpy girder
- Standard beam section lifting

Yao Pei, General Manager

Sutong Bridge Construction Co., Ltd.

1030 Coffee Break

1045 Anti-corrosion: Guarantee of the Bridge Usage Life

- Bridge anti-corrosion required by the influence of climate, hydrology, topography and other geological environments
- Selection criteria of anti-corrosion coating and its specific application
- Epoxy-coated Rebar for anti-corrosion

Shao Xinpeng, Chief Engineer

Qingdao Bay Bridge Construction Command

1115 Equipment Innovation and its Application in Bridge Engineering (sponsorship opportunity)

- Expansion joint device type and the installation
- Technology innovation of bridge girder erection machine

1145 Panel Discussion: Applications of Anti-corrosion and Waterproof Materials in Bridge Construction

- Seamless spray applied in bridge deck waterproofing
- Stainless steel rebar to solve the corrosion problem

Moderator:

Tony Keane, Executive Director, **NACE International, USA**

Panelists:

Jean-Marc Tanis, Chairman, **Association of French Civil Engineering (I'AFGC)**

Ken Dykes, Chairman, **The Corrosion Prevention Association (CPA), UK**

Cai Yisheng, General Manager, **Guangdong Nanao Bridge Construction Co., Ltd.**

Xie Daqi, General Manager, **Shanghai Donghai Bridge Management Co., Ltd.**

1215 Luncheon

Afternoon Session: The Technology Innovation for both Bridge Safety and Aesthetics

1400 The Bridge Design Research Based on the Life-cycle Cost Assessment

- The Content of Bridge Life-cycle Assessment (Design, Performance, Ecology, etc.) and the Tools (Cost Analysis, Risk Assessment, etc.)
- The Systematic Decomposition Method and Criteria for the Entire Life of Bridge Construction
- The Information Integration of Life-cycle for the Whole Bridge Construction Project

Zhang Xigang, CEO

Highway Consultants Co., Ltd., China Communications Construction Company LTD.

1430 Technology Innovation of New Built Bridges in Singapore

- Henderson Wave Bridge: the highest pedestrian bridge
- Marina Bay Bridge: Double-helix DNA chain design and advanced technology

Neo Bian Hong, Design Director

Land Transport Authority, Singapore

1500 Incremental Launching Method Applied in Combined Bridges Construction

- Design difficulties and innovative ideas of composite bridge structures
- Incremental launching method principles and key construction techniques
- Case study: Hangzhou Jiubao arch bridge — China's first large-scale cross-river composite bridge using incremental launching method

Cheng Xiaodong, Deputy Chief Director

Zhejiang Hangzhou Jiubao Bridge Construction Command

1530 Coffee Break

1545 Key Technologies of Split-type Steel Box Girder Used in Xihoumen Bridge

- Reliability and significance of split-type Steel Box Girder
- Characteristics of load-carrying capability and the transit mechanism

Shen Wang, Director

Zhejiang Zhoushan Island Integration Project Construction Command

1615 Pre-stressing System for Bridge Engineering (sponsorship opportunity)

1645 Bridge Condition Diagnosis and Reinforcement Assessment

- Diagnostic Techniques for bridge fatigue damage and prediction of remaining life

- Advanced sensors and its optimization layout for bridge structural inspection

Motoi Okuda, Senior Director of Long-span Bridge Engineering Center
Honshu - Shikoku Bridge Expressways Co., Ltd. (HSBE), Japan

1715 Panel Discussion: Structural Health Monitoring Technology of Large Bridges
Moderator:

Dai Xiaojian, General Manager, **Shanghai Changjiang Tunnel and Bridge Construction and Development Co., Ltd.**

Panelists:

Wang Zhongyu, Director, **Bridge Engineering Research Center, Taiwan**

Motoi Okuda, Senior Director of Long-span Bridge Engineering Center, **Honshu - Shikoku Bridge Expressways Co., Ltd. (HSBE), Japan**

Zhong Jianchi, Director, **Jiangsu Taizhou Yangtze River Bridge Construction Command**

Xiang Mingwu, CEO, **South China Metallurgical Group** (Contractor of Changde Yuanshui West Bridge)

1745 End of summit

DAY THREE: Bridge Tour, December 3

Shanghai Changjiang Tunnel Bridge & Chongming Island Tour