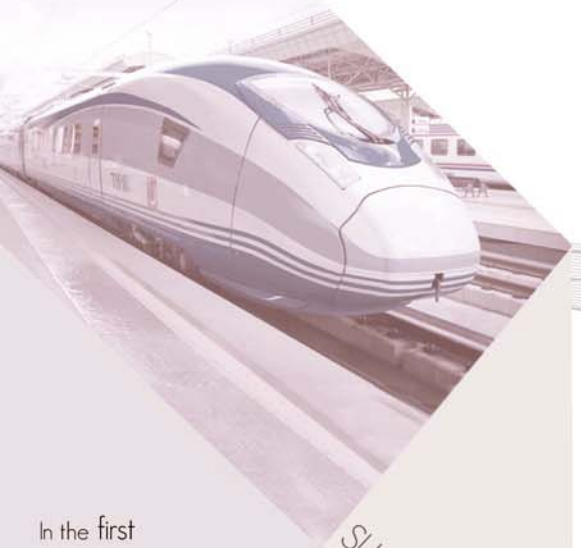


HIGH-SPEED INTRODUCTION

Monday, June 1, 2015

Day Director: Rod Diridon

SUMMIT DAY ONE

In the first masterclasses, an introduction to high-speed rail will be given, these are some topics that will be discussed:
-The Story of high speed in the world
-High speed sketch
-Track Mechanics
-Types Of high-speed trains
-Brake equipments and braking characteristics
-Wheel-rail interaction

After the introduction of the high speed, in the second Masterclass, track technics will be given. These will be the topics:
-basic concepts of track characteristics
-Types of track devices and their characteristics

In the third masterclass, general knowledges for the use of BIM program for HSR technologies will be given

the fourth masterclass, Introduction to the railway systems, will include the following topic:
-Brief introduction to signaling, telecommunications, catenary and TPS

08:30	Registration
09:30	Welcoming address given by: ROD DIRIDON (Mineta Transportation Institute Emeritus Executive Director)
10:00	Opening: Introduction of characteristics and targets for the high-speed in San francisco given by: JEFF MORALES (California High-Speed Rail Authority CEO)
10:30	Coffee break
11:00	1st Masterclass: HIGH-SPEED RAILWAY INTRODUCTION given by: MICHEL LEBOEUF (UIC intercity & high-speed Director)
13:00	Lunch time
14:00	2nd Masterclass: HIGH SPEED RAIL TRACK TECHNICS, INTRODUCTION given by: EDUARDO ROMO URROZ (FCH President)
14:45	3rd Masterclass: A NEW ERA: BIM FOR HSR given by: PETER GERTLER (APTA Intercity and HSR Committee Chairman)
15:15	Coffee Break
15:30	4th Masterclass: INTRODUCTION TO THE RAILWAY SYSTEMS given by: ANTONIO ARRIBAS (Eurif President)
16:15	End 1st day

TRACK, TPS, CATENARY AND SIGNALING

Tuesday, June 2, 2015

Day Director: Eduardo Romo

SUMMIT DAY TWO

At the beginning of the second day, necessary knowledge for the development of the **track**, will be given in the **fifth masterclass**. including:
-Track system selection: Suitability analysis and selection process

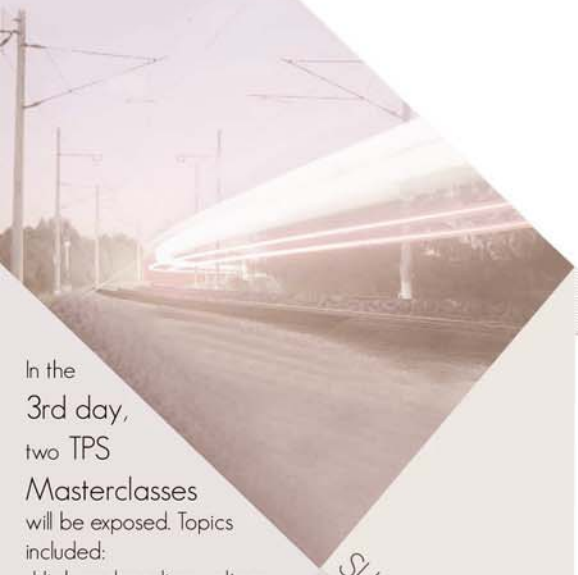
In the **sixth masterclass, catenary** topics will be given, including:
-General Analysis of railway electrification
-Catenary-pantograph interaction
-Mechanical and electrical elements definition

In the **seventh masterclass, signaling & telecommunication** topics will be initiated:
-Basic railway signaling concepts: security
-Circuit track and axle counters
-Supervision and onboard equipment
-Interlocking, signal and control of turnouts

After this, in the **eighth masterclass, TPS topics** will be iniziated, including:
-General characteristics of TPS system.

At the end of the day, in the **ninth masterclass, track topics** will be finalized, including:
-Track-infrastructure integrated behavior:
-Vertical stiffness of the track, Earthworks and track integrated behavior, and Track-bridge interaction

09:30	5th Masterclass: TRACK PART I given by: MANUEL CUADRADO (Senior railway engineer FCH)
10:45	Coffee break
11:00	6th Masterclass: CATENARY OVERVIEW PART I given by: ANDRÉ DOELLING (Senior railway engineer)
12:00	Lunch time
13:00	7th Masterclass: SIGNALING & TELECOMUNICATION PART I given by: JOSÉ LUIS MEDINA (Senior railway engineer & technical Signaling Director) and WOLFANG JACOB (Senior signaling railway engineer) *//confirmation pending*
14:15	Coffee break
14:30	8th Masterclass: TPS PART I given by: ARMIN KEMENATER (Senior project engineer in rail electrification) and MÁXIMO LÓPEZ (Senior railway engineer & electrification Professor in Polytechnic University of Madrid)
15:30	9th Masterclass: TRACK PART II given by: INGO PAUKNER (Senior railway slab track expert) and MANUEL CUADRADO (Senior railway engineer FCH)
16:30	End 2nd day



SUMMIT DAY THREE

TPS, CATENARY AND SIGNALING

Wednesday, June 3, 2015

Day Director: Antonio Arribas

In the 3rd day, two TPS Masterclasses will be exposed. Topics included:
-High and medium voltage networks in the vicinity of the railroad tracks
-Subestations. Sizing and onle-line diagram and Substation equipment of AC
-Auxiliary systems & Unbalancing currents

After this, the last catenary masterclass will be given. These will be the topics:
-Equipment and catenary design
-Interaction of traction power supply system & rolling stock

in the thirteenth & fourteenth masterclasses, signaling & telecommunication topics, will be finalized, including:
-System of driving assistance depending on the speed
-European Train Control System ETCS / ERTMS
-CTC centralized traffic-control and management tools for Command post
-Wire systems and analog and digital transmission
-Information packaging. Hierarchical communication networks
-Communication Radio GSMR & Associated telecommunications services

In the next masterclass, how to identify & coordinate interfaces between systems will be exposed.

At the end of the day, a brief masterclass of electrical & electromagnetic disturbances in lines, and external systems, nearby railway line, will be exposed

09:30	10th Masterclass: TPS (ELECTRICAL SUBSTATIONS) PART II given by: ARMIN KEMENATER (Senior project engineer in rail electrification) and MÁXIMO LÓPEZ (Senior railway engineer & electrification Professor in Polytechnic University of Madrid)
10:15	11th Masterclass: TPS PART III given by: ARMIN KEMENATER (Senior project engineer in rail electrification) and MÁXIMO LÓPEZ (Senior railway engineer & electrification Professor in Polytechnic University of Madrid)
11:00	Coffee break
11:15	12th Masterclass: CATENARY ENGINEERING & DESIGN TOOLS PART II given by: ANDRÉ DOELLING (Senior railway engineer)
12:00	Lunch time
13:00	13th Masterclass: SIGNALING & TELECOMMUNICATION PART II given by: JOSÉ LUIS MEDINA (Senior railway engineer & technical Signaling Director)
14:15	Coffee break
14:30	14th Masterclass: SIGNALING & TELECOMMUNICATION PART III given by: JOSÉ LUIS MEDINA (Senior railway engineer & technical Signaling Director)
15:45	15th Masterclass: INTERFACE DEFINITION & METHODOLOGIES given by: ANTONIO ARRIBAS (Eurif President)
16:15	16th Masterclass: ELECTRICAL AND ELECTROMAGNETIC DISTURBANCES given by: ARMIN KEMENATER (Senior project engineer in rail electrification) and MÁXIMO LÓPEZ (Senior railway engineer & electrification Professor in Polytechnic University of Madrid)
16:30	End 3rd day

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