

全球首例

行人天橋採用

S960 超高強度鋼材

The world's first use of ultra-high strength S960 steel in footbridge construction



龍躍頭交匯處上方
Above Lung Yeuk Tau Interchange



橫跨梧桐河
Across Ng Tung River

粉嶺繞道 (東段) The Fanling Bypass Eastern Section

項目里程碑 Project Milestones



土拓署與理大簽署深化S960超高強鋼科研及應用合作備忘錄，促進雙方在橋樑建設項目中落實應用S960超高強鋼。
The CEDD and PolyU signed a Memorandum of Understanding to deepen collaboration in the research and adoption of high strength steel for facilitating the use of ultra-high strength S960 steel in bridge construction projects



理大實驗室內舉行S960超高強鋼焊接考試，以及為焊接組件進行壓縮測試。
Ultra-high strength S960 steel welding examination and compression test of welded section at PolyU



工地現場模擬實際S960超高強鋼焊接操作，以及進行焊接測試。
Ultra-high strength S960 steel welding trial mimicking actual operating condition and welding test at construction site



首段S960超高強鋼行人天橋組裝儀式
First section of ultra-high strength S960 steel footbridge assembly ceremony



工地現場進行橋段架設
Lifting bridge segment at construction site

06/2023

08/2023 - 06/2024

07/2024

08/2024

使用S960超高強鋼的優點

- 比一般強度的鋼材具更高抗拉強度，有效減少鋼材消耗，提高抗變形能力和抗疲勞強度，以降低建造成本。
- 能減低橋身重量，令橋樑結構更輕巧，可有效減少地基樁柱數目。
- 流線型外觀
- 可使用較小型的起重設備，減低安全風險。
- 減少碳排放
- 提升建造效率，縮短施工期

Benefits in using ultra-high strength S960 steel

- Higher tensile strength than normal strength steel, which effectively reduces steel consumption, improves resistance to deformation and fatigue strength to reduce construction cost.
- Can reduce the weight of the bridge deck and make the bridge structure slimmer, which can effectively reduce the number of piles.
- Streamlined appearance
- Enable the use of smaller lifting equipment to reduce safety risks
- Reduce carbon emission
- Enhance construction efficiency and shorten construction period



首段S960超高強鋼行人天橋組裝儀式

首段以S960超高強鋼建造的行人天橋預製組件已經運抵香港，並在2024年7月18日由土拓署署長方學誠、發展局北部都會區統籌辦事處副主任翁佩雲女士、發展局項目策略及管控處處長羅國權太平紳士、理大國家鋼結構工程技術研究中心香港分中心主任鍾國輝教授、建造業議會主席何安誠教授，連同其他政府部門、學界與業界代表參與組裝儀式，標誌著工程取得了階段性成果。

土拓署署長方學誠太平紳士致辭時表示是次項目是全世界首次採用S960超高強鋼建造行人天橋，足見政府決心將建造水平推至世界前列。

First section of ultra-high strength S960 steel footbridge assembly ceremony

The first prefabricated section of the footbridge made of ultra-high strength S960 steel has been delivered to Hong Kong. A ceremony on the tightening of the connection bolts was held on 18 July 2024, attended by the Director of CEDD, Michael Fong, JP, Ms Pecvin Yong, Deputy Director of Northern Metropolis Co-ordination Office of Development Bureau, Mr Joseph Lo, JP, Head of Project Strategy and Governance Office of Development Bureau, Professor Chung Kwok-fai, Director of the Chinese National Engineering Research Centre for Steel Construction (Hong Kong Branch) of PolyU and Professor Ho On-sing, Chairman of Construction Industry Council, together with other representatives from the Government, academia and the industry, signifying the milestone achievement of the project.

During the ceremony, the Director of CEDD, Mr Michael Fong, JP, said that this was the first-ever use of ultra-high strength S960 steel in the construction of a pedestrian footbridge, and that the Government was determined to bring the construction standard to the forefront of the world.



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應用S960超高強鋼建行人天橋是政府、學界與業界攜手合作的成果，除了為未來橋樑建造項目奠定了技術基礎，亦可減少工程的碳排放，促進可持續性發展。不久的將來，工程完成後將為粉嶺區帶來更完善的交通網絡，以及綠色宜居的生活環境。

The application of ultra-high strength S960 steel in the construction of the footbridge is the result of the co-operation between the Government, the academia and the industry. Apart from laying a technological foundation for future bridge construction projects, this technology reduces carbon emissions in construction and thus promotes sustainable development. In the near future, the project will bring a better transport network, as well as a green and livable environment to Fanling.

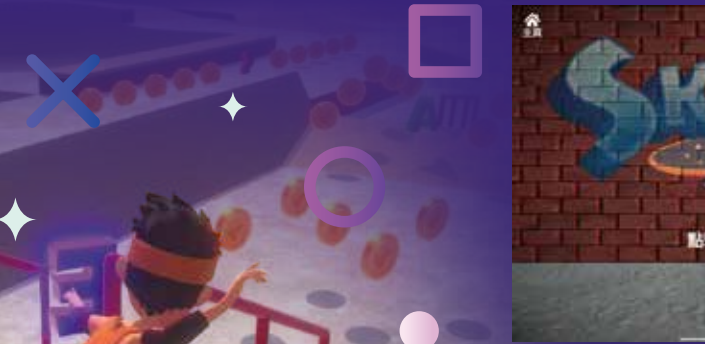
粉北創作 - 社區共融壁畫創作活動

工程團隊於2024年4月至5月期間，聯同豐盛社企學會和菁然社企 (wePaint)，舉辦了一系列的社區共融壁畫創作活動——「粉北創作」。是次活動邀請到一班長者和有特殊學習需要的人士，為粉嶺北社區聯絡中心外牆共同創作一幅富有粉嶺特色的壁畫，讓每位參與者能夠展現藝術才華，同時促進長幼共融，凝聚社區。



Community inclusive mural painting programme

The project team, in collaboration with Fullness Social Enterprise Society and wePaint, organised a community-inclusive mural painting programme at the Fanling North Community Liaison Centre from April to May 2024. A group of elders and people with special educational needs were invited to jointly create a mural with Fanling features on an exterior wall at the Centre, allowing all participants to showcase their artistic talents while promoting harmony across generations and the community.



粉嶺北社區聯絡中心全新展品

粉嶺北社區聯絡中心內全新的滑板展區，設置了一款以即將落成的安樂門街遊樂場為藍圖的滑板遊戲，讓訪客透過模擬遊戲，率先體驗達致奧運標準的安樂門街遊樂場，共享滑板帶來的刺激和樂趣。

New exhibit at the Fanling North Community Liaison Centre

The Fanling North Community Liaison Centre proudly presents a new skateboard exhibition highlighting a skateboard game featuring our coming completion of the Olympic standard skateboard park - On Lok Mun Street Playground. Visitors can taste the excitement and fun of skateboarding through this simulation game and experience the future On Lok Mun Street Playground.



Project team receives UK New Engineering Contract Award

The Martin Barnes Awards presentation ceremony organised by the New Engineering Contract (NEC) Users' Group under the Institution of Civil Engineers of the United Kingdom was held on 27 June 2024. The project team received the Winner Award under the "Demonstrating Carbon Dioxide Reduction Initiatives towards Net-zero" category in recognition of the team's proactive efforts in adopting a number of carbon reduction initiatives in the project with an aim to reducing carbon dioxide emissions and commitment to a sustainable future.

工程團隊獲頒「新工程合約」獎項

英國土木工程師學會轄下的新工程合約組織(NEC)於2024年6月27日舉行「Martin Barnes」獎項頒獎典禮。工程團隊獲頒發「實踐減少二氧化碳排放量措施以邁向淨零排放」組別冠軍，以表揚其於工程項目中積極採用一系列減碳措施，達致減少二氧化碳排放量，以及致力建造可持續發展的將來。

實踐可持續發展目標獲業界肯定

「粉嶺北新發展區第一階段-粉嶺繞道東段(石湖新村北至龍躍頭)工程團隊榮獲由環保促進會舉辦的「聯合國可持續發展目標香港成就獎2024」其中兩個獎項，表彰其在推行工程項目時能致力實踐可持續發展目標，惠及社區。

Recognition received for achieving the sustainable development goals

The project team of "Fanling North New Development Area, Phase 1 - Fanling Bypass Eastern Section (Shek Wu San Tsuen North to Lung Yeuk Tau) was honoured to receive 2 awards in the United Nations Sustainable Development Goals Achievement Awards Hong Kong 2024 organised by the Green Council in recognition of its commitment to achieving the sustainable development goals in implementing the project for the benefit of the community.

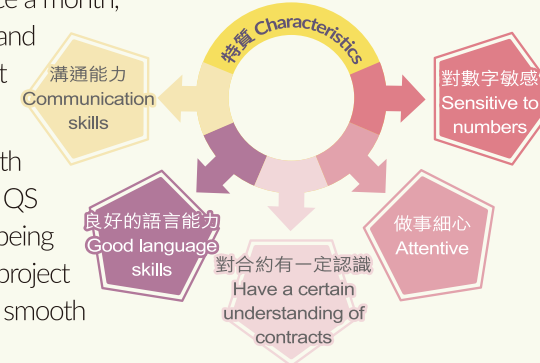
工程小知識 Engineering Knowledge

工料測量師

工料測量師是建築界的「財務策劃師」及「合約專家」。建築工程須嚴格控制開支，故市場對工料測量師的需求亦日益上升。工料測量師的主要工作包括：成本諮詢及控制、成本計劃、制訂招標文件、處理合約糾紛等。一般而言，工料測量師主要在寫字樓工作，但每月需要到地盤巡視平均一至兩次，除了檢視工程進度外，亦知悉承建商動用的資源，以作成本計算之用。在古洞北及粉嶺北新發展區項目中，工料測量師團隊肩負重任，為龐大的工程款項及開支把關，令工程項目能夠順利推進。

The quantity surveyors

Quantity surveyors (QS) are the "financial planners" and "contract experts" of the construction industry. The need for strict cost control in construction projects has led to an increasing demand for QS. Their major duties include cost consultation and control, cost planning, formulation of tender documents, handling of contract disputes, etc. QS mainly work in office buildings, but they need to go to the construction site occasionally once or twice a month, for checking the progress of works, and contractor's resources deployed for cost evaluation. In the Kwu Tung North and Fanling North New Development Areas project, the QS team has taken up the important role of being the gatekeeper for the huge amount of project payments and expenditure to ensure the smooth progress of the projects.



查詢詳情，請與古洞北及粉嶺北新發展區辦事處聯絡。 For further information, please contact the Kwu Tung North and Fanling North New Development Area Office. 古洞北 tel: 3547 1645 email: ktnrp@cedd.gov.hk 粉嶺北 tel: 3547 1648 email: fnrp@cedd.gov.hk



Map of Kwu Tung North and Fanling North New Development Area showing construction progress for various contracts (ND/2019/01 to ND/2019/06). Includes details on site formation, infrastructure, sewage treatment, and road works.