

GUIDE TO RAILWAY TRAINING



**RAILWAY STAFF COLLEGE,
VADODARA**



**INDIAN RAILWAYS INSTITUTE
OF CIVIL ENGINEERING,
PUNE**



**INDIAN RAILWAYS INSTITUTE OF
MECHANICAL & ELECTRICAL ENGINEERING
JAMALPUR**



**INDIAN RAILWAYS INSTITUTE OF SIGNAL
ENGINEERING & TELECOMMUNICATION,
SECUNDERABAD**

PROGRAMMES FOR THE YEAR (2014 - 2015)



RITES LIMITED,
(A Government of India Enterprise)

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RAIL TRANSPORT TRAINING IN INDIA

Training is the most commonly used mechanism in human resource development. It is the process, which attempts to fill the gap by way of what employee has to offer by way of skills, experience and knowledge and that which is required by the job. The objective of the training is to help people to acquire the knowledge, skills and capacities necessary to do their job while to prepare them for transfer to other jobs and capability to be fitted into the working group.

Indian Railways has the best training facilities in entire Asia & Africa to train people in rail transport. These facilities have come up over the years due to its gigantic system & level of operation as shall be evident from the following facts:

The Indian Railways system is today, the second largest Railways system in the world under a single management. It has its own facilities for production of locomotives and other rolling stock besides Research Design and Standard wing to carry out research work in railway technology, standardization and application to attain self sufficiency. It occupies a place of pride not only because of its size but also because of its assets utilization statistics are comparable with those of the most advanced Railways system of the developed countries. To highlight its vastness, it is worth to mention that Indian Railways has 109996 track kilometers (64600 route km), 9500 locomotives, and 239000 units of freight cars, 55000 passenger cars, 7146 stations and 1361520 staff. It operates more than 9000 passenger trains every day.

To meet the continuously growing demand of its consumers both quantitatively as well as qualitatively, the Indian Railways have been upgrading its system by adopting the latest technological developments, enabling its officers and staffs in acquiring knowledge and new set of technical and managerial skills. Therefore, training of its personnel has been a major concern to the Management of Indian Railways. More than 3,00,000 staff is imparted training every year.

To impart training to such a vast number of employees, Indian Railways has following training facilities.

To train executives responsible for maintenance, operation, planning, development of infrastructure & assets there are following training institutes:

1. National Academy of Indian Railways (Railway Staff College), Vadodara
2. Indian Railway Institute of Civil Engineering, Pune
3. Indian Railway Institute of Signal Engineering and Telecommunications, Secunderabad
4. Indian Railway Institute of Mechanical and Electrical Engineering, Jamalpur
5. Indian Railway Institute of Electrical Engineering, Nasik
6. Indian Railway Institute of Transport Management, Lucknow

Besides the above, there are 200 more training schools located over various Zonal Railways to provide training to supervisors and staff engaged in operations and maintenance.

To impart specific skills to categories of staff such as tradesmen, basic training centers and divisional area schools are run on Zonal Railways. The basic training centers are attached to major workshops to make the training practical. On the job training is also given to staff engaged in operations and maintenance.

All the training institutes are well equipped with laboratories, model rooms, outdoor demonstration yards, computer centers, library, hostel facilities etc. The institutes also provide various sports facilities at their campuses to ensure trainee fitness.

ABOUT RITES

1. INTRODUCTION

RITES Ltd. (RITES) Government of India Enterprise was established in 1974, under the aegis of Indian Railways. RITES is incorporated in India as a Public Limited Company under the Companies Act, 1956 and is governed by a Board of Directors which includes men of eminence from various sectors of infrastructure and management.

RITES specialises in providing comprehensive consultancy services under a single roof and believes in sharing its experience with client organizations. In overseas projects, RITES actively pursues and develops meaningful relationships with local consultants/firms both as a means of maximum utilization of local expertise and as an effective instrument of transfer of technology.

RITES is internationally recognized as a leading consultant with operational experience of 51 countries in Africa, Asia, Middle East and Central America.

RITES employs more than 3000 staff including over 1500 specialists of high professional standing in the fields of engineering, management and planning. Besides full time professionals, RITES has on its panel a large number of experts, whose services can be drawn upon at short notice. This provides the company an unmatched strength in meeting the needs of clients.

2. SERVICE PROFILE

RITES services include:

☞ Airport Engineering	☞ Inland Water Transport
☞ Architecture & Design	☞ Materials Management
☞ Bridge Engineering	☞ Operation & Maintenance
☞ Computer Services	☞ Ports and Harbors
☞ Container Traffic	☞ Project Management
☞ Energy Management	☞ Quality Management
☞ Engineering Surveys	☞ Railways
☞ Environmental Engineering	☞ Ropeways
☞ Export Packages	☞ Telecommunication & Signaling
☞ Financial Management	☞ Transport Planning & Economics
☞ Geo-technology	☞ Urban Development
☞ Highway Engineering	☞ Urban Transport
☞ Human Resource Development and Training	☞ Workshop Management

3. RITES TRAINING DIVISION

RITES Training Division provides comprehensive services including:

<ul style="list-style-type: none"> ☞ Assessment of Training Needs ☞ Curriculum Development ☞ Development of Training Infrastructure ☞ Direct Training ☞ Enhancing Operational Efficiency ☞ Improving Quality of Training 	<ul style="list-style-type: none"> ☞ Manpower Planning ☞ Monitoring and Evaluating Training Schemes ☞ Setting up & Management of Training Institute ☞ Training Facilitation & Logistics ☞ Training of Trainers/ Resource Persons
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4. INSTITUTIONAL TIE-UPS

RITES have institutional tie-ups with prestigious institutions in India and overseas. It has access to over 200 training establishments of the Indian Railways alone. Regular support from most other institutes of national importance is also available. The available training facilities include transport simulators, laboratories, model rooms, audio-visual equipment, workshops, libraries etc.

Training Division is regularly organizing special training covering:

<ul style="list-style-type: none"> ☞ Attachment training involving association with field establishments for on-the-job access to working areas and handling of practical problems. ☞ Hands on training in the different disciplines for acquisition of operational skills at functional levels under actual working conditions. This is combined with theoretical instructions to improve asset, reliability and availability. 	<ul style="list-style-type: none"> ☞ Management Development Training aiming at development of highly specific skills through appropriate knowledge and attitude to cope with the tasks in the changing environment. Training institutions for this purpose include Indian Institute of Management, Ahmedabad (Harvard affiliation) and Birla Institute of Technology (Massachusetts Institute of Technology affiliation).
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In fact, RITES has the capability to design and organize any training programme to meet with specific client needs.

5. TRAINING IN RAILWAY SECTOR

RITES has recognized that the availability of the most technologically advanced permanent way, rolling stock and other assets by themselves do not ensure success of a railway system. The critical resource is the human

resource, a resource which has to be nurtured with care and provided with the necessary skills to meet and understand the challenges of new technologies.

Having trained over 3000 railway-men from countries in Africa, Asia and Latin America, the HRD and Training Division understands the needs of these railway systems and regularly organizes training programs tailor-made to their requirements.

6. RITES TRAINING PROGRAMMES HAVE THE FOLLOWING ADVANTAGES:

<ul style="list-style-type: none"> ☞ Accent is on practical and field work including hands-on training ☞ Level of technology is appropriate to clients requirements ☞ Training can be arranged in India or in the host country 	<ul style="list-style-type: none"> ☞ Training can be geared to the exact level and nature required by the client. Above all, technologies are applied in an environment of a developing economy
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7. BACK-UP SUPPORT

RITES Training Division has close association with a number of well-established training institutions at the national level. These institutions offer large opportunities in appropriate training programs to various levels of personnel including top executives, senior level managers, and other personnel of all railway disciplines.

RITES have ready access to over 200 Training Institutions of the Indian Railways, which train all levels and categories of personnel from Craftsmen to Engineers to Junior Managers to top executives. These institutes offer a wide range of training programs, which are specifically designed to meet, identified training needs.

This Guide to Railway Training brings out information on the important training programs organized by RITES in the Railway Sector. RITES organize a variety of training programs for various levels of personnel in other sectors of transportation too.

RITES will be pleased to supply information on the other training programs relevant to the specific requirements of sponsoring organizations.

These courses are conducted in the English language. Translator/ Interpreter services can be provided on request.

8. ACCOMMODATION

RITES ensure fully furnished single room accommodation to all participants in Hostels/Hotels near the place of training on reasonable payment.

9. TRAINING FEE

The training fee is determined depending upon the number of participants in each course/special training requirements, etc. This fee would normally include cost of training, training material, medical assistance, monitoring and evaluation. If the client so desires, these costs can be given separately also. The fee excludes the cost of international & local travel, board, lodging, out-of-pocket allowance, excess baggage, embarkation fee etc.

10. FELLOWSHIP /NOMINATIONS FOR CANDIDATES

Sponsoring organizations may seek fellowships from international funding agencies like World Bank, UNDP, CFTC, CIDA, Kuwait Fund, AFDB, ADB, ITEC etc. Direct nominations may be sent to RITES. It may, however, be ensured that the nominee has the pre-requisite skill/knowledge/aptitude.

11. TIMINGS

<p>☞ The Training Centers normally work between 09.00 - 1600 hrs. - 5 days a week.</p>	<p>☞ The working period is normally divided into five sessions, consisting of lectures, tutorials, attachment training/practical, and group discussions, seminars and project work.</p>
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12. REGULATIONS

During the period of stay in India, the participants would be required to follow:

<p>☞ Instructions as may be stipulated by both the nominating Government and the Government of India.</p>	<p>☞ Programme of training. ☞ Rules and regulations of the training institutions.</p>
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13. PARTICIPANTS ARE ADVISED TO:

<ul style="list-style-type: none">☞ Bring 2 (two) copies of recent photograph (Passport size).☞ Obtain Visa for entering India prior to departure for India.	<ul style="list-style-type: none">☞ Refrain from engaging in any political activities or any form of employment for profit or gain.
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14. NOMINATIONS

PLEASE MAKE YOUR ENQUIRIES AND NOMINATIONS TO

**GROUP GENERAL MANAGER (EXPOTECH)
RITES LIMITED, RITES BHAWAN,
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MANAGEMENT COURSES FOR RAILWAY MANAGERS & ENGINEERS

1. Foundation Course - 11 week (December 2014)

For Whom: Managers/Engineers freshly inducted in Railroads.

Course Contents

<ul style="list-style-type: none"> ☞ Civil Engineering ☞ Elect. Engineering ☞ Finance & Railway Accounts ☞ Materials Management ☞ Medical ☞ MIS, etc. 	<ul style="list-style-type: none"> ☞ Personnel Management ☞ Railway History and Organization ☞ Railway Operation ☞ Signaling & Telecommunication Engineering ☞ Statistics ☞ Traffic Transportation
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2. Induction Course – 5 week (November 2014)

For Whom: Engineers/ Managers with 2 – 3 years experience in rail-roads and who have undergone Initial Course.

Course Contents

<ul style="list-style-type: none"> ☞ Civil Engineering ☞ Computer Applications ☞ Elect. Engineering ☞ Financial Management ☞ Human Resource Management ☞ Law 	<ul style="list-style-type: none"> ☞ Material Management ☞ Mechanical Engineering ☞ Operation & Commercial ☞ Qualitative Techniques ☞ S&T Engineering
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3. Management Development Program - 5 week (August, Sept., October & November 2014)

For Whom: Engineers/Managers of with 4-7 years experience in executive cadres for helping them to solve problems faced by them and seek opportunities offered by technological and managerial innovations to enable them to hold independent charge

Course Contents

<ul style="list-style-type: none"> ☞ Alternate Finance, Budgeting ☞ Communication ☞ Corporate Business Economy ☞ Customer Orientation ☞ Decision making negotiations ☞ Ethics, Values & Factory Act ☞ Human Resource Development ☞ Introduction to Computers ☞ Legal aspects such as CPA 	<ul style="list-style-type: none"> ☞ Motivation, Vigilance ☞ MS office, E-mail and Internet ☞ Personal Effectiveness ☞ Practical Training ☞ Railway Act, Works Program ☞ Rolling Stock Program (RSP) and Machinery and Plant Program (M&P) ☞ Safety Management , Strikes ☞ Transport Environment
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4. Advance Management Development Program - 3 week (August & October 2014)

For Whom: Engineers/Managers with 10-15 years experience in Executive and Administrative level to acquaint officers with areas of strategic management and to improve organizational effectiveness through its senior administrative grade.

Course Contents

<ul style="list-style-type: none"> ☞ Alternate Finance ☞ Budgeting & capital investment appraisal ☞ Communication ☞ Customer Orientation ☞ E-mail & Internet ☞ Human Resource Management ☞ Introduction to Computers ☞ Learning Organisation ☞ Legal aspects such as CPA 	<ul style="list-style-type: none"> ☞ Liaison with Civil Authorities ☞ Mission & Vision ☞ Personal effectiveness. ☞ Quality ☞ RSP & M&P ☞ Safety Management ☞ Strategic Management & Corporate Business Economy ☞ Strikes ☞ Vigilance ☞ Works programme
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5. Railway Safety - 2 Week (August, November & December 2014)

For Whom: Engineers/Managers with 2-3 years of experience to develop a holistic insight into safety management to identify areas of human failures and assess the measures to enhance accountability and efficiency for avoiding accidents.

Course Contents

<ul style="list-style-type: none">☞ Accident enquiries☞ Accident prevention☞ Breakdown trains☞ Computer aided investigation☞ Crisis communication☞ Disaster Management☞ Human aspects☞ Perception presentation☞ Psychological aspects☞ Rail wheel interaction	<ul style="list-style-type: none">☞ Safety environment☞ Safety in railways☞ Safety Management☞ Safety organisation and inspection☞ Strategic planning & Technical up gradations☞ Track parameters & Training of drivers☞ World vision
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EXECUTIVE LEVEL COURSES – MECHANICAL ENGINEERING

1. Induction Course for Mechanical Engineers - 11 Week (November 2014 & March 2015)

For Whom: Directly recruited Mechanical Engineers in the Executive Cadre with 2-3 years of experience

Course Contents – Mechanical System

<ul style="list-style-type: none"> ☞ Classification of Locomotives & Types of Transmission with merits and demerits. ☞ Locomotive & Diesel Shed Layout ☞ Diesel engine – assembly and details of components including design, manufacture, inspection and maintenance. ☞ Load Box testing 	<ul style="list-style-type: none"> ☞ Combustion process and valve timing diagram. ☞ Bimetal & Tri-metal Bearings and Failure analysis. ☞ Diesel Engine systems – fuel oil, Lube oil etc. ☞ Expressor and air circuits and related failures ☞ Engine Governor – GE and Woodward
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Course Contents – Electrical System

<ul style="list-style-type: none"> ☞ Principles of Electric transmission in Diesel locomotive. ☞ Electrical control component – Relays, Contractors etc. ☞ Starting of diesel engine – circuit analysis ☞ Electrical Rotating machines 	<ul style="list-style-type: none"> ☞ Excitation control – Principle and circuit analysis ☞ Dynamic braking – Principle and circuit analysis ☞ Automatic Transition regulation – Principles and circuit analysis
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Course Contents – Chemistry & Metallurgy

<ul style="list-style-type: none"> ☞ Specifications, properties and testing of fuel oil, lube oil water (including corrosion inhibition in water) ☞ Water treatment (DM water plant) 	<ul style="list-style-type: none"> ☞ Material specification & Testing of steel, gaskets and rubber ☞ Non-destructive testing applicable to Diesel Loco Sheds, including UST.
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Course Contents – Operating & Safety

<ul style="list-style-type: none"> ☞ Fuel economy with respect to operation and maintenance & Foot Plate Inspection ☞ Speed recorders – principle of working and how to interpret charts ☞ Trouble shooting and loco defect on run 	<ul style="list-style-type: none"> ☞ Design concepts of various types of under-gear of Diesel Locomotives ☞ Safety aspects of Locomotives ☞ Run release feature modification, ACD
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2. Welding Technology & Corrosion – 2 week (November 2014 & March 2015)

For Whom: Executives/Engineers with 1-2 years experience to enhance knowledge about welding.

Course Contents

<ul style="list-style-type: none"> ☞ Fundamental of welding – Process, weld ability, Fluxes, Selection of Electrodes ☞ Electrical aspects ☞ Welding defects – causes & remedies ☞ Problems and solution faced in Shed (yard) ☞ Welding of Safety components – knuckle, draw bar components etc. 	<ul style="list-style-type: none"> ☞ Problems faced during welding <ul style="list-style-type: none"> • Coach manufacturing & corrosion repairs • Wagon – manufacturing & Corrosion repairs • Locos • LHB coach ☞ Ease of welding – Selection, Manufacture & other application ☞ Cost & economy in welding
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3. Senior Professional Development Program - 3 Week (February 2015)

For Whom: Engineers/Managers of Mechanical Discipline with 5-10 years experience in Executive & Administrative level.

Course Contents

<ul style="list-style-type: none"> ☞ PPP, Inf. Act, BOLT ☞ Quality systems ISO 9000 & ISO 14000 ☞ Disaster Management ☞ Investigation of accidents and Derailments – Case studies 	<ul style="list-style-type: none"> ☞ Traction issues ☞ Tenders Contracts and arbitrations ☞ LCC and Benchmarking ☞ Experience sharing ☞ Dedicated freight corridor
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4. Professional Skill Augmentation course - 4 Week (August, November 2014)

For Whom: Serving Mechanical Engineers with 2-3 years experience.

Course Contents - Crane Module

<ul style="list-style-type: none"> ☞ Introduction ☞ Powder pack and Transmission ☞ Bogie and Under frame for crane and match truck ☞ Theory of Hydraulic circuits and their applications in Railways ☞ Hydraulic circuits of Brakes of Crane ☞ Pneumatic circuits and Brakes of Crane 	<ul style="list-style-type: none"> ☞ Electrical system of crane ☞ Details of PAT system ☞ Details of Crane operation ☞ Maintenance instructions, infrastructural facilities required for basing 140 ton cranes ☞ Study of crane topping – core – cause & prevention
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Course Contents - Safety Module

<ul style="list-style-type: none"> ☞ A.R.T. – equipment and operation ☞ Accidents – definition and classification ☞ Lifting tackles, Chains and Ropes ☞ Enquiry and report ☞ Factors leading to derailment (permanent way and rolling stock) 	<ul style="list-style-type: none"> ☞ Functions of Mechanical Department in accident management ☞ Hydraulic re-railing equipment, Lifting tackles ☞ Rail wheel interaction and derailment coefficient ☞ Accident investigation and Report, Enquiry proceedings, case Studies.
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5. Special Course on Accident, Disaster Management – 2 Week (January & March 2015)

For Whom: Mechanical Engineers and senior supervisors with 2-7 years experience for enhancing knowledge for proper analysis of derailments, prevention of accidents and rescue operation at site.

Course Contents

<ul style="list-style-type: none"> ☞ IR Safety Performance ☞ ART & Accident Classification ☞ P.Way introduction ☞ P.Way defects – Points & crossings ☞ PWay – Track Measurement 	<ul style="list-style-type: none"> ☞ Restoration equipment ☞ Accident Inquiry ☞ C&W Defects & Gauges ☞ Vehicle Stability & Oscillation Trials ☞ Crane operations
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<ul style="list-style-type: none">☞ Derail Management☞ Loco Defects☞ Disaster Management☞ Safe Train handling	<ul style="list-style-type: none">☞ Crane at Accident Sites.☞ Medical Relief☞ Corporate Safety Plan☞ Railway Safety committee Recommendations☞ Class Studies in Accident
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EXECUTIVE LEVEL COURSES – CIVIL ENGINEERING

1. Integrated Course – 13 Week (November 2014)

For Whom: For newly appointed Civil Engineers.

Course Contents - Permanent Way

<ul style="list-style-type: none"> ☞ Rails and Fastenings, Sleepers and Fastenings ☞ Ballast and Sub-ballast ☞ Curves, Realignment of curves ☞ Points and crossings ☞ Level Crossings ☞ Schedule of Dimensions ☞ Track Maintenance – Conventional, Mechanised ☞ Maintenance of track in electrified sections and track circuited areas 	<ul style="list-style-type: none"> ☞ Glued and insulated joints, Creep, Testing of Glued Joints. ☞ Welding Techniques, SWR, LWR ☞ Rail failures and U.S.F.D. ☞ Concrete sleepers ☞ Elastic Fastenings ☞ Track Renewals & Laying ☞ Working of push trolleys, motor trolleys, lorries and material trains. ☞ Working of material train ☞ Track structure on bridges
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Course Contents – Bridges

<ul style="list-style-type: none"> ☞ Bridge Rules, Bridge substructure code ☞ Soil investigation for bridge foundation ☞ Discharge and Waterway calculations 	<ul style="list-style-type: none"> ☞ River training and protection works ☞ Types of bridges, components and functions ☞ Inspections and maintenance of bridges
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Course Contents – Works

<ul style="list-style-type: none"> ☞ Earth work and compaction ☞ Measurement of works ☞ Building construction 	<ul style="list-style-type: none"> ☞ Sanitary Engineering ☞ Introduction to contracts ☞ Tunnels & Architectural features
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2. Senior Professional Course (P. Way) - 7 Week (August & December 2014)

For Whom: Engineers/Managers of Civil Engineering discipline with 2-3 years experience in P. Way (Track Technology)

Course Contents

<ul style="list-style-type: none"> ☞ Ballast and sub-ballast, formation treatment, Ballast less track ☞ Concrete sleepers for plain track and points & crossings ☞ Curves, Use of computer program for realignment ☞ Elastic Fastenings ☞ Glued and Insulated joints ☞ Maintenance of concrete sleeper track ☞ Points and crossings, Layouts 	<ul style="list-style-type: none"> ☞ Rail, rail welding, welded track, LWR on bridges ☞ Rail-Wheel Interaction & Derailment Investigation ☞ Track Monitoring, track tolerances, TMS, High speeds ☞ Track stresses, track standards and criteria for track renewals ☞ USFD, Rail & weld failures and remedial measures ☞ Yard layouts, Ballast less track
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3. Senior Course on Modern Surveying – 2 Week (November 2014)

For Whom : Engineers/Managers of Civil Engineering discipline with 5-6 years experience in Executive cadre

Course Contents - Surveys

<ul style="list-style-type: none"> ☞ Different kind of Surveys ☞ Awareness of various kinds of investigations ☞ Knowledge of Modern Survey Equipments and technology ☞ Survey & Investigations ☞ Concept of Survey ☞ Types of Survey 	<ul style="list-style-type: none"> ☞ Geotechnical investigations with case studies ☞ Demonstration of equipments ☞ Hydrological investigations ☞ GPS and Total station ☞ Photogrammetry – Application in route selection and estimate preparation.
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Course Contents – Bridges

<ul style="list-style-type: none"> ☞ Bridge Rules, Bridge substructure code ☞ Soil investigation for bridge foundation ☞ Discharge and Waterway calculations 	<ul style="list-style-type: none"> ☞ River training and protection works ☞ Types of bridges, components and functions ☞ Inspections and maintenance of bridges
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Course Contents – Works

<ul style="list-style-type: none"> ☞ Earth work and compaction ☞ Measurement of works ☞ Building construction 	<ul style="list-style-type: none"> ☞ Sanitary Engineering ☞ Introduction to contracts ☞ Tunnels & Architectural features
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EXECUTIVE LEVEL COURSES – ELECTRICAL ENGINEERING

1. Integrated Course - 11 Weeks (September 2014 & January 2015)

For Whom: Engineers/Managers of Electrical Engineering discipline promoted from Supervisory position to Executive grade.

Course Contents - Traction Rolling Stock (Operation)

<ul style="list-style-type: none"> ☞ Crew Management and Training. Road learning, Classification of Drivers, System of Monitoring and Counseling. ☞ Manpower and motive power planning. Power Plan, Loco & Crew Link. ☞ Statistical data preparation for Loco Operation (4 A Statement). 	<ul style="list-style-type: none"> ☞ Trip shed and crew booking point management. ☞ Carriage and Wagon problem in Loco Operation. ☞ Important case studies/Accident and Breakdown. ☞ Collection of evidences at accident site.
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Course Contents - Traction Distribution

<ul style="list-style-type: none"> ☞ Railway Electrification. ☞ Overhead Equipment. ☞ Power Supply Installation. ☞ Protection Scheme of TSS. ☞ Supervisory remote control SCADA. ☞ Signaling supply. 	<ul style="list-style-type: none"> ☞ Types of Foundations and Structures. ☞ Design of Foundations and Structures. ☞ Pantograph entanglements, TRD Breakdowns. ☞ ODC movements – Schedule of dimensions.
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Course Contents - Train Lighting

<ul style="list-style-type: none"> ☞ Introduction to systems of Train Lighting. ☞ Requirement of Coaches. ☞ Schedules of maintenance. ☞ Drives. ☞ Alternators. 	<ul style="list-style-type: none"> ☞ Rectifier-cum-Regulator. ☞ Batteries including VRLA batteries. ☞ Coach wiring, Lighting, Fans. ☞ MOG/EOG/HOG. ☞ Maintenance schedules including POH.
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Course Contents - General services & Air conditioning

<ul style="list-style-type: none"> ☞ I.E. Rules. ☞ Air conditioning fundamentals. ☞ Heat load calculations. 	<ul style="list-style-type: none"> ☞ Air conditioning of Railway coaches. ☞ Air conditioning of stationary installations.
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Course Contents - Water supply pumping installations

<ul style="list-style-type: none"> ☞ Basic concepts of pumping. ☞ Types of pumps and their constructional features. 	<ul style="list-style-type: none"> ☞ Selection of Pumps. ☞ Installation, operation and maintenance of Pumps.
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Course Contents - Lighting

<ul style="list-style-type: none"> ☞ Light sources. ☞ Lighting Design. 	<ul style="list-style-type: none"> ☞ Energy effective lighting strategies.
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Course Contents - Power supply

<ul style="list-style-type: none"> ☞ Distribution substation and distribution system. ☞ Switch Gear and Safety devices of General Services, Sub-Stations. 	<ul style="list-style-type: none"> ☞ Energy Management/Audit/Conservation in General Services.
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Course Contents - Basic Electronics (Theory)

<ul style="list-style-type: none"> ☞ Classification of Electronic component. ☞ Passive components. 	<ul style="list-style-type: none"> ☞ Introduction to semiconductor physics and construction, operating principle of Active components such as Power Diodes, Zener Diodes, LEDs, BJT, UJT, SCR, IGBTs & GTOs, its specification and testing.
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Course Contents - Basic Electronics (Practical)

<ul style="list-style-type: none"> ☞ Oscilloscope familiarization. ☞ Testing and identification of passive component. 	<ul style="list-style-type: none"> ☞ Testing of Diodes, Transistor, SCR, Triac diac, IGBT's
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Course Contents - Power Electronics

<ul style="list-style-type: none"> ☞ Overview of Three Phase Locomotive. 	<ul style="list-style-type: none"> ☞ AC Coach Inverter.
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Course Contents - Computers

<ul style="list-style-type: none"> ☞ General introduction to computers and its applications. ☞ Operating System. ☞ Word Processing Application. 	<ul style="list-style-type: none"> ☞ Spreadsheet Application ☞ Introduction to Networking. ☞ Introduction to Internet, e-mail & e-Commerce.
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Course Contents - Instrumentation

<ul style="list-style-type: none"> ☞ Condition Monitoring of Electrical equipment basic concepts. ☞ IR Value, polarization index and measurement of capacitance. ☞ Tan Delta and enameled wire Tan Delta. ☞ Partial discharge and surge comparison test. ☞ Condition Monitoring of Transformers. ☞ Introduction to Non-destructive Testing (NDT). 	<ul style="list-style-type: none"> ☞ Liquid Penetrate Testing. ☞ Visual Testing. ☞ Eddy Current Testing. ☞ Magnetic Particle Testing. ☞ Ultrasonic Testing. ☞ Relay Testing for Traction Sub-station. ☞ Radiographic Testing – Basic concepts. ☞ Application of NDT and Condition Monitoring on Railways.
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2. Course on Power Electronics - 2 Week (August & December 2014)

For Whom: Directly recruited Electrical Engineers/Supervisors with 2 – 3 years experience.

Course Contents

<ul style="list-style-type: none"> ☞ Power Semi-conductor devices, Power Diodes, SCR, GTO, IGBT's. ☞ Converter, inverter and chopper circuits. ☞ VVVF control of induction motor, Direct torque control of induction motor. ☞ Microprocessors (Software and hardware). ☞ Microprocessor based propulsion and control for traction vehicles. ☞ 25 KVA AC Coach Inverter, Train Lighting Regulators. 	<ul style="list-style-type: none"> ☞ Three phase locomotive power circuits, auxiliary circuit, control circuit, hardware & software details, MICAS – S@ control system, pneumatic system, trouble shooting, diagnostic system. ☞ Digital electronics – Labs for Logic gates, coding circuit, decoders, MUX, De MUX, Flip flops, Counters, Memories. ☞ SCADA system for 25 KV AC traction.
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3. Special Course on Train Lighting and Air conditioning - 3 week (September, November 2014 & March 2015)

For Whom:

Engineers/ Managers of Electrical Engineering discipline with 5-10 years experience.

Course Contents -

Train lighting & Air-conditioning of Railway Coaches & Stationary plants

<ul style="list-style-type: none"> ☞ System of TL. ☞ Maintenance and Problem. ☞ Alternators and Regulators for TL/AC with wiring arrangement. Fire prevention in coaches. ☞ Conventional, VRLA batteries, Charging, Problems, Maintenance and Testing. ☞ Inverters in RMPU AC units in SG Coaches. ☞ EOG System of TL&AC. 	<ul style="list-style-type: none"> ☞ Reliability in TL/AC. ☞ LHB Coaches. ☞ Performance of AC coaches and directives of MSG meeting. ☞ Comparison of Air-conditioning in LHB and conventional coaches. ☞ Heat load and tonnage capacity of Air-conditioning system. ☞ Maintenance of equipment in centralized air-conditioning plant. ☞ MSG Meeting ITEMS.
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Course Contents - General power supply & Distribution

<ul style="list-style-type: none"> ☞ Power supply system in General Service. ☞ Sub-Station and its protection. 	<ul style="list-style-type: none"> ☞ I.E. Rules involving safety in General Service.
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Course Contents - Lighting

<ul style="list-style-type: none"> ☞ Lighting terminology. ☞ Light sources and Indoor lighting design. 	<ul style="list-style-type: none"> ☞ Illumination system control. ☞ Essentials of good lighting and energy effectiveness.
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Course Contents - Water supply pumping installation

<ul style="list-style-type: none"> ☞ Types of pumps and characteristics of Centrifugal Pumps. ☞ Considerations for design of water supply pumping installation. 	<ul style="list-style-type: none"> ☞ Selection of centrifugal pumps. ☞ Maintenance, Operation of Pumps with an aim to energy conservation.
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Course Contents - Condition monitoring in General service

<ul style="list-style-type: none"> ☞ Transformer and Oil. ☞ Cables and it's testing. 	<ul style="list-style-type: none"> ☞ Mechanical components. ☞ Lead Acid Batteries.
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EXECUTIVE LEVEL COURSES - SIGNAL ENGINEERING & TELECOMMUNICATIONS

1. Initial Course - (Phase – I) - 14 Week (December -2014)

For Whom: Fresh Entrants (Graduate Engineers)

Course Contents

<ul style="list-style-type: none"> ☞ Basic concepts of Signaling and principles of Interlocking ☞ Block Signaling - Part I ☞ Electrical Signaling including relays ☞ Line plant practice ☞ Locking Table and dog charts 	<ul style="list-style-type: none"> ☞ Orthodox and double wire Signaling ☞ Signaling general and safety ☞ Telephone exchanges ☞ Telephone exchanges (Strowger). ☞ Track circuits and power supply arrangements ☞ Train traffic control
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2. Initial Course - (Phase – II) - 14 Week (July 2014)

For Whom: Fresh Entrants (Graduate Engineers) who have undergone Phase I program.

Course Contents

<ul style="list-style-type: none"> ☞ Axle counters ☞ Block Signaling - Part II ☞ Computer Applications ☞ Data communication ☞ Electrical Signaling circuit practices ☞ Electronic exchanges ☞ Locking Table practices ☞ Microwave communication including digital microwave 	<ul style="list-style-type: none"> ☞ Modern Signaling ☞ Multiplexing & PCM, VHF and mobile communication ☞ Relay interlocking - British system ☞ Relay Interlocking - Siemens's system ☞ Signaling in 25 KB AC electrified area ☞ Stores, Accounts ☞ Tenders estimates
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3. Integration Course (Telecom to Signaling) Phase I - 7 Week (October 2014)

For Whom: Engineers/Managers of Telecommunications promoted from Supervisory Cadres of Telecommunications with 2-3 years experience/fresh Graduate Engineers with 1-2 years experience.

Course Contents

<ul style="list-style-type: none"> ☞ Automatic Signaling and Axle Counters ☞ Basic concepts in Signaling and principles of interlocking ☞ Block Signaling and Axle counter ☞ Block Signaling including Intermediate ☞ Block working Signaling general and Safety rules. ☞ Electrical Signaling – Relays 	<ul style="list-style-type: none"> ☞ Equipment and their controls ☞ Mechanical Signaling - Orthodox and double wire Signaling ☞ Modern Signaling ☞ Relay interlocking systems - British & Siemens type ☞ Selection Circuits ☞ Track Circuits
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4. Integration Course -(Telecom to Signaling) Phase II - 7 Week (December 2014)

For Whom: Engineers/Managers of signaling discipline promoted from Supervisory Cadres of Signaling discipline with 2-3 years experience/fresh Graduate Engineers with 1-2 years experience.

Course Contents

<ul style="list-style-type: none"> ☞ Carrier communication ☞ Control communication: Under ground cable, over head cables ☞ Digital electronics ☞ Electronic Exchanges ☞ Fundamentals in electronics and applied electronic circuits 	<ul style="list-style-type: none"> ☞ Introduction to modern telecom techniques. ☞ Multiplexing and microwave ☞ Optic fiber. ☞ Propagation and antennas ☞ Public communication system ☞ Train traffic control
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SUPERVISORY DEVELOPMENT PROGRAMMES – MECHANICAL ENGINEERING

1. Mechanical Supervisors Course (General) - 5 Week (August, November 2014 & March 2015)

For Whom: Junior Mechanical Supervisors with 1-2 years experience to enhance knowledge of various systems of diesel locomotives & C&W stock.

Course Contents

<ul style="list-style-type: none"> ☞ AAR classification ☞ Combustion process and valve timing diagram ☞ Diesel engine - Assembly, components, design, manufacture, inspection and maintenance ☞ Diesel engine systems - fuel, lube oil, cooling water and charge air ☞ Electrical control components ☞ Electrical rotating machines ☞ Engine governor - GE and Woodward ☞ Introduction to workshop technology ☞ Material testing, Failure prevention 	<ul style="list-style-type: none"> ☞ Electrical systems - speed control, propulsion control, excitation control, automatic transition regulation and dynamic brake ☞ Expressor and air circuits ☞ Properties and testing of fuel, lube oil and, Cooling water treatment. ☞ Load test and Troubleshooting of locomotives ☞ Latest development in Alco Locomotive ☞ Introduction to GM Locomotives. ☞ GM loco layout & Introduction ☞ EMD electrical & AC-AC transmission ☞ HTSC bogie
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Course Contents

<ul style="list-style-type: none"> ☞ C&W Open line Management ☞ Coaching stock – Nomenclature and codification ☞ Freight stock 	<ul style="list-style-type: none"> ☞ Train lighting and air conditioning ☞ Brake system ☞ C&W maintenance.
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2. Welding Technology & Corrosion – 2 week (November 2014 & March 2015)

For Whom: Supervisors with 1-2 years experience to enhance knowledge about welding.

Course Contents

<ul style="list-style-type: none"> ☞ Fundamental of welding – Process, weld ability, Fluxes, Selection of Electrodes 	<ul style="list-style-type: none"> ☞ Problems faced during welding <ul style="list-style-type: none"> • Coach manufacturing & corrosion repairs
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<ul style="list-style-type: none"> ☞ Electrical aspects ☞ Welding defects – causes & remedies ☞ Problems and solution faced in Shed (yard) ☞ Welding of Safety components – knuckle, draw bar components etc. 	<ul style="list-style-type: none"> • Wagon – manufacturing & Corrosion repairs • Locos • LHB coach ☞ Ease of welding – Selection, Manufacture & other application ☞ Cost & economy in welding
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3. Mandatory Course – Chemists and Metallurgists - 5 Week (September 2014)

For Whom: Chemists & Metallurgists Supervisors.

Course Contents

<ul style="list-style-type: none"> ☞ Failure investigation ☞ Corrosion prevention of Rolling Stock ☞ Failure investigation of rails, rolling stock and other metallurgical components ☞ NDT of Rolling Stock ☞ Ferrous and non-ferrous foundry ☞ Uses of computers 	<ul style="list-style-type: none"> ☞ Heat treatment of castings forging ☞ Rubber, Plastic, components & FRP components ☞ Fuel Lubricants & Bio-Diesel ☞ Environment pollution & their prevention ☞ Mechanical drawing & their significance ☞ Budget & Expenditure
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**SUPERVISORY DEVELOPMENT PROGRAMMES
SIGNAL ENGINEERING & TELECOMMUNICATIONS**

1. Initial Course Phase I & II - 30 Week (Phase I - September 2014)

For Whom: Fresh recruited Supervisors in signaling with degree in Science for developing Senior Supervisory official.

Course Contents

<ul style="list-style-type: none"> ☞ Basic concepts of signaling and principles of interlocking ☞ Computer appreciation ☞ Electrical signaling including power supply arrangements ☞ Electrical signaling practice ☞ Establishment, stores and accounts matters, tenders and contracts 	<ul style="list-style-type: none"> ☞ Introduction to modern signaling. ☞ Locking table and dog charts ☞ Orthodox and double wire signaling ☞ Relay interlocking systems ☞ Signaling general and safety ☞ Signaling in RE areas ☞ Train traffic control ☞ Block signaling.
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2. Initial Course for Directly Recruited Supervisors in Signaling Phase I - 14 Week

For Whom

Supervisors responsible for construction and maintenance work connected with Signaling and handle Signaling equipment independently.

Course Contents

<ul style="list-style-type: none"> ☞ Basic concepts of Signaling and principles of interlocking ☞ Locking table and dog charts ☞ Measurements. ☞ Mechanical Signaling – orthodox and double wire 	<ul style="list-style-type: none"> ☞ Electrical Signaling – relays, track circuits, equipment and their controls, selection circuits, automatic Signaling, axle counters, power supply and relay interlocking ☞ Basic electronics
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3. Refresher Course for Telecom Inspectors - 5 Week (July, August, Sept, Oct & November 2015)

For Whom: Supervisors of Telecom discipline with 4-5 years experience.

Course Contents

<ul style="list-style-type: none"> ☞ PCM principles, data communication and PRS ☞ Study of control equipment ☞ Study of line plant systems including optic fiber cable ☞ Study of WPC regulations including licensing and ITU recommendations. 	<ul style="list-style-type: none"> ☞ Study of power supply systems for telecommunication installations, network management system ☞ Study of VHF, UHF, microwave, analog and digital including 18GHz systems ☞ Study of digital electronics, microprocessors applications
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4. Equipment Course in Relay Interlocking (SIEMEN's) - 4 Week (November 2014)

For Whom: Supervisors working in Signaling Department and conversant with Electro-mechanical signaling.

Course Contents

<ul style="list-style-type: none"> ☞ Relay Interlocking specification ☞ Design of control panel and illuminate track diagram ☞ Relay s and relay groups ☞ Symbols and nomenclatures, preparation of route section plan 	<ul style="list-style-type: none"> ☞ Circuit explanations of route relay interlocking. ☞ Drawing office practice on circuit design ☞ Power supply arrangement ☞ Installation features ☞ Testing and commissioning.
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5. Refresher Course for Signaling – 5 weeks Aug, Sept, Oct, Nov 2014)

For Whom: Refresher course is meant for working supervisor looking after railway signaling. The topics which are covered are as under:

Course Contents

<ul style="list-style-type: none"> ☞ Electrical Signaling – Train Detecting Devices (Track Circuits, Axle Counters & AFTC) ☞ Elect. Signaling Equipment & Misc. Circuits ☞ Signaling in 25 KV RE area. ☞ Power Supply Arrangements & Relay Interlocking (British) ☞ Relay Interlocking (Siemens) ☞ Modern Signaling, Solid State Interlocking 	<ul style="list-style-type: none"> ☞ Modern Signaling, Digital Axle Counter, AWS, Data logger, ETCS, etc., ☞ Block Signaling, GSR & aspects related to safety & SEM ☞ Locking Table Practice, Lifting Barrier gate & Reliability & Sound Construction Practice ☞ Accidents and case study & Microprocessor ☞ Computer Basics & Rail net / Internet
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SUPERVISORY DEVELOPMENT PROGRAMMES – TRAFFIC OPERATIONS

1. Trains Operations & Management - 9 Week (Sept. 2014 & Feb.2015)

For Whom: Senior Supervisors of Traffic Discipline cadres (SS/YM/ Controller).

Course Contents

<ul style="list-style-type: none"> ☞ Booking of materials and claims ☞ Commercial passenger and freight traffic ☞ Finance and general management. ☞ Freight and passenger trains control ☞ Marketing and sales ☞ Marshalling yards 	<ul style="list-style-type: none"> ☞ Operating Transportation Management ☞ Pass amenities, Permanent-way ☞ Punctuality, Reservations & Revenue ☞ Signaling. Ticket less traveling & Time-tabling ☞ Traffic projections, Wagon utilization
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2. Commercial Management - 9 Week (Sept. 2014)

For Whom: Senior supervisors with 3-5 years experience in Commercial Department.

Course Contents

<ul style="list-style-type: none"> ☞ Accidents records and returns statistics ☞ Duties and responsibilities of Railway staff ☞ Establishment / General Rules and Pass amenities. 	<ul style="list-style-type: none"> ☞ Passenger and freight traffic ☞ Platform arrangements ☞ Station Account Claims ☞ Station working ☞ Conduct Rules
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3. Promotional Course for Sr. Section Engineer - 8 Week (November 2014)

For Whom: Sr. supervisors with 3-5 years experience in Civil Engineering Department.

Course Contents

<ul style="list-style-type: none"> ☞ Ballast and sub-ballast, formation treatment, Ballast less track ☞ Concrete sleepers for plain track and points & crossings ☞ Curves, Use of computer programme for realignment 	<ul style="list-style-type: none"> ☞ Rail, rail welding, welded track, LWR on bridges ☞ Rail-Wheel Interaction & Derailment Investigation ☞ Track Monitoring, track tolerances, TMS, High speeds
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<ul style="list-style-type: none"> ☞ Elastic Fastenings ☞ Glued and Insulated joints ☞ Maintenance of concrete sleeper track ☞ Points and crossings, Layouts 	<ul style="list-style-type: none"> ☞ Track stresses, track standards and criteria for track renewals ☞ USFD, Rail & weld failures and remedial measures ☞ Yard layouts, Ballast less track
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4. Initial Course for Asst. Loco Pilot (Diesel/AC) – 5-1/2 Week (August, October, December 2014 & February 2015)

For Whom: Fresh entrants with 1-2 years experience to impart knowledge of various systems of diesel locomotives

Course Contents

<ul style="list-style-type: none"> ☞ Basics of Mechanical/ Electrical Engg ☞ Familiarization with Layout & working of various types of Locomotives. Principal and working of Diesel Loco. ☞ Various components of Diesel loco and demonstration on Loco. ☞ Diesel engine systems - fuel, lube oil, cooling water and charge air ☞ Electrical control components ☞ Excitation system Microprocessor system and related trouble shooting ☞ Engine governor - GE and Woodward ☞ Vac and Air brake system of Diesel Loco 	<ul style="list-style-type: none"> ☞ Electrical systems - speed control, propulsion control, excitation control, automatic transition regulation and dynamic brake ☞ Expressor and air circuits ☞ Sequence of starting and shutting down of diesel engine. Precaution to be taken before movement of locomotive ☞ Safety Equipments and safety devices of Loco ☞ Latest development in Alco Locomotive ☞ Introduction to GM Locomotives. ☞ GM loco layout & Introduction ☞ EMD electrical & AC-AC transmission ☞ Track Train Dynamics ☞ Practical training of loco operation.
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SPECIAL TRAINING PROGRAMS

These Programs are organized in reputed Railway Workshops, Locomotive & Rolling Stock base depots and Field Training Centres.

1. Operation & Handling of Diesel Loco – 8 weeks (October & Dec 2014)

For Whom: Locomotive Drivers

Course Contents

<ul style="list-style-type: none"> ☞ Working of various types of Locomotives. Principal and working of Diesel Loco. ☞ Various components of Diesel loco and demonstration on Loco. ☞ Diesel engine systems - fuel, lube oil, cooling water and charge air ☞ Electrical control components ☞ Excitation system Microprocessor system and related trouble shooting ☞ Engine governor - GE and Woodward ☞ Vac and Air brake system of Diesel Loco ☞ Electrical systems - speed control, propulsion control, excitation control, automatic transition regulation and dynamic brake 	<ul style="list-style-type: none"> ☞ Expressor and air circuits ☞ Sequence of starting and shutting down of diesel engine. Precaution to be taken before movement of locomotive ☞ Safety Equipments and safety devices of Loco ☞ Trouble shooting of defects on line ☞ Latest development in Alco Locomotive ☞ Introduction to GM Locomotives. ☞ GM loco layout & Introduction ☞ EMD electrical & AC-AC transmission ☞ Track Train Dynamics ☞ Training on Loco Simulator ☞ Practical training of loco operation with Loco Inspector
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2. Maintenance of Diesel Loco – 8 Week (October, December 2014)

For Whom: Senior supervisors with 3-5 years experience in Loco maintenance depot

Course Contents – Mechanical System

<ul style="list-style-type: none"> ☞ Diesel engine – assembly and details of components including design, manufacture, inspection and maintenance. ☞ Over hauling of turbo super 	<ul style="list-style-type: none"> ☞ Trouble shooting and loco defect on run ☞ Load Box testing ☞ Latest development in Alco Locomotive
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<ul style="list-style-type: none"> chargers ☞ Diesel Engine systems – fuel oil, Lube oil water cooling and charged air etc. ☞ Over hauling of various sub assemblies ☞ Combustion process and valve timing diagram. ☞ Specifications, properties and testing of fuel oil, lube oil water (including corrosion inhibition in water) ☞ Water treatment (DM water plant) ☞ Design concepts of various types of under-gear of Diesel Locomotives ☞ Safety devices of Engine 	<ul style="list-style-type: none"> ☞ Material specification & Testing of steel, gaskets and rubber ☞ Non-destructive testing including UST. ☞ Bimetal & Tri-metal Bearings and Failure analysis. ☞ Expresser and air circuits and related failures ☞ Engine Governor – GE and Woodward ☞ Fuel economy with respect to operation and maintenance ☞ Speed recorders – principle of working and how to interpret ☞ Load Box testing
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Course Contents – Electrical System

<ul style="list-style-type: none"> ☞ Principles of Electric transmission in Diesel locomotive. ☞ Electrical control component – Relays, Contractors etc. ☞ Starting of diesel engine – circuit analysis ☞ Electrical Rotating machines ☞ Principles of Electric transmission in Diesel locomotive. ☞ Electrical control component – Relays, Contractors etc. ☞ Automatic Transition regulation – Principles and circuit analysis 	<ul style="list-style-type: none"> ☞ Excitation control – Principle and circuit analysis ☞ Dynamic braking – Principle and circuit analysis ☞ Automatic Transition regulation – Principles and circuit analysis ☞ Excitation control – Principle and circuit analysis ☞ Dynamic braking – Principle and circuit analysis
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3. Welding Technology – 3 week (September, Dec. 2014 & Jan, March 2015)

For Whom: Technicians with 1-2 years experience to enhance knowledge about welding.

Course Contents

<ul style="list-style-type: none"> ☞ Fundamental of welding – Process, weld ability, Fluxes, Selection of Electrodes ☞ GMAW & Flux cored wire welding with CO₂ 	<ul style="list-style-type: none"> ☞ Problems faced during welding <ul style="list-style-type: none"> • Coach manufacturing & corrosion repairs • Welding Safety • New welding technology in
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<ul style="list-style-type: none"> ☞ Welding defects – causes & remedies ☞ Use of measuring gauges, Visual aid of weld examination ☞ Introduction to Bipassana, testing and certification. 	<p style="text-align: center;">Railways</p> <ul style="list-style-type: none"> ☞ Ease of welding – Selection, Manufacture & other application ☞ Cost & economy in welding
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4. Industrial Application of Hydraulics & Electro pneumatics – 2 Week (August & October 2014)

For Whom: Mechanical Supervisors working in Maintenance to enhance knowledge about Hydraulic Machines.

Course Contents

<ul style="list-style-type: none"> ☞ Practical in automation lab, symbols ☞ Basics of hydraulics of hydraulic and pneumatic & Pascal Law, working Principle. ☞ Details on hydraulic Cylinders and Valves etc. ☞ Principle of hydraulic Motor Pumps, hydraulic Jacks and their working, Maintenance aspects. Direction control and flow control valve on trainer kit. 	<ul style="list-style-type: none"> ☞ Exercises for different types of circuits (Hydraulics), Hydraulic maintenance & trouble shootings. ☞ Health, Nutrition & family welfare, ☞ Actual working of hydraulic / Pneumatic system, IMS, Exercises for different types of Pneumatic circuits. ☞ Practical on pneumatic Cylinders and Valves and oil filtration etc. Practical of single acting and double acting cylinder
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NB:

Regular courses for transportation personnel, Assistant Station Masters, Guards, Drivers, Commercial Clerks, Ticket Collectors, Engineering Staff – Permanent Way, Inspectors, Inspector of Works, Storekeeper, Statistic are also organized. Details of specific requirement can be submitted on demand.

Practical attachment training in specialized areas for Artisans/ Mechanics/ Technicians/ Fitters is also organized in reputed Railway Workshops, Locomotive & Rolling Stock base depots and Field Training School.
