

## **Visit the Guangdong steel factory of China Construction Steel Structure Group in Huizhou 2019.04.01**

The CNERC paid a technical visit to Huizhou, and visited the steel factory of China Construction Steel Structure Group (CSCEC), seen the automated production line independently developed by CSCEC and discussed the welding problems between the high-strength steel factory and the construction site. The delegation team consisted of:

Prof. K. F. Chung	Director of CNERC
Mr. Y. K. Pang	Secretary of HKCMSA
Dr. T. M. Chan	Deputy Secretary General of CNERC
Dr. Y. F. Leung	Office Bearer of CNERC
Dr. H. C. Ho	Deputy Secretary General of CNERC
Ir W. H. Wu	Senior Project Fellow of CNERC
H. Jiang	Research Associate of CNERC
Catherine Ng	Executive Officer of CNERC
H. Jin	PhD Student of PolyU

Representatives of the CSCEC included:

K. Xu	Chief Engineer
Z. M. Chen	General Manager
J. X. Lu	Chief Engineer
Q. C. Feng	Chief Engineer
J. F. Tian	Deputy General Manager
C. Wang	Manager

Mr. K. Xu, Chief Engineer and Mr. Z. M. Chen, general manager of the CSCEC accompanied the CNERC delegation team to visit the museum of China Construction Steel Corporation with a theme of "iron and bones, steel future". The steel museum introduces the history of the CSCEC, and the current development which has been based on BIM construction system with intelligent computer technology, transportation system for the purpose of creating "a slowdown city" and other innovative products.

After that, the two parties visited the "steel structure intelligent manufacturing production line", which is solely developed by the CSCEC. The production line has been fully automated from the cutting of steel plates, to pre-assembly and welding, and the subsequent spray coatings. The flexible intelligent manufacturing system of integrated information management and CPS truly realizes the idea of "intelligent manufacturing". At the same time, the production line also provides structural parts for the Shenzhen International Convention and Exhibition Center which is currently under construction.



From left: Dr. Y. F. Leung, Dr. T. M. Chan, Mr. Z. M. Chen, Prof. K. F. Chung, Mr. K. Xu, Mr. Y. K. Pang and Dr. H. C. Ho

During the exchange meeting, Mr. Z. M. Chen first introduced the construction of the intelligent manufacturing system of the Guangdong Construction Plant of CSCEC, as well as the welding process and quality level. At the same time, he pointed out the different parts of welding in the factory welding and construction work, and the difficulties in welding on the engineering site. Later, Prof. K. F. Chung explained the research progress of the CNERC in the Q690 steel welding, and introduced the softening of the material properties of the high-strength steel under welding conditions, the change of the structure and how to slow down the degradation of the properties of the material from the welding process. At the end, the two parties discussed and exchanged issues on steel quality control, welding process and structural parts installation at the current stage.



Group photo of the CNERC delegation team and the CSCEC representatives