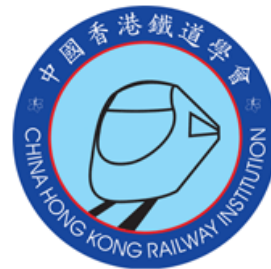


CHKRI Bulletin

Autumn 2014 年秋

中國香港鐵路學會簡報



<http://chkri.hk>

Chairman's message

You will notice that this issue of the CHKRI Bulletin is now bi-lingual. This is part of our continuing effort to enhance communication with our members and to continually strive to upgrade our services to meet your needs.

With the announcement by the Hong Kong Government of the Railway Development Strategy 2014, railway expansion in Hong Kong looks set to continue well into the next decade. This will give great opportunities for existing railway professionals and also for young graduates to have a fruitful career path ahead of them. CHKRI is arranging a special presentation on RDS2014 at our Christmas Dinner so I encourage all members to come along to see what the future holds for us.

The 11th World Railway Development and Research Society (WRDRS) Annual Meeting will be held on 27-28 November 2014 in Beijing. The main discussion topics include China High Speed Rail technology export strategy, latest legislation on railway safety management, latest development on train technology. Both CHKRI President Adi Lau and I will attend the meeting and any other CHKRI members are welcome to join.

Ir LEUNG Sze Kwan
Chairman, CHKRI

主席的話

今期，你會發現「中國香港鐵路學會簡報」已經採用了雙語出版。我們的努力漸見成果，我們會持續加強與會員溝通、提升服務，以滿足大家的種種需求。

綜觀香港政府公佈的 2014 年鐵路發展策略，未來十年的鐵路擴展前景持續樂觀。這既給現有的鐵路從業員帶來莫大機遇，也為年輕的畢業生提供許多職業發展良機。為此，學會將藉今年舉辦聖誕晚宴之機，特別安排「鐵路發展策略 (RDS2014)」簡報環節。本人誠邀所有成員屆時蒞臨參與，共證未來。

第十一屆世界軌道交通發展研究會年會 (WRDRS) 將於 2014 年 11 月 27 至 28 日在北京舉行。主要議題包括：中國高铁”走出去” 的战略部署、鐵路安全管理的最新法規、軌道車輛技術的最新發展。學會理事長劉天成先生和本人將會出席此次會議，亦歡迎其他會員能夠一起參加。

中國香港鐵路學會主席
梁士琨工程師

Technical Talk : Phased Array Ultrasonic Technique in Wheel and Axle Inspection

The quality of the wheel sets directly affects the safety of railway operation, especially for high speed train and heavy haul transportation, due to the dynamic load produced in the wheel sets. Peels, cracks and defects occur in the area of wheel tread, wheel rim, wheel disc and axle where the stress will be concentrated. The traditional method features the disadvantage of time consuming, high manpower cost, low efficiency and reliability.

On 18th August, Gao Xiaorong, Professor of Southwest Jiaotong University gave a technical talk on the advantages of phased array ultrasonic testing which can be used in wheel and axle defect inspection and quality control. She explained the practical application of the automatic inspection equipment for a phased array ultrasonic testing system can reliably find defects in the key areas of wheels and axles.

技術講座：利用「相控矩陣超聲波檢測技術」檢查車輪和車軸

輪對的質量直接影響鐵路運行的安全性。高速列車和重載運輸車運行時，其所產生的動態負載對輪對尤其是個大考驗。輪面、輪輞、輪盤、車軸等會出現剝離，斷裂等缺陷，而壓力會集中在有瑕疵的區域。傳統檢測方法的缺點包括耗時、人力成本高、效率和可靠性低。

8月18日，西南交通大學的高曉蓉教授以「相控矩陣超聲波檢測」為專題，講解該技術應用於車輪和車軸的缺陷檢測和質量控制的種種優點。她以自動檢測設備為實例，說明「相控矩陣超聲波檢測系統」能可靠地找到車輪和車軸主要部位的缺陷。



Professor Gao delivers the presentation and receives a CHKRI souvenir from Secretary, Anthony Tong

高教授主持演講，和接受由學會秘書長湯基雲先生送贈紀念品

Site Visit to Guangzhou – Dongguan – Shenzhen Intercity Railway Construction Site

實地參觀廣州-東莞-深圳城際鐵路的工地

On 13 September, members visited construction sites of Guangzhou – Dongguan - Shenzhen Intercity Railway Project in Humen, Shenzhen.

在 9 月 13 日，會員參觀了「穗莞深城際鐵路項目」位於深圳虎門的工地。

The Pearl River Delta Intercity Railway Company opened the visit by giving members an overview of the PRD Intercity Project. CRCC Tunnelling Works Contractor then briefed members the operating principle of the tunnel boring machine and led members to inspect the completed 8.5m internal diameter bored tunnel section which is designed for maximum train speed of 250 km/h.

珠三角城際鐵路公司以「珠三角城際項目概覽」為導，迎接會員的到訪。中鐵隧道工程承辦商隨後介紹了隧道鑽挖機的工作原理，並帶領會員視察一段已鑽挖的、內徑 8.5 米的隧道，該段的設計車速可達每小時 250 公里。

In the afternoon, CREC Railway Bridge Contractor briefed members the construction method and staging of a major structural steel railway bridge with span configuration of 143m+264m+143m and a clear headroom of 34m for marine vessels passing underneath the bridge.

當天下午，中鐵鐵路橋承辦商向會員講解一段主鋼結構鐵路橋的施工方法和分階工程，該橋的跨度為 143 米+264 米+143 米，橋下的船舶淨空高度達 34 米。



Members enjoy the visit to Dongguan intercity railway construction
會員訪問穗莞深城際鐵路

Technical Talk : Mixed operations of 4-car and 6-car trains in MTR Shenzhen and 4 to 6-car conversion

The “4 to 6” Car Electric Multiple Unit Conversion Project was the first train consist extension project for an operating railway line in Shenzhen.

On 27 October, Cheri Lee, Deputy General Manager - Operation, MTR (Shenzhen) explained how the project was managed seamlessly from design, construction, testing, commissioning and changeover to passenger service ahead of programme without affecting the normal traffic operations.

The project covered 28 trains with complicated processes in both coordination and technical arrangement including modification of signalling system, rolling stocks and platform screen doors, etc. Under the pressure of rapid patronage growth, the project had to be completed within 27 months, starting from design to converted trains being put into passenger service.

The project is now 60% complete and it is expected that all trains in passenger service can be converted to 6-cars by Chinese New Year 2015 in order to meet the peak travel period.



Cheri Lee receives a CHKRI souvenir from Secretary, Anthony Tong.

李婉玲女士接受由學會秘書長湯基雲先生送贈紀念品

技術講座：深圳地鐵 4 卡和 6 卡列車的混合運行及由 4 卡至 6 卡的轉換項目

電動車組由“4 卡”變“6 卡”的轉換項目，是深圳營運中鐵路綫的首個列車車輛組加長項目。

10 月 27 日，港鐵（深圳）副總經理-運營李婉玲女士，講解了該項目如何在嚴謹的管理下，完成設計、施工、測試、調試等程序，並在不影響正常行車運作的情況下，較原定日期提早投入客運服務。

該項目涉及 28 組列車，涉及複雜的協調工作和技術安排，改動範疇包括信號系統、鐵道車輛和月台幕門等。在客量急促增長的壓力下，整個項目由設計開始到把轉換後的列車投入客運服務，必須在 27 個月內完成。

該項目現已完成 60%，預計整個轉換“6 卡”列車項目能在 2015 年農曆新年期間完成，以滿足客運高峰期的服務需求。



SZ Line 4 Train

深圳四綫列車的圖片

Coming events <http://chkri.hk/event.html>

13–16 November : 15th Senior Railway Engineering and Management Course, Guangzhou

15 November - Site visit to new MTR West Island Line HKU station prior to opening

27-28 November – The 11th World Railway Development & Research Society (WRDRS) Annual Meeting, Beijing www.worldrailway.cn

12 December – CHKRI Christmas Dinner and Quiz Night with special presentation on RDS2014
http://www.hyd.gov.hk/en/publications_and_publicity/publications/railway_development_strategy_2014

December – Site visit : Airport People Mover maintenance and midfield extension

近期活動預告 <http://chkri.hk/event.html>

11 月 13-16 日 : 第十五屆高級鐵路工程及管理培訓班，廣州

11 月 15 日 : 實地參觀即將啟用的港鐵西港島綫香港大學車站

11 月 27-28 日 : 第十一屆世界軌道交通發展研究會年會在北京舉行 www.worldrailway.cn

12 月 12 日 : 中國香港鐵路學會聖誕晚宴和智力競賽之夜與 RDS2014 特別介紹

http://www.hyd.gov.hk/en/publications_and_publicity/publications/railway_development_strategy_2014

12 月 : 實地參觀：機場旅客捷運系統的維修和中場範圍擴展計劃

Membership Fees

Just a reminder to all Members that some 2014 Membership Fees are still due!

Please send your cheque to the Treasurer or contact any CHKRI Committee Member.

For details visit our website : <http://www.chkri.hk/notice.html>

會員費

謹提醒各位會員，2014 年有部分會員費仍未繳交！

請將您的支票寄給司庫或聯絡任何 CHKRI 委員會委員。

有關詳情，請訪問我們的網站：<http://www.chkri.hk/notice.html>