

TRAINING PROGRAM

Leading education & training in **INFRASTRUCTURE SOLUTIONS**

Infrastructure System |

Signaling Systems |

Maintenance |

practice-based knowledge transfer
due to bundled know-how

best-equipped
training turnouts

highly qualified
lecturers

tailor-made
trainings



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Information about WS Academy

WS Academy stands for a sustainable knowledge advantage due to the combined know-how of the well-esteemed companies ÖBB Infrastruktur AG, voestalpine Railway Systems GmbH, Weichenwerk Wörth GmbH and WS Service GmbH.

The intelligent combination of voestalpines' product know-how with ÖBB's maintenance and operational prowess guarantees high-quality practical trainings based on state-of-the-art technology at WS Academy.

Due to many years of experience and expertise, we offer leading education and trainings in infrastructure solutions. We cover topics such as infrastructure system, turnout & rail technology, signaling components as well as inspection and maintenance. We are also devoting ourselves to sustainability.

As a training provider it is our goal to provide practice-oriented solutions offering our customers added value in their professional everyday life.

In order to supplement the theoretical knowledge with practical handling, we offer turnouts for training purposes regardless of the weather conditions.

Our modern exhibits are always based on state-of-the-art technology.

During our tailor-made trainings as well as our regular training programs the practice-oriented education is always paramount.

With three smaller and one larger conference rooms, WS Academy is the perfect location for conferences, trainings, workshops, seminars and corporate events of any kind.

Our offer is rounded out by factory tours and individual on-site support.

Located in the south of the capital city Sankt Pölten, WS Academy is easily accessible.

If you do have any further questions, please do not hesitate to ask.



CONTACT US

WS Academy

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Our individual offer for you



tailor-made

We offer all our courses and topics as tailor-made trainings. In order to suit your wishes and needs you get to choose your individual topics and subjects from our training program. We will create an offer tailored to fit your individual requirements.

You get to decide the topics, focus, date and type of event.



inhouse

All our courses can also be organized as an inhouse training. The training will be carried out from our professional experts at your company site.



online

We offer all courses also as online trainings. The technical requirements are easy – you will get a link to enter the course in a timely manner.

Also any tailor-made trainings can be carried out online.



In case there are no suitable topics for your requirements, we will create a new training program in collaboration with our experts to suit your needs.



our training competence center

event arena



catering area



conference room



Our conference rooms

seminar room 1	St. Peter in der Au	45 m ²
seminar room 2	Villach	65 m ²
seminar room 3	St. Michael	120 m ²
seminar room 4	Wörth	46 m ²
event arena		570 m ²

Our four multifunctional conference rooms offer the perfect setting for events in any kind. The rooms are equipped with modern technical equipment to fulfill all requirements to ensure a professional performance for your conferences, events, trainings, workshops and seminars.

Our offer is completed by extensive inclusive services as well as personal event support on site.

Our inclusive services for you

- Water & fruit juices
- Snacks during breaks including coffee
- Lunch buffet in the catering area
- WLAN access
- Writing materials for each participant
- On-site support during the event
- Permanent availability of fully functional training switches

We would be happy to make you an individual offer.

Overview of trainings

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INFRASTRUCTURE SYSTEM

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SIGNALING SYSTEMS

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MAINTENANCE

Modular Trainings

Vignol track

001

Superstructure - Basics

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Basics of turnouts for standard gauge (1435mm)

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Basics of DLD-components in turnouts

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Grooved rail

004

Turnout technology for grooved rail assemblies - basics

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005

Turnout technology for grooved rail assemblies - knowledge consolidation

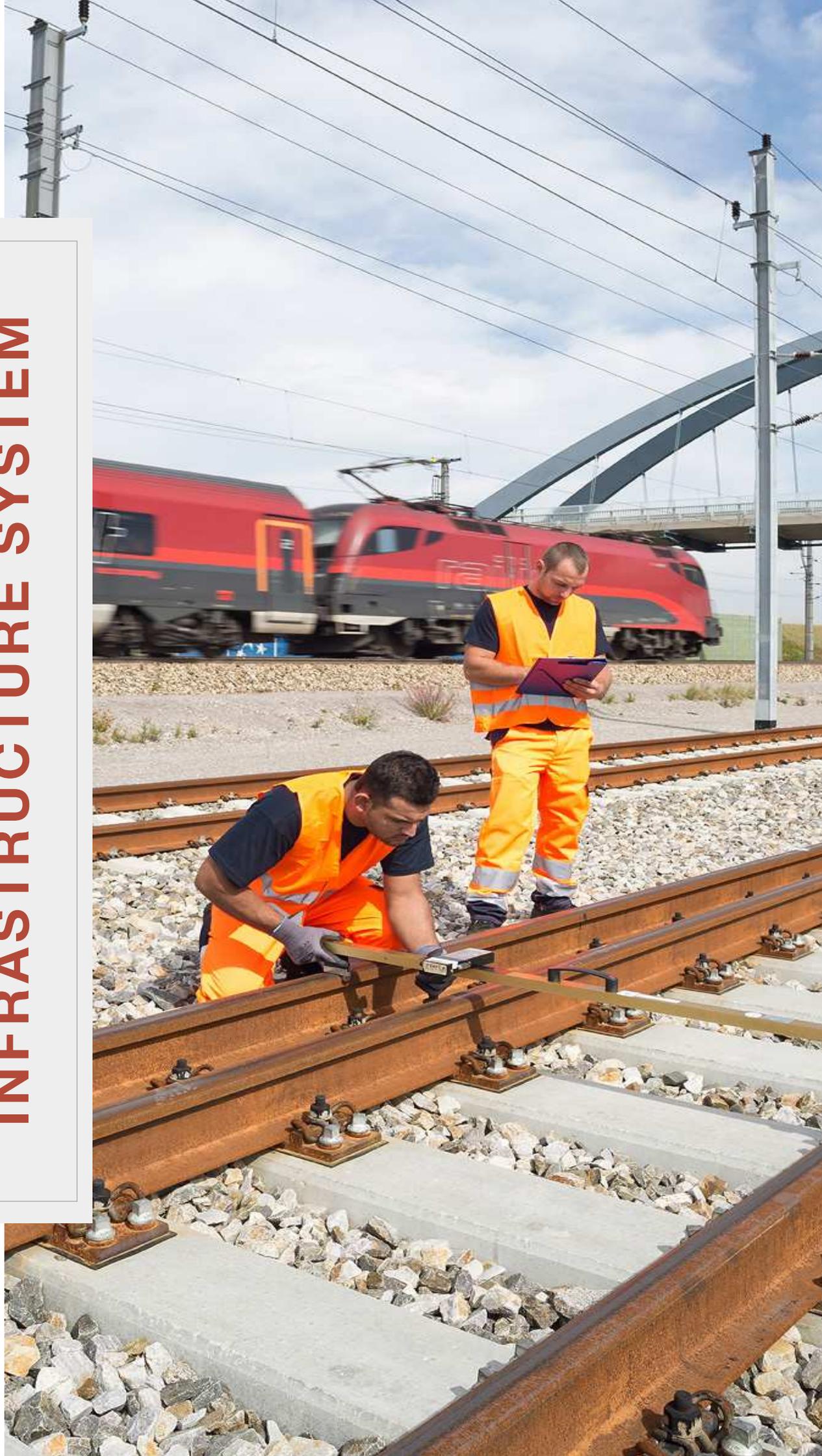
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015

Inspection, service and maintenance of grooved rails and turnouts - practical day!

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INFRASTRUCTURE SYSTEM



001 Superstructure - Basics

description The seminar teaches the basics of track superstructure and the current technical status of modern track technology.

You will receive an overview of the system requirements and applications of the track components. Especially looking at the force paths from wheel towards the subgrade and how to retain them within a safe level. Special track constructions such as transition zones, rail expansion joints, isolated rail joints etc. are covered as well as the basic requirements for the continuously welded rail (CWR) track and slab track systems as an alternative to ballasted track.

In addition, the basics of track and switch inspection are presented in a rough overview (track measuring wagons, track gauges) as well as the possibilities of mechanical track and switch processing.

-
- topics**
- Definitions and tasks of the parts of the track
 - Vehicle and track
 - The forces on the track and track stability
 - Load-bearing capacity and bedding of tracks and switches
 - Superstructure calculation
 - Description of the superstructure components (rails, fastening, sleeper, ballast bed)
 - Substructure and bituminous base courses
 - Slab track constructions
 - Special constructions (transition zones, rail expansion joints, isolated rail joints etc.)
 - CWR tracks and cross section design
 - Principles of track and switch inspection
 - Machine track and switch processing at a glance

target group Basic course for planners, installers and maintainers of track and switch systems, site managers, project managers and project editors, purchasers, track layers, railway engineers

trainer Univ.-Prof. Dr. Ferdinand Posposchil, MSc (TU Graz)

date on request

price on request

Please do not hesitate to contact us. We will be happy to organize the type and date of training according to your requirements.

002 Basics of turnouts for standard gauge (1435mm)

description The seminar conveys the basics, the current technical status and the requirements for turnout technology (Vignol track) from the point of view of a turnout manufacturer. You will receive an insight into the design of the turnout, to the optimal use of turnouts and turnout technology.

- topics**
- Basics – track – advanced lessons
 - » Turnouts, turnout components, rollers
 - » Fastening system
 - » Base plates
 - » Sleepers
 - » Plain line
 - » Special devices in the track (expansion joints, insulated rail joints, ...)
 - Clamp lock – Tempflex III
 - Stiffness in turnouts
 - Geometrical parameter/tolerances in turnouts (based on EN standards and TSI INF 1299/2014/EU)
-

target group Advanced course for planners, installers of switch systems, site managers, project managers and – purchasers, track layers, railway engineers

trainer Dipl.-Ing. Erich Wipfler

date on request

price on request

Please do not hesitate to contact us. We will be happy to organize the type and date of training according to your requirements.

003 Basics of turnouts for narrow gauge (<1435mm)

description The seminar conveys the basics, the current technical status and the requirements for turnout technology (narrow gauge) from the point of view of a turnout manufacturer. You will receive an insight into the design of the turnout, to the optimal use of turnouts and turnout technology.

- topics**
- Turnout types
 - Geometric characteristics for turnouts
 - Design features for turnouts
 - Geometry check for bent turnouts / safety for bent turnouts
 - Switch panel
 - Materials in switch panel
 - Crossing panel
 - Fastening systems in switches
 - Concrete sleepers, wooden sleepers, steel sleepers
 - Setting system
 - Site plan / laying plan
 - Investigation of turnouts: Turnout test dimensions / derailment safety in turnouts
 - Turnout pre-assembly and transport
 - Turnout ordering (requirements etc.)
-

target group Advanced course for planners, installers of turnout systems, site managers, project managers and project purchasers, track layers, railway engineers, superstructure maintenance engineers.

trainer Dipl.-Ing. Erich Wipfler

date on request

price on request

Please do not hesitate to contact us. We will be happy to organize the type and date of training according to your requirements.

004 Turnout technology for grooved rail assemblies - basics

description The seminar conveys the basics as well as the current technical status and the requirements for turnout technology. You will get an overview from the set-up of the turnout to the optimal use of turnouts and turnout technology as well as views into the development of turnout technology (materials, laying systems, maintenance technology and drive technology). This also includes basic information on lane guidance (wheel / rail theme), component design, changeover systems and their basic requirements.

- topics**
- Definition Turnout
 - Turnout types and systems (standardized terms and designations)
 - Turnout nomenclature (geometric image, switch radius, end inclination, components)
 - Rails (profiles and materials)
 - Dependence on turnout geometry and permissible travelling speed
 - Basic knowledge of track guidance, effect on component design (switch device, centre piece and wheel control arm)
 - Tongue devices (types, design and mode of operation)
 - Centerpiece area (center and wheel control arm, types, flat and deep-groove topics)
 - Climbing turnouts – why and how they work
 - Positioning systems and their basic requirements and tasks
 - Contexts between access speed and positioning/locking system.
 - Superstructure types, stray current insulation, fastening systems.
 - Summary of the special features of the “turnout system” with impact on planning, maintenance and operational safety at a glance

target group Basic course for employees in the superstructure area or from areas with interfaces to this subject and for employees who have not yet come into contact with the topic of turnouts. Suitable for purchasers, vehicle drivers, beginners or supervisors or installation engineers through to planners or area managers who have a professional interface with the subject of turnouts.

trainer Ing. Thomas Klemen
Gerald Lach

date on request

price on request

Please do not hesitate to contact us. We will be happy to organize the type and date of training according to your requirements.

005 Turnout technology for grooved rail assemblies - knowledge consolidation

description The seminar covers the current technical status and the requirements for turnout technology for grooved rail systems. You will receive an overview of the structure of the turnout to the optimum use of turnouts and turnout technology as well as an outlook on the development of turnout technology (materials, laying systems, maintenance technology and drive technology).

- topics**
- Technology aspects in local transport
 - Rails – materials, wear behavior, suitability for welding
 - Dependence of turnout geometry and permissible travelling speed. Calculation of lateral acceleration and its permissible speed related values.
 - Track guidance Effect on component design (switch device, frog and wheel guide and track bends), optimization possibilities and limits of component design; Low-floor vehicle technology.
 - Tongue devices: Designs, choice of materials, special designs
 - Centerpiece area (Center and wheel guide, types, flat and deep-groove topics, special solutions, application experience, special features for maintenance, movable frogs)
 - Climbing turnout – Component design, standard points, areas of application, positioning system and fastening
 - Positioning systems and their basic requirements and tasks – impact on Switch design, modular systems, safety technology
 - Superstructure forms, stray current insulation, fastening systems (loser examination of the requirements for stray current and elastic mounting)
 - Assembly, dispatch, transport and logistics – special features depending on the switch systems and laying system.

target group Advanced course for people who need to deal in depth with the topic of switch systems in planning, conception, procurement and maintenance. Suitable for construction managers, planners, project managers and -processors, track layers, engineers of railway operators, track maintenance workers. Previous knowledge of switch technology is required.

trainer Ing. Thomas Klemen
Gerald Lach

date on request

price on request

Please do not hesitate to contact us. We will be happy to organize the type and date of training according to your requirements.

006 Basics of rail road sleepers

description The seminar gives an insight into the design, production, properties and use of sleepers in the railway superstructure. Different types of sleepers in track and turnouts and their rail fastening systems are shown and the effects of sleepersole on the elasticity of the track system and maintenance and economy.

- topics**
- Overview of sleeper types in turnout construction
 - Wooden and plastic sleepers
 - » Materials / technical standards / possible uses and specific properties of the respective sleeper materials / inspection of sleeper drilling and platform / presentation, discussion on shown objects / shown pieces
 - Concrete sleepers
 - » Overview of precast concrete parts in the railway superstructure / sleeper types including rail fastening systems / sleeper production / sleeper design, approval, testing / sleeper installation, the sleeper in the track / Other precast concrete parts in the railway superstructure / repair options
 - Soling of concrete sleepers
 - » Load transfer track / types of the sole, normative basics / production - application of the sole / sole use in track - turnout / economy / practical examples

target group Basic course for specialist personnel in the field of track technology and superstructure (e.g. railway, track or signaling foremen, railway construction employees, etc.) whose area of activity includes the new construction or maintenance of track systems, representatives of railway siding operators, site managers, planners, project managers, purchasers, track layers, engineers from railway operators, superstructure maintenance engineers.

trainer Dipl.-Ing. Markus Lerchbacher
 Dipl.-Ing. Dr. Gerhard Rinnhofer
 Dipl.-Ing. Dr. Rudolf Schilder

date on request

price on request

Please do not hesitate to contact us. We will be happy to organize the type and date of training according to your requirements.

007 Asset management in the infrastructure system

description The seminar conveys the basics of modern, data-based system management for the railway route. The central topics of the first block are the collection and structuring of data in a database-compatible environment, the extraction of information about the state of the system and its deterioration, as well as the forecast-based derivation of measures. The content of the second block is shaped by the economic evaluation of various options for action, the determination of target quantities for sustainable management of the infrastructure and the comparison between available budgets and upcoming projects in terms of prioritizing measures.

- topics**
- Basics of system data
 - Structured data management
 - Measurement-based condition recording of the rail route
 - Data analysis
 - From diagnosis to prognosis
 - Statistical evaluations - global rail track behavior
 - Measure derivation - from cross section to section
 - Project evaluation - technical
 - Average behavior - the standard element approach
 - Relationship between maintenance and service life
 - Basics of economic valuation
 - Components strategies
 - Deriving strategic quantities
 - Project evaluation - economical
 - Prioritization of projects
 - Synthesis in system management
-

target group Advanced course for infrastructure and maintenance managers, inspection personnel, project managers and railway engineers.

trainer Assoc.Prof. Dipl.-Ing. Dr. Stefan Marschnig
Univ.-Prof. Dipl.-Ing. Dr. Peter Veit

date on request

price on request

Please do not hesitate to contact us. We will be happy to organize the type and date of training according to your requirements.

008

Introduction to the sustainability of the track

description The Seminar will address issues of track sustainability and provide participants with a general understanding of this increasingly important topic. The course takes a holistic view of the topic but highlights the issue of the infrastructure's CO2 footprint and measures to reduce it. The contents range from basic definitions to process topics (manufacturing routes), CO2 footprints of products (e.g., rail, sleeper) and systems (e.g., turnout) to Life Cycle Assessments.

- topics**
- Introduction to CO2 footprint analyses
 - Differentiation between company level (Scope I, Scope II, Scope III) and product level
 - Introduction to Life Cycle Assessment LCA („cradle-to-gate” und “cradle-to-grave”)
 - Introduction to Environmental Product Declarations (Type III Environmental declarations)
 - Practical examples of CO2 footprints (components, systems)
 - Practical example for LCAs
 - Measures to reduce the CO2 footprint (on the process side, on the product side)
-

target group Basic course for planners, installers and maintainers of track and switch systems, site managers, project managers and purchasers, track layers, railway engineers.

trainer Christian Aichberger, MSc

date on request

price on request

Please do not hesitate to contact us. We will be happy to organize the type and date of training according to your requirements.

009 Railway Infrastructure Design

description The seminar deepens the principles of track design and in this respect builds on the course superstructure – Basics course. After a brief description of the superstructure system, the focus is on the properties of superstructure components and their influence on load transfer. In particular, the elasticity in the superstructure is addressed and the characteristics of the ballasted track and slab track systems are explained, as well as the possibilities of measurement technology in the track to record the system behavior. The course is rounded off with in-depth insights into track geometry quality and its influencing factors.

- topics**
- The superstructure system including its physical replacement system
 - Elasticity in the superstructure and its effect
 - Differences between the ballasted track and slab track systems, regarding to magnitude and distribution of elasticity.
 - Measurement technology in the track to record the system behavior.
 - Introduction to track geometry quality
-

target group In-depth course for planners, installers and maintainers of track and switch systems, project managers and workers, railway engineers and engineers in the infrastructure industry

trainer Univ.-Prof. Dr. Ferdinand Pospischil, MSc

date on request

price on request

Please do not hesitate to contact us. We will be happy to organize the type and date of training according to your requirements.

010 Introduction to the running of rail vehicles

description The seminar conveys the interrelationships in the interaction of track and vehicles. You will receive a compact overview of the basics of track guidance technology, derailment safety and its impact factors for both the track and the vehicles.

On this basis, the forces acting in wheel-rail contact are also addressed and possibilities of positive influence to protect the track and vehicles are presented. A good understanding of the running of rail vehicles supports efforts to achieve an optimum system technology for the railway with our own activities.

- topics**
- Parameters of the track
 - Track gauge, rail inclination, rail profile
 - Parameters of railway vehicles
 - Wheel contour, track gauge, free wheelset incl. suspension and damping bogie, wheelbase
 - Wheel Rail Contact
 - Contact point, profile functions, conicity, single-point contact, two-point contact
 - Vehicle run
 - Sinusoidal run, vehicle position in arc, stability
 - Derailment safety
 - Climbing of the wheelset and derailment process incl. influencing factors
 - Forces of the wheel-rail contact
 - Certical, transverse and longitudinal forces of rail vehicles in straight, wide curve, tight curve
 - Positive influence on the strength level
 - Summary of content and practical examples
-

target group Basic course with in-depth character in some points, ideally suited for planners, installers and maintainers of track and switch systems, site managers, project managers and processors, purchasers, track builders, railroad engineers and engineers in the infrastructure industry.

trainer Dipl.-Ing. Dr. Wolf Dieter Jussel

date on request

price on request

Please do not hesitate to contact us. We will be happy to organize the type and date of training according to your requirements.

011

Smart turnout design for time-optimized installation solutions

description The seminar conveys the principles of what optimization options are available from the planning the design of components through to maintenance and servicing. After an introduction to the individual components of a turnout, it is first shown how negative effects on time and costs can be avoided as early as the planning phase. Furthermore, the latest developments in switch design with regard to optimized installation. Finally, modern diagnostic and monitoring systems are presented and it is shown how they can be used in combination with asset management optimize maintenance and repair intervals.

- topics**
- Basics of turnout design and components
 - Planning: principles to avoid increased follow-up costs
 - Optimized switch components for installation and replacement
 - Monitoring and asset management systems for time-optimized maintenance and servicing
-

target group Course for planners, installers and maintainers of switch systems, project managers and project staff, Railroad engineers and engineers in the infrastructure industry

trainer Dipl.-Ing. Robert Demal

date on request

price on request

Please do not hesitate to contact us. We will be happy to organize the type and date of training according to your requirements.



SIGNALING SYSTEMS

012 DLD-components in turnouts

description The seminar conveys detailed knowledge of the structure, function, maintenance and repair of safety equipment on turnouts and includes procedures for failure localisation under operating conditions.

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- topics**
- Theoretical and practical training on Point Machines, Setting Systems (Hydrostar), Locking Systems (Spherolock), Power Transmission Systems (Polygon, Torsion, Hydrolink) and End Position Detection
 - Geometrical criteria for DLD components
 - Test sheets – how to use
 - Force measurement for point machines for switching
 - Tools and equipment to inspect and repair
 - Fault detection & fault clearance
 - Preventive maintenance

target group Basic course for employees working in the field of signaling technology for turnouts

trainer Dipl. Ing. Andreas Pogrillz

date on request

price on request

Please do not hesitate to contact us. We will be happy to organize the type and date of training according to your requirements.



MAINTENANCE



013 Inspection, service and maintenance of turnouts

description The seminar teaches the basics for an efficient maintenance of turnouts (vignol) and gives a theoretical overview of turnout geometries and typical errors in turnouts.

- topics**
- Basics about maintenance – international standards
 - Basic training of track components
 - Turnouts
 - Rail expansion joints
 - Insulated rail joints
 - Wheel/Rail contact
 - Preventive maintenance of turnouts, REJ, IRJ
 - Typical failures in turnouts, REJ, IRJ
 - Geometrical parameters
 - Measures to be taken
-

target group Basic course for employees in the field of permanent way maintenance for connecting and private railroads.

trainer Dipl.-Ing. Robert Demal
Dipl.-Ing. Erik Stocker

date on request

price on request

Please do not hesitate to contact us. We will be happy to organize the type and date of training according to your requirements.

014

Inspection, service and maintenance of turnouts - practical day

description The focus of the seminar is on practical work on the training turnout. The participants measure the turnout, check fastening materials and the clamp lock and correct the guide values. In addition, the turnout is deburred and the tongues are corrected using a hand-held bending machine.

- topics**
- Turnout geometry
 - Wood & concrete sleepers - quality criteria and typical defects
 - Typical defects in turnouts
 - Measuring turnouts with a turnout gauge device
 - Hand-held machines for maintenance work
 - Deburring turnouts
 - Bending tongues
 - Inspection of turnouts, REJ and IRJ on track
 - Geometrical adjustment
 - Grinding of turnouts
-

target group Basic course for employees in the field of track maintenance for connecting and private railroads.

trainer Gerald Neumeister
Klaus Hollik

date on request

price on request

Please do not hesitate to contact us. We will be happy to organize the type and date of training according to your requirements.

015

Inspection, service and maintenance of grooved rails and turnouts - practical day!

description The focus of the seminar is on practical work on the training turnout at a special facility of our cooperation partner. The seminar provides common measures for the inspection, maintenance and repair of grooved rail systems.

- topics**
- General maintenance
 - Inspection and maintenance of grooved rail turnouts
 - Turnout inspection and condition assessment on site and practical
 - Special attention to switch panel and crossing panel
 - Forms of wear and degradation
 - Guidelines for repair
 - Turnout Diagnostic System
-

target group Basic course for track layers, engineers from railroad operators, superstructure maintenance staff & maintenance personnel.

trainer Ing. Thomas Klemen
Gerald Lach

date on request

price on request

Please do not hesitate to contact us. We will be happy to organize the type and date of training according to your requirements.

016 Rail welding

description This seminar covers all commonly used rail welding procedures. Welding procedures and consumables, as well as grinding of welds will be discussed in detail. The metallurgy of rails, the basis of rail welding, will be presented in a simple way.

- topics**
- Metallurgy of rails and the impact of rail metallurgy on rail welding - Why do have rails the chemical composition as they have?
 - Chemical composition of rails, rail geometry and the impact of both on welding technology
 - Flash butt welding – stationary and mobile machines process description and assessment of welding programs
 - Aluminothermic welding of Vignol and grooved rails process and critical factors for a successful weld
 - Innershield and stick welding of Vignol and grooved rails
 - Choice of welding consumables
 - Grinding of welds – the most important process step at rail welding
 - Weld failures and how to avoid them
 - Best practise
-

target group Advanced course for specialists from the permanent way sector, especially rail welders, operators of flash butt welding machines, project managers of welding firms, operations managers, IWEs, SFIs, welding supervisors, welding technicians.

trainer Dipl.-Ing. Alexander Zlatnik

date on request

price on request

Please do not hesitate to contact us. We will be happy to organize the type and date of training according to your requirements.

017 Turnouts - defects and repair

description The seminar offers an insight into the world of repair welding of turnout parts. It deals with examining the damaged areas of the turnout and correcting the errors correctly. An insight into the possible test devices for determining rail damage and an insight into the welding of special steels materials as Manganese.

-
- topics**
- Rail-/Wheel contact
 - Crossings
 - » Wear & defects in turnouts; measures to avoid and repair
 - » Defects; measures to avoid and repair
 - Repair welding techniques
 - » Theory
 - » Distressing
 - Practical training in 2 groups
 - » Repair welding on cast MN crossings
 - » Grinding
 - Non-destructive testing
 - » PT-testing
 - » Ultrasonic testing
 - » Eddy current testing
 - » Magnetic particle inspection

target group Advanced course for specialists from the permanent way sector, especially rail welders, IWEs, SFIs, welding supervisors, welding technicians

trainer Dipl.-Ing. Erik Stocker

date on request

price on request

Please do not hesitate to contact us. We will be happy to organize the type and date of training according to your requirements.

Introduction of the speakers

Christian Aichberger, MSc

Is responsible for sustainability at voestalpine Railway Systems GmbH and, among other things, for the preparation of environmental Product Declarations and carrying out LCA analyses. He is a member of relevant committees and has several years of practical experience in the assessment of Co2 emissions in the mobility sector.

Dipl.-Ing. Robert Demal

Has many years of experience in the field of railroad technology. He is an employee of voestalpine Railway Systems and was responsible for international turnout construction projects at vaRS as a technical project manager. Since April 2023 he has been the designated expert for metro systems within the vaRS Group.

Klaus Hollik

Has many years of professional experience in the field of superstructure at ÖBB-Infrastruktur AG and is responsible for the railroad sidings division within WS Service GmbH. He has extensive technical and operational know-how in the field of maintenance, with approval competence.

Dipl.-Ing. Dr. Wolf Dieter Jussel

Is a consultant engineer for mechanical engineering and a court-certified expert. He has extensive experience in the field of track guidance technology. His expertise includes rail vehicles as well as the railroad track, their practical application in industry and the transfer of knowledge. Dr. Jussel is also a lecturer at the Graz University of Technology.

Ing. Thomas Klemen

Has many years of professional experience in the field of switch technology. He initially worked in the design and engineering department of voestalpine Railway Systems GmbH worldwide in the areas of local transport TRAM and METRO, mainline and heavy haul railroads. Since April 2017 in the Customer Solutions department of voestalpine Railway Systems GmbH, with technical market and customer responsibility for all areas in Africa, China, India, UK Finland and Greece.

Gerald Lach

Has been working in the design and engineering department of voestalpine Railway Systems GmbH for over 20 years as well as working worldwide in the field of grooved rail turnouts and light rail / tramway and therefore has many years of professional experience in this area. Since 2018 in Customer Solutions at voestalpine Railway Systems GmbH, mainly responsible for tramway/local transport areas in Europe.

Dipl.-Ing. Markus Lerchbacher

Has many years of professional experience in the technology and supply chain of turnout systems and turnout concrete sleepers. He has been with voestalpine since 01.09.1979 and has worked in the turnout technology division of voestalpine since 1989.

Dipl.-Ing. Andreas Pogrillz

Has many years of experience in the development, planning, assembly, and commissioning of drive, closure, end position testing, and power transmission systems. Since 2006, he has been working in the development and engineering department at voestalpine Signaling Austria.

Assoc.Prof. Dipl.-Ing. Dr. Stefan Marschnig

Worked as deputy head of the Institute of Railway Engineering and Transport Economics at Graz University of Technology. For more than 15 years he has been working on railroad infrastructure systems, their quality and costs in terms of investment, component, and maintenance strategies, life cycle cost calculations and asset management through to infrastructure pricing. He teaches at several tertiary educational institutions and holds training courses for railroads, industry and international investment banks.

Gerald Neumeister

Has many years of professional experience in the field of permanent way at ÖBB-Infrastruktur AG and, as Head of Track Technology Track at WS Service GmbH, he is also responsible for the technical training of track employees at WS Service GmbH.

Univ.-Prof. Dr. Ferdinand Pospischil, MSc

Is Professor and Director of the Institute for Railway Infrastructure Design at Graz University of Technology and has extensive experience in the infrastructure sector. The Institute for Railway Infrastructure Design, which he heads, is particularly concerned with the physical interaction in the track system and the resulting derived optimal dimensioning of the superstructure. In addition to theoretical approaches, the methods of measurement technology are also used on the track and in the laboratory to support and verificate the work on these topics.

Dipl.-Ing. Dr. Gerhard Rinnhofer

Has many years of professional experience in the field of research and development as well as product management of precast concrete elements. He has been with Maba Fertigteilindustrie GmbH since 2001 and has been responsible for the new and further development and product management of precast concrete elements for railroad superstructures.

Dipl.-Ing. Erik Stocker

Is an expert in the field of turnout technology since 1999. As head of the Quality Management & Material Technology department at voestalpine Railway Systems GmbH, he plays a key role in ensuring quality for customers and subsidiaries on a global level. From 2014 to 2020, he also headed the company's research and development department. He has expertise as a materials scientist, is a certified International Welding Engineer and Level 3 materials tester and is also actively involved as a member of CEN standards committees.

Introduction of the speakers

Dipl.-Ing. Dr. Rudolf Schilder

Worked in the railroad industry for over 40 years, including 25 years as a superstructure engineer, later as head of superstructure and then for several years as division manager at ÖBB in the field of track construction and maintenance.

Univ.-Prof. Dipl.-Ing. Dr. Peter Veit

Is Director of the Institute of Railway Engineering and Transport Economics at Graz University of Technology. Since the mid-1990s he has built up the Life Cycle Management of Railway Infrastructure. He also teaches at several tertiary educational institutions and holds training courses and seminars for railroads, industry and international investment banks.

Dipl.-Ing. Erich Wipfler

Has many years of professional experience in the field of switch technology. He is head of the engineering department at voestalpine Turnout Technology Zeltweg GmbH (design of turnout systems and rail pull-out) devices for customers in Austria and Switzerland). Since 2017, he has also been responsible for the international engineering division of voestalpine Railway Systems GmbH.

Dipl.-Ing. Alexander Zlatnik

Has been working at voestalpine Rail Technology GmbH since 2005, 6 years worldwide in technical customer service, then 4 years in R&D. He has been Head of the Competence Center Welding since 2015 and is responsible for all rail welding technology.

Registration form

Please fill out the registration form and send to office@ws-akademie.at

We hereby accept the terms and conditions of WS Academy and register for following course:

PARTICIPANTS

Titel	Name	Position in company	Training no.

CORPORATE ADDRESS

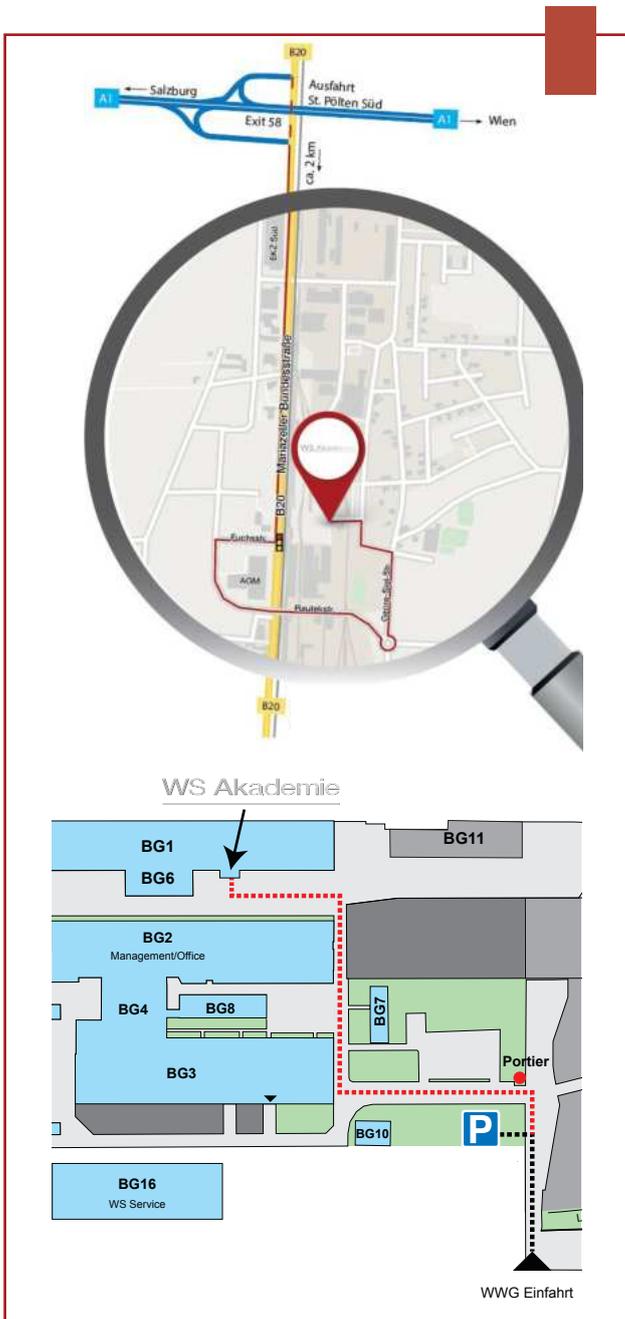
Company		Department
Postal code	City	Street

VAT no.

CONTACT PERSON

Name		Position in company
E-Mail		Phone
Date	Signature	

Finding us



ARRIVAL

Arrival by car

- Coming from motorway "A1"
- Exit 58, St. Poelten Süd
- Take the "B20" direction Traisen/Wilhelmsburg/Mariazell
- Continue straight ahead for about 2 km and turn right into Fuchsstrasse at the traffic light between the companies "Best4Forst" and "AGM"
- At the T-junction turn left towards the bridge and follow the road until you reach the roundabout
- Take the second exit at the roundabout towards Hart
- At the town-sign of Hart turn left
- Following this road, our premises are located on the left handside
- A parking area for guests of the WS Academy is behind the noise protection wall
- The main entrance to our premises is directly adjacent to the parking area

Arrival by airplane & train

- From Vienna International Airport Connection to St. Poelten by train, duration approx. 1 hour
- There is an intercity train from Vienna Airport directly to St. Poelten (hourly)
- You can search for train times here:
<http://fahrplan.oebb.at/bin/query.exe/en>
- Main train station: St. Poelten Hauptbahnhof
- City Bus LUP line 1, direction St. Georgen, stop: Peter-Anichstrasse
- Of course we can also organize a transfer from the train station, if needed.

FACTORY PREMISES

The walkway to WS Academy leads through the premises of Weichenwerk Wörth GmbH. Upon arrival, please check in at the porter's cabin of Weichenwerk Wörth GmbH.

Recommendations

HOTEL

WS Academy

CITYHOTEL DESIGN & CLASSIC

Völkplatz 1
3100 St. Pölten
Phone: +43 2742 755 77
Web: www.cityhotel-dc.at
E-Mail: office@cityhotel-dc.at

HOTEL-GASTHOF GRAF

Bahnhofplatz 7
3100 St. Pölten
Phone: +43 2742 35 27 57
Web: www.hotel-graf.at
E-Mail: office@hotel-graf.at

DESIGN BUDGET HOTEL DAS ALFRED

Rödlgasse 11
3100 St. Pölten
Phone: +43 2742 28 990
Web: www.dasalfred.at
E-Mail: office@dasalfred.at

TAXI

WS Academy

RITTNER TAXI GMBH & CO KG

H.-Schnofl-Straße 10
3100 St. Pölten
Phone: +43 2742 208

AUSTRIAN AIRPORT TRANSFER

Heinrich Schneidmadl-Straße 15
3100 St. Pölten
Phone: +43 2742 37737

We are happy to help you with any questions or concerns at any time.
If you need help with bookings, please do not hesitate to contact us.

ANY QUESTIONS?

GENERAL TERMS AND CONDITIONS FOR CUSTOMISED TRAINING PROGRAMMES

1. Bookings / Orders
 - 1.1. The customer's order is based on WS Service GmbH's offer for the implementation of customised training programmes and must be made in writing.
 - 1.2. Every order is confirmed in writing by email.

2. Invoices and Payment Terms
 - 2.1. The prices indicated for customised training programmes are net prices.
 - 2.2. Invoices will be sent to the address provided by the customer after the training has been completed.
 - 2.3. The invoiced amount is due for payment immediately upon receipt of the invoice and should be paid into WS Service GmbH's account, which is indicated on the invoice.
 - 2.4. If the customer defaults on a payment, WS Service GmbH is entitled to charge interest on arrears at the statutory rate.

3. Cancellations
 - 3.1. Cancellations may only be made in writing. Cancellations can be made free of charge up to 31 calendar days before the training is due to take place. Cancellations received less than 31 calendar days before the training is due to take place will be subject to a cancellation fee of 50%. For cancellations received from the seventh day before the start of the training, the full agreed fee/price will be charged.
 - 3.2. The contracting parties are entitled to withdraw from the contract in whole or in part at any time for important reasons attributable to the sphere of the other contracting party. An important reason attributable to the sphere of the other contractual partner is deemed to exist particularly if
 - a) bankruptcy proceedings have been instigated against the assets of the other party, or the petition for bankruptcy has been dismissed due to lack of assets to cover the costs, or
 - b) the company of the other party goes into liquidation, or
 - c) a claim for compensation is made in respect of the contracting party's company.

4. Changes to Bookings
 - 4.1. Due to the long-term planning involved, the organisers reserve the right to make organisational changes to the programme for reasons beyond their control, such as changing dates and/or trainers and cancelling events. The customer will be informed of such an eventuality in a timely and suitable manner. A change of trainer or postponement of the course does not entitle the customer to withdraw from the contract or to reduce the fee, provided that the subject matter and level of the course are not significantly affected.
 - 4.2. If an event is cancelled due to an instructor's illness or other unforeseen event, there is no entitlement for the event to take place. Compensation for expenses incurred and other claims against WS Service GmbH cannot be derived from this. The same applies to postponements or changes to the timetable of the agreed customised training programme, which may become necessary at short notice.

5. Warranty conditions
 - 5.1. WS Service GmbH does not guarantee the success of the training.

6. Data Protection
 - 6.1. WS Service GmbH, Ghegastraße 3, A-3151 St. Georgen am Steinfeld, FN 408141h is responsible for the processing of personal data arising from the organisation's handling and documentation of customised training programmes. The contact details of WS Service GmbH's data protection officer and further information on data protection can be found at www.ws-akademie.at.
 - 6.2. If the customer provides data of natural persons different from him/herself (e.g. seminar participants or contact persons) in the context of contacting or booking customised training programmes, the customer is obliged to inform these persons of the privacy policy, available at www.ws-akademie.at.
7. Disclaimer
 - 7.1. WS Service GmbH assumes no liability for personal belongings of participants, including any learning materials provided. No liability claims can be made against WS Service GmbH from the application of knowledge acquired within the framework of the WS Academy GmbH.
8. Applicable Law, Place of Jurisdiction
 - 8.1. This contract is exclusively subject to Austrian law, to the exclusion of UN sales law and international private law.
 - 8.2. The contracting parties shall attempt to settle any disputes arising from or in connection with this contract, including questions about its validity, amicably in the first instance. Should this not prove possible within a reasonable period of time, the jurisdiction of the relevant court in St. Pölten shall be agreed for any disputes arising from or concerning this contract.
9. Miscellaneous
 - 9.1. All teaching materials issued within the scope of the training courses may only be used and in particular duplicated, distributed, made accessible to the public or put into circulation with our express consent.
 - 9.2. The participants of the training courses must follow the instructions of the trainer.
 - 9.3. Any changes and additions to the contract must be made in writing.
 - 9.4. Should one or more provisions of this contract be or become invalid, ineffective, unworkable or unenforceable, such a defect shall not affect the remaining provisions of this contract. Any defective provision shall be deemed to be replaced by a valid, effective, workable and enforceable provision that comes closest to the economic and legal effects which the parties to the contract expected from the defective provision. Headings in this contract are for convenience only and do not define or limit its terms.
 - 9.5. General and other contractual terms and conditions and suchlike of the customer are invalid, even if WS Service GmbH does not contradict them. Agreements deviating from the terms and conditions stipulated here are only legally effective if they are confirmed in writing by WS Service GmbH in the order confirmation.
 - 9.6. The customer is obliged to maintain secrecy concerning the information (trade secrets) that comes to his attention in the course of the fulfilment of the contract. S/he must also impose this obligation on the participants of the training courses.

COMPACT KNOW-HOW

A JOINT PROJECT OF

WS Service GmbH



WS Academy

WS Academy
Ghegastraße 3
3151 St. Georgen am Steinfelde, Austria

Phone: +43 50304 28 8890
E-Mail: office@ws-akademie.at