Signalling Principles

(Course Code: SC 17-041)

26 August 2017 (Saturday), 9:30am to 5:00pm

Introduction

Signalling system is very important for safe operation of railway. This course introduces the functions delivered from signalling and how safety is ensured for trains and passengers through signalling. An overall signalling architecture, signalling principle, design techniques and design work flow/procedures will be illustrated. Examples on the design of a signalling control tables from a track layout will be discussed.

Programme Objectives

1. To provide an understanding of the roles of signalling in railway system
2. To appreciate how signalling ensures train running on rails without safety issues
3. To illustrate the Signalling Principles
4. To explain applications of Signalling Principles in the control table design from a track layout
5. To demonstrate the development of the signalling system from route relay logic interlocking (RRI) circuit design to solid state interlocking (SSI) data preparation design

Learning Outcomes

Upon completion of this course, participants are able to：

1. Appreciate the importance of the signalling system in railway safety operation
2. Understand various applications of signalling principles in safety protection
3. Describe the design development process and application of signalling from RRI (circuits) to SSI (software)

Language

Cantonese and supplement with English

Who Should Attend

Engineering practitioners in developing signalling careers, especially for designers

Venue

MTR Academy - Hung Hom Centre, Kowloon, Hong Kong

Mode of Learning

Classroom lecture

Programme Structure

The programme comprises 3 main parts:

1. Railway signalling, its roles and typical architecture
2. Signalling principles and their applications
3. Design of a signalling control table from a track layout

Speaker

Timothy Y. T. Tai
BSc, MSc,
MIRSE, MHKIE,
MIEAust,
CPE(NER), MIET,
CEng

Timothy Y.T. Tai (Tim) is a professional signal engineer with over 35 years of experience in maintenance, implementation, design; test and commissioning of relay interlocking, Computer Based Interlocking, Automatic Train Control and Communications-based Train Control (CBTC) systems. He is currently employed as the Signalling & Electronic Control Engineering Manager in MTR Corporation with the responsibility of design, implementation, test and commissioning of modifications for the Signalling & Electronic Control system in Operating Railway and the on-coming new line interfacing systems.

His working experience in Australia, India, Canada, China and Hong Kong enables him with the knowledge and skills in different signalling systems.

Tim has attained a MSc in Computer Science and is a member of IEAust, MIET, MHKIE and MIRSE (by examination), a Chartered Engineer (IET) and Chartered Professional Engineer (IEAust) with Certificate of National Engineering Register (NER).

Tim also has IRSE licence to carry out work in the categories 1.1.150Dv2 (Signalling Principles Designer), 1.3.180v1 (Signalling Principles Tester) & 1.3.190v1 [Tester in Charge(S)].

Tim was a Visiting Lecturer in the Hong Kong Polytechnic University, teaching Signalling and Train Control Systems in MSc course in year 2009 and 2013. He is also an active Executive Member of IRSE (HK Section) who provides tutorials for the examinees for the UK annual IRSE examination.

Certificate of Attendance

Each participant will receive a certificate of attendance (indicating 6.5 hours of participation) upon successful completion of this programme

Programme Fee	Early Bird Fee	Corporate & Group Discount
$2,000	**$1,800** (Paid registration on or before 12 Aug 2017)	**15%** off for – members of supporting professional bodies * – full time staff of MTRCL and its subsidiary companies (Ngong Ping 360, Octopus and TraxComm) **25%** off for – all participants in a group of 3 or above from the same company (enrolment is for the same course code)

* Supporting professional bodies are: Hong Kong Institution of Engineers (HKIE), The Institution of Engineering and Technology (IET), Society of Operations Engineers (SOE), China Hong Kong Railway Institution (CHKRI), Hong Kong Quality Management Association (HKQMA), Six Sigma Institute (SSI), Knowledge Management Development Centre (KMDC), Hong Kong Institute of Environmentalists, Literati Academy of Greater China (Lagreach) and The Hong Kong Institution of Engineering Surveyors (HKIES).

Application Methods

Online

Applicants can enrol and pay online https://www.mtracademy.com

Enquiry in Person

Address: MTR Hung Hom Building, 1/F., 8 Cheong Wan Road, Hung Hom, Kowloon
Opening hours: Mon, Wed and Thu: 1:30pm – 2:30pm; 3:30pm – 7:30pm; Saturday: 9:30am – 12:30pm
Closed on Sunday and Public Holiday

For Group Enrollment

Please call 2520 3453 or email: academy@mtr.com.hk. Please email or fax us the completed enrollment forms.

Payment methods

By credit card or cheque

Closing Date for Registration

Please note that due to limitations of venue capacity and relevant logistics, all registrations must be made at least 3 working days prior to the delivery date of individual modules. No walk-in registration will be entertained.

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