

Bair Jin Yueih Briefing

Over 30 years' experience in Infrastructure projects, including 20 years' experience in tunnel construction and 10 years' experience in tunnel design. Mr Bair designed all of the tunnel temporary supports for the Singapore Downtown Line 3, Package B, including NATM tunnels, cross passages, vertical shafts, soft eyes at the TBM launch and retrieval sites and TBM turn arounds. In addition to this, Mr Bair also designed the five-arc ventilation tunnel for Package B and has designed small radius (R<20m) TBM cable tunnels in Taiwan. Contract Value of projects which had been handled range from **£2,500,000. to £875,000,000.**

M.S Geotechnical Engineering , National Taiwan University		1988
B.S. Civil Engineering , National Chiao Tung University		1985
Chartered Professional Engineer (Civil) (Taiwan)		1991
Registered Applied Geologist (Taiwan)		2007
UK/ICE/GMICE		2018
Chartered Geotechnical Engineer (Civil) (Taiwan)		2011
04/22	present	Ruoh Yur Office of Engineering Technology Affairs Manager
07/2017	03/2022	CEC Corp Package GC03 of Aerotropolis Rapid Transit System Project (Green Line) with 6 stations and 12 tunnels is a turkey project. Senior Engineer (Manager) Preparing tender
07/2015	07/2017	CEC Corp Liantang/Heung Yuen Wai Boundary Control Point Site Formation and Infrastructure Works –Contract 6 in Hong Kong. Construction of an approximately 4.6km long dual two-lane Connecting Road (with about 0.6km of at-grade roads, 3.3km of viaducts and 0.7km of tunnel) connecting the BCP with the proposed Sha Tau Kok Interchange and the associated tunnel ventilation buildings. (£270,000,000) Blasting Specialist Blasting designs and supervisor
07/2012	06/2015	CEC Corp Preparing tenders for Liantang C1, C2, and C6 in Hong Kong and Mumbai MRT Phase 3 in India Senior Engineer (Manager) Preparing tenders
04/2002	06/2012	T.Y.LIN International Taiwan 1.Singapore MRT Downtown Line 3 package B, including 5 underground stations and associated TBM tunnels , 3 escape vertical shafts of 24m, 54m and 52 m in depth and 2 small sections of NATM tunnel (120m and 30m in length). Design all tunnels temporary supports including NATM Tunnels, Cross passages, Vertical Shafts, TBM Launch and Arrival, TBM U-turn. (£875, 000, 000) 2.Highway linked to Keelung Harbour, includes 3 twin tube tunnels with length of 1300m, 350m and 120m; and cross section area of 110 m ² using drilled and blast methos(£44, 000, 000) 3.Tunghu Hill link road near Taipei City, includes 2 single tube tunnels with length of 150 and 30m; and cross section area of 95 m ² using mechanical excavation method(£4, 500, 000) 4.Nan Shan Kou Drainage tunnel in Chungho Township. The tunnel is 2.6 km long with cross section area of 46 m ² using drilled and blast method(£19, 500, 000) 5.Tai-Power 161 KV cable TBM tunnel with 3.6 m diameter (Suder~Fuyin~Honan Line). There are 2 tunnels with length of 1.6km and 1.2 km(£21, 000, 000) Tunnel Design Engineer Designing tunnels

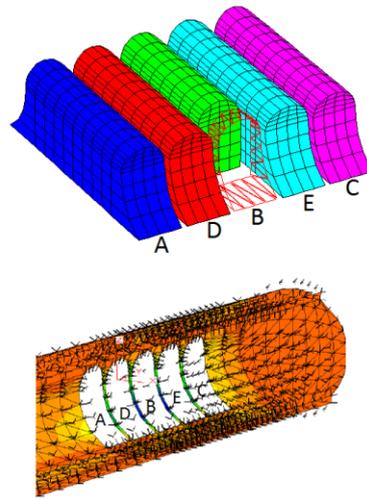
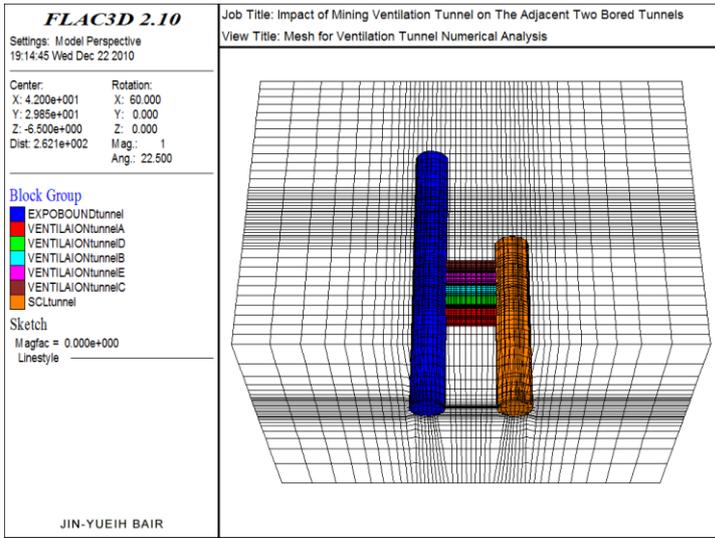
		<p>(Turnkey contract) 6.Taiwan Railway Changsuwan 3rd track project, includes one single track tunnel of 1.3km with cross section area of 45m² using mechanical excavation method(£32, 500, 000) (Design and Build contract) 7.Ankeng no.1 road project 1in New Taipei City 2nd phase, includes 3 tubes tunnel (2 for road and 1 for light rail) with 200m in length and cross section area of 110m each using mechanical excavation method(£7, 500, 000)</p>	
04/2000	03/2002	<p>Koukai Co. Ltd Construction of viaduct for TouSue Freeway Project contract C515. (£67, 500, 000)</p>	<p>Manager Planning projects</p>
06/1999	04/2000	<p>New Asian Construction & Development Corporation Construction of water tunnels, include one 7.2 km TBM tunnel and one 2.4km drilled & blast tunnel with cross section area of 45m² for the Shing-Wu-Jie Water Project (£65, 000, 000)</p>	<p>Team Leader Leading tunnel construction</p>
05/1997	05/1999	<p>Sin-Der Construction Co. Pa-Kua-Shan Tunnel for East-West Hanbao ~ Tsutun Expressway Project. The tunnel is a twin tube with the length of 5.2km and cross section of 100m² using mechanical excavation method. (£47, 500, 000)</p>	<p>Team Leader of western portal Leading tunnel construction</p>
04/1996	04/1997	<p>Chyuarn Jihn Construction Co The tunnel is 200m in length with cross section area of 90m² using excavation by machine. (£2, 500, 000). Drainage tunnel of 1300m in length with cross section area of 28m² (£4, 875, 000).</p>	<p>Special Tunnel Adviser Advising tunnel construction</p>
07/1995	03/1996	<p>Jia Liarn Construction Co. Construction of two tunnels of the construction Contract 303z) for Northern Second Freeway Project. These two tunnels are twin tube with the length of 350 m and 660m; and with the cross section area of 155m² using drilled and blast method. (£25, 250, 000)</p>	<p>Team Leader Leading tunnel construction</p>
07/1990	06/1995	<p>CECI Engineering Consultants, Inc., Taiwan 1. Two twin tube tunnels with length of 350 m and 660m; and with cross section area of 155 m² using drilled & blast method for the Northern Second freeway Project (design contract 303z) (£25, 250, 000) 2. Pa-Kua-Shan Tunnel for East-West Expressway (Hanbao ~ Tsutun) Project. The tunnel is a twin tube with the length of 5.2km and cross section of 100m² using mechanical excavation method. (£65, 000, 000)</p>	<p>Tunnel design Engineer Designing tunnels</p>
01/1989	06/1990	<p>United Geotech, Inc Eastern section of Central Tunnel (8 km), western section of An Sho Tunnel and An Sho Vertical Shaft (101 m in depth) for the of Taiwan Railway Southern Link project. These tunnels were using drilled and blast method with cross section area of 60m²</p>	<p>Geologist Tunnels mapping</p>
09/1985	08/1986	<p>Wu Chir Ching Architect Associates Dormitory Facility construction of Chishan Sugar Farm of the Tai-Sugar Company</p>	<p>Site Engineer Supervisor</p>
09/1981	08/1982	<p>Bor Cherng Constructor Foundation work of the high voltage cable towers linked to the Third Nuclear Power Plant of the Tai-Power Company</p>	<p>Site Engineer Supervisor</p>

Issued papers

- 1.花蓮縣富里地區海岸山脈斷層大地應力之初步分析(Dissertation of Master's degree)
- 2.未來隧道工程師所面臨的挑戰(現代營建)
- 3.世界隧道技術的變革及新的管理觀念(現代營建)
- 4.台灣岩石隧道的技術瓶頸與核心競爭力(工程月刊)
- 5.隧道風險分析和掘進速率評估(工程月刊)
- 6.台電和平溪碧海水力發電工程第 I-B 隧道工程風險評估及通風分析(現代營建)
- 7.高性能混(噴)凝土在地下工程中的應用(工程期刊)
- 8.基隆市中和路通基金公路隧道之破壞模式(世界隧道期刊-中國)
- 9.未固結地層隧道打設全著型灌漿岩栓的目的(工程期刊)
- 10.簡介挪威的隧道施工法NMT(現代營建)
- 11.成功的隧道洞口設計(現代營建)
- 12.有限元素法在岩石隧道中的應用(現代營建)
- 13.台灣隧道工程的技術瓶頸—核心競爭力(工程期刊)
- 14.日本環片新技術(現代營建)
- 15.潛盾隧道小半徑曲線施工方法(工程期刊)
- 16.TBM掘進速率預測模型的比較(台電工程月刊，94年度研究計畫論文)
- 17.英國隧道風險管理實施規則(工程期刊)(Introduce 'THE JOINT CODE OF PRACTICE FOR RISK MANAGEMENT OF TUNNEL WORKS IN UK')
- 18.蒙地卡羅模擬在自由斷面掘削機評估中的應用(台電工程月刊)
- 19.破壞力學及突變理論在岩石邊坡之應用(臺灣公路工程)
- 20.國道1號4k+820邊坡崩塌之探討(現代營建)
- 21.國道3號3.1公里走山之探討(現代營建)
- 22.流-固耦合應用在Singapore Downtown Line 3複雜地下工程(現代營建)
- 23.淺覆蓋軟弱岩體超接近隧道內襯砌動力反應分析(現代營建)
23. Is a full face drive safer and more effective than sequential excavation in mixed ground? (Tunnelling and Underground Space Technology, being reviewed)
24. Study of Slope Failure at 3.1 K of National Freeway No. 3 in North Taiwan (Engineering Geology, being reviewed)
- 25.台灣高階放射性核廢料地質處置場何處尋(現代營建)
- 26.全斷面開挖較分部開挖安全及有效率嗎?以大陸工程香港蓮塘第六標為例(現代營建)

Programs for analysis:

Dips(0875B)、Phases2(0875A)、Rockdata(0875A)、Unwedge v3.0(0875A)
DECISION TOOLS 4.5 Professional Suite (87405)
Mathcad 11 pro (JW11035-KA0028-T753-QDD3)
FLAC3D (version 2.1 242-886-0007-USB 18557)Creep, Thermal, Dynamic
Visual MODFLOW 4.3 (VMOD-430-648526089-1076)
grapher™ 11 (WG-075217-1183)
Surfer (WS-089094-1752)



Presentation at Hong Kong Tunnelling Society





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MEETING NOTIFICATION

24th March 2016

The Next meeting of the Hong Kong Tunnelling Society (HKTS) will be held at:

Date: 7:00pm for 7:30pm, **Wednesday 6th April 2016**

Venue: 3/F Bar, Mariners Club, Middle Road, TST



This month's discussion will be:

What is the function of fully grouted bolts in mixed ground?

Is a full face drive safer and more effective than sequential excavation in mixed ground?

In Hong Kong, fully grouted bolts are not often employed to support tunnels in mixed ground. However, fully grouted bolts are often used to support tunnels in uncemented ground in Taiwan. Numerical analysis of FLAC3D will be used to explain the function of fully grouted bolts in mixed ground conditions. In the example for discussion, the portal section of tunnel passed through an area of mixed ground. Based on the evolution of tunnelling method, 3D numerical analysis of FLAC3D is used to demonstrate that "a full face drive is safer and more effective than sequential excavation in mixed ground".

Presenter: Bair Jin Yueih – Senior Engineer (Manager), Continental Engineering Corp

Over 25 years' experience in Infrastructure projects, including 15 years' experience in tunnel construction and 10 years' experience in tunnel design. Mr Bair designed all of the tunnel temporary supports for the Singapore Downtown Line 3, Package B, including NATM tunnels, cross passages, vertical shafts, soft eyes at the TBM launch and retrieval sites and TBM turn arounds. In addition to this, Mr Bair also designed the five-arc ventilation tunnel for Package B and has designed small radius (R<20m) TBM cable tunnels in Taiwan.

Please join us for the presentation followed by drinks in the bar opposite. The event is kindly sponsored by Continental Engineering Corp. A contribution of HK\$20 per person will be accepted at the door to cover the cost of the room.

Please try to provide exact change to expedite entry.

Regards,

David Salisbury
Secretary, Hong Kong Tunnelling Society

If any details are incorrect or if you do not wish to receive this notification please contact the Secretary, HKTS.

Our ref: ICE/Membership/82333988

Date: 4 January 2018

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Dear Mr Bair,

Career Appraisal: Pass with Guidance for Professional Review

I'm pleased to tell you that you've passed your Career Appraisal.

Your assessors found that you have the skills, knowledge and experience needed to apply for the Chartered Professional Review.