TECHNICAL VISITS

In cooperation with Renfe, Adif and other actors, a series of technical visits will complement the theoretical concepts explained and the different parameters described in the practical case.

Information will be provided well in advance and in any case, the organisation of the training will take into account all the logistics. All costs are included in the training fees except travel to and from Madrid.

Practical Information

Dates and venues

From	24 to 28 October 2016, Madrid - Spain
Venue	Fundación de los Ferrocarriles Españoles (C/ Santa Isabel, 44 – E-28012 Madrid)
	www.ffe.es
Registration	October 24 at 08:00 am
End of the training	October 28 at 16:00 pm
Price	1 600 €

For registration and any additional detail please contact:

For the content of the programme
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www.formacion-ffe.es

INTERNATIONAL UNION OF RAILWAYS

FUNDACIÓN DE LOS FERROCARRILES ESPAÑOLES

INTERNATIONAL UNION OF RAILWAYS

4th Training on High Speed Systems

Level 2

MADRID
24-28 October 2016

Press partner vía libre The Spanish Railway Journal

General context

High speed rail is not just a single area of expertise, but a complex system combining wide-ranging technical fields such as infrastructure, rolling stock and operations with cross-disciplinary issues such as finance, business, management, communication and training.

Taking these factors into account, and facing an often tense economic, political and social climate in their countries, managers must take tough decisions that may prove historic in the field of transport in general and rail transport in particular.

The decision to build a high speed system and how to implement it is complex due to numerous parameters, different potential combinations and the variety of stakeholders involved.

In order to answer all these questions and satisfy the many requests for comprehensive and unbiased information on the subject made by its own members as well as consultancy firms, ministries, railway companies, etc., in 2004 UIC launched a special course, Training on High Speed Systems (THSS).

Since 2004 more than 500 students have taken active part in these sessions on an annual basis to learn more and share their experience with us (UIC members). The 12th session was organised in April 2016 and more sessions are planned for future years.

Following proposals made by students in previous editions and at the request of UIC members, since 2012 we have offered a second level of training focusing on more in-depth and specific elements of high speed systems, with a particular emphasis on the theoretical aspects of fundamental issues (standards, environment, modelling, etc.).

In the second level, particular attention is given to the analysis and discussion of practical cases, which can prove highly useful when taking decisions in practice.

A series of technical visits will complement the course programme.

The 4th edition of this Level 2 THSS will be held in Spain in October 2016 thanks to the cooperation of Spanish stakeholders in the field of high speed (Renfe Operadora, Adif, Fundación de los Ferrocarriles Españoles and Fundacion Caminos de Hierro FCH), giving the possibility of showing several different technologies and examples of integration of systems.

You will find here-after more detailed information on this innovative and unique training session.

Objectives

- Provide in-depth and comprehensive insight into the high speed system
- Provide managers with all the information needed to facilitate decision-making on the subject of high speed rail
- Discuss and develop practical high speed projects
- Definition on path/way to implement a High Speed System
- Visit strategic points on the Spanish high speed system and discuss them on-site

Target groups

- Managers, strategy experts, decision-makers, economists, banks, industry, engineers...

Conditions for participation

- The seminar is targeted at people who wish to be given a comprehensive overview of high speed systems
- Previous attendance to THSS-Level 1 is recommended but not necessary
- Attendance at ALL sessions is therefore mandatory
- The organiser is in charge of the logistics for the training session (technical documents, domestic travel for technical visits, lunches)
- Accommodation from 24 to 28 October and dinners are not included
- The training session will be held in English

PROGRAMME

Draft

The training program will consist of the following components:

INTRODUCTORY MODULE

Introduction to High Speed Systems (summary of basic THSS – Level 1)

- Potential in the conventional network ("incremental rail speeds")
- General approach to high speed rail
- Overview of high-speed rail systems around the world
- High Speed Implementation Handbook

THEORETICAL SESSIONS

Each theoretical session will consist of a presentation about the several strategic concepts necessary for a High Speed project development.

Each subject can be composed of a one or more 30-minute presentation.

Strategic subjects identified are (some final modifications are possible):

- **Environment**
  Presentation of UIC research on high speed's contribution to sustainable mobility and carbon balance
- **Stations for High Speed Systems**
  Presentation of UIC research on high speed and the city
- **Traffic Forecasting**
  Basic principles of modelling and its application to High Speed prospection
- **Standards for High Speed Rail Systems**
  Requirements, definitions, different types of standards, different "families" of rail standards
- **Other Fundamental Values in High Speed Projects**
  Basic principles for comprehensive planning and processes in developing a high speed project,
  Fundamental elements of high speed (safety, security, RAMS [Reliability, Availability, Maintainability and Safety], quality, management, life cycle cost, etc.),
  Integration concept.

PRACTICAL CASE

During the training, and on an alternating basis with the many other different theoretical sessions, students will be divided into groups of a maximum of 5 students led by a teacher-supervisor, and will develop and discuss a real example of a High Speed project.

This practical exercise will include all the steps to accomplish to define and plan a real High Speed project, from the beginning of the process up to the final configuration of basic parameters and many actions to implement. A presentation and final common discussion will be held at the end of the training.

After the setting-up of the groups, each one will develop the different consecutive parts. At the end, a plenary discussion will compare the different solutions reached.

- Main explanation of the project
- Geography of the projects and strategy of cities served
- Modelling and calculation of the potential traffic expected, under the different hypotheses and options
- Definition of the strategy and situation of stations
- Definition of the operating plan
- Creation and adaptation of rail standards
- Integration
- Adjustment and correction of parameters
- Further steps to the final implementation

Final round-table discussion and conclusions

- Final discussion
- Closing remarks