EVEN BEFORE YOU "TURN THE KEY"

MANAGE YOUR BUSINESS

ISS
international

INTEGRATED
SERVICE
SOLUTIONS

Training &
Know-how Transfer
DIRECTORY

WE ARE **ISS INTERNATIONAL SPA**

INDEX

INTRODUCTION

ISS International Spa is able to plan and to manage training courses and to develop didactic materials.

ISS International Spa supplies and realizes training services with traditional (Classrooms, On the Job, Side by Side) and innovative (Training Simulator) methods.

CLASSROOM

SIDE BY SIDE

ON THE JOB

TRAINING SIMULATOR
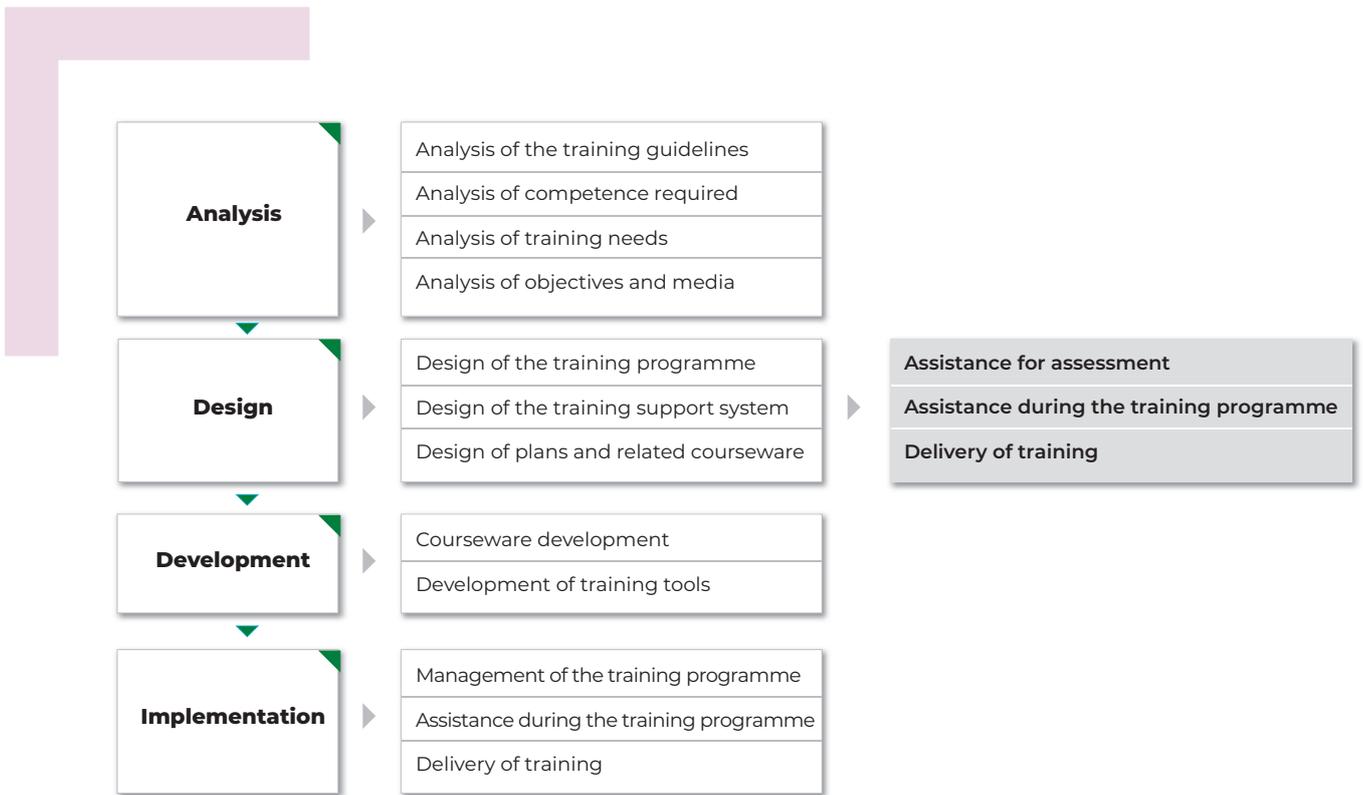
TRAINING STANDARD IMPLEMENTATION

ISS International Spa Standard Training Methodology is organized considering that training should be applied to several different professional typologies and it is based on the *Skills & Competence Approach*.

With the term "Competence", often used in different context with several diffe ent acceptations, we intend the complex system of knowledge and ability, fundamental for functional carrying out of work activity.

The training process is developed through the following phases:

1. Analysis of the organizational chart and structure of the Client company, in order to prepare the Job Descriptions
2. Identification of the Competence required for each professional profile
3. Interviewing of personnel to assess and evaluate their Competence and to identify their formative needs
4. Activity planning and preparation of Training Material
5. Execution of Training courses
6. Assessment of the Competence acquired during and at the end of each course
7. Identification and implementation of corrective actions if previously defined Competence have not been completely or even partially achieved.

The **ISS International Spa** Standard implementation path is shown in the following figure:

Analysis	Analysis of the training guidelines
	Analysis of competence required
	Analysis of training needs
	Analysis of objectives and media

Design	Design of the training programme		Assistance for assessment
	Design of the training support system		Assistance during the training programme
	Design of plans and related courseware		Delivery of training

| **Development** | Courseware development |
| | Development of training tools |

Implementation	Management of the training programme
	Assistance during the training programme
	Delivery of training

Planning and implementation of the courses are settled to the acquisition of knowledge, the upgrade and the development of the competence.
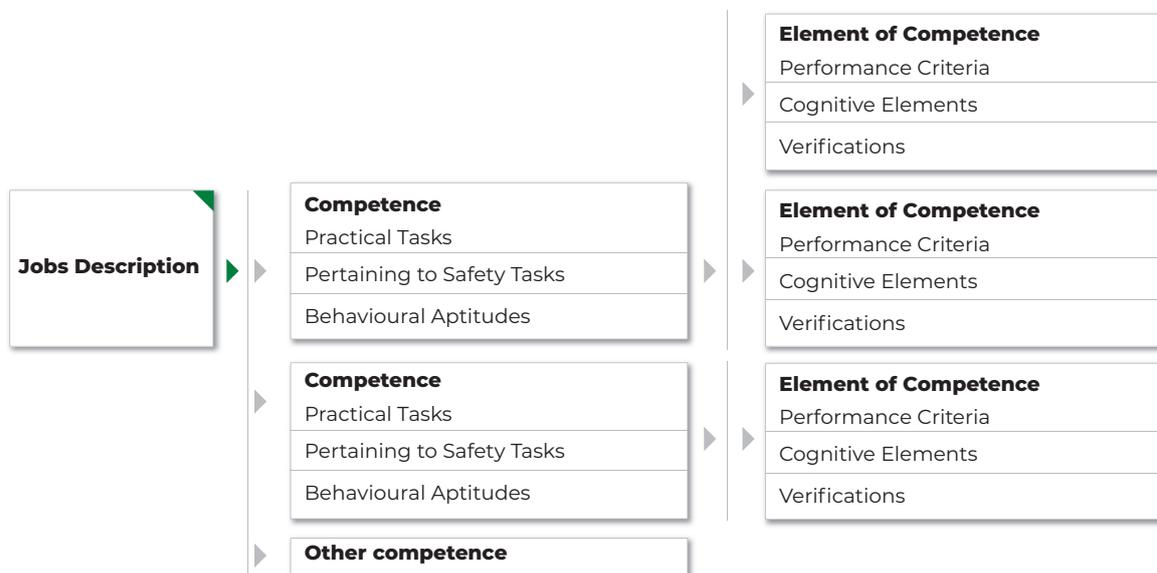
2.1 SKILLS & COMPETENCE BASED TRAINIG APPROACH ANALYSIS

ISS International Spa can develop the whole competence set and the trainees GAP Analysis Definition. Skills & Competence Methodology of **ISS International Spa** is as follows:

2.1.1 IDENTIFICATION OF THE REQUIRED COMPETENCE

ISS International Spa uses job descriptions as a tool to assign the Competence of each professional profile. Each position of the client's organization chart will have Competence detailed and differentiated according to practical tasks, safety rules and behavioural aptitudes. Each competence has a code allowing easy identification. For a unique description of each competence, elements of competence will be defined.

In the following diagram, we have outlined the procedure followed for the identification of elements of competence, on the basis of defined competence and job descriptions.

Jobs Description		
	Competence Practical Tasks Pertaining to Safety Tasks Behavioural Aptitudes	**Element of Competence** Performance Criteria Cognitive Elements Verifications
		Element of Competence Performance Criteria Cognitive Elements Verifications
	Competence Practical Tasks Pertaining to Safety Tasks Behavioural Aptitudes	**Element of Competence** Performance Criteria Cognitive Elements Verifications
	Other competence	

Each Element of Competence is then further defined by three fundamental criteria, giving it a complete connotation. They are:

Performance Criteria

Identifies the correct modality of execution of designated activity. Identifies correct standard (observable and definable) for the execution of single task.

Cognitive Elements

Identifies theoretical and experimental know-how needed to obtain specific element of competence.

Verifications

Indicates common methods and tools to evaluate the performance of each employee, related to his own duty and level of competence to be assessed.

Therefore three methods of Verification can be indicated:

~ *Direct observation of performance*
~ *Verification through a questionnaire to employees/ trainees (Test)*
~ *Verification through a questionnaire to their superiors.*

2.1.2 EVALUATION OF COMPETENCE AND IDENTIFICATION OF THE TRAINING NEEDS

It is necessary to determine the correspondence, or the gap, between the requested Competence for each individual job position and those already obtained by the trainees (confirmed by the initial verification procedures outlined in the preceding paragraph), in order to define the Training Needs.

One of the most commonly used procedures to identify and predict when a subject is able to perform a specific job task is the **Critical Incident Method**. This method allows registration of the actions performed within the context of a specific work activity, during a pre defined period. These actions are then evaluated on the basis of specific criteria of Quality, Productivity, Availability, etc. In other cases, tests or interviews may be used to determine performances.

For each verification methodology used, the results are compared with the defined standard for each Competence and not with those obtained by other trainees.

ISS International Spa will identify the Training Needs on the basis of the gap between the optimal Competence – defined from the Job Description prepared – and those already obtained by the trainees.

As training needs have been defined, training materials, together with other tools, can be issued in order to complete the training program and achieve final targets.

2.1.3 PLANNING ACTIVITIES AND PREPARATION OF TRAINING MATERIAL

For the planning and the developing of the training material is fundamental to consider an exact correlation among the objectives, the Competence to be obtained and the contents of each course. On the basis of the gap to be filled, the didactical material, necessary to reach every expected competence, will be developed. There is always a correspondence between the training module and its relative competence.

2.1.4 TRAINEE EVALUATION

The evaluation of a training program is, first of all, delegated to the instructors and coordinated by the **ISS International Spa** who will have the responsibility of:

~ *Planning the activities in detail*
~ *Explain the objectives of each course to the trainees*
~ *Monitor the learning capabilities*
~ *Monitor the motivational, technical and theoretical aspects.*

At the end of each course, the trainees are evaluated as Competent or Not Competent.
If one or more trainees have not achieved the desired goals, corrective actions will be taken. ISS International Spa assesses whether it is appropriate to suggest a repetition of the course or is sufficient to adopt other solutions.
The Theoretical Competence are evaluated with written or oral tests. At the end of the training project, each student undergoes a Final Verification, allowing those who are considered *Competent to* perform ordinary and extraordinary work related to their specific role in the company.
The examination is carried out on each element of Competence, which can be evaluated and certified, in order to proceed step by step with the definition of every Competence.
These results are gathered for each Element of Competence, indicating as well the procedures used for th evaluation along with the instruments used for the Verification of the evidence:

~ *Direct Observation (D)*
~ *Simulation (S)*
~ *Test (T)*
~ *Questionnaires (Q).*

2.1.5 TOTAL TRAINING SERVICE

ISS International Spa can offer, when requested, a Total Training Service Assurance.
This approach has the purpose to supply a 360 degrees service to training activity.

The assistance includes all type of logistical, technical, commercial and organizational service.

The training package may include the followings:

~ *Realization of all types of material related to training courses: slides, booklet, training manuals etc.*
~ *Supply of fully furnished classrooms and ITC classrooms*
~ *Boarding and lodging for trainees*
~ *Transfers*
~ *Selection and employing of the personnel that the client will have to engage at the end of the course*

ISS International Spa can employ the trainees for the duration of the training while the client commits to retain only the trainees that have reached the determined competence for the related job position.
The advantage for the client is to be relieved from managing all the aspects related to short or long term employment of persons who have to be trained before becoming part of the company personnel.

SPECIFIC TRAINING TOOL

The following Training Tools are normally used by **ISS International Spa** for the optimization of its training projects:
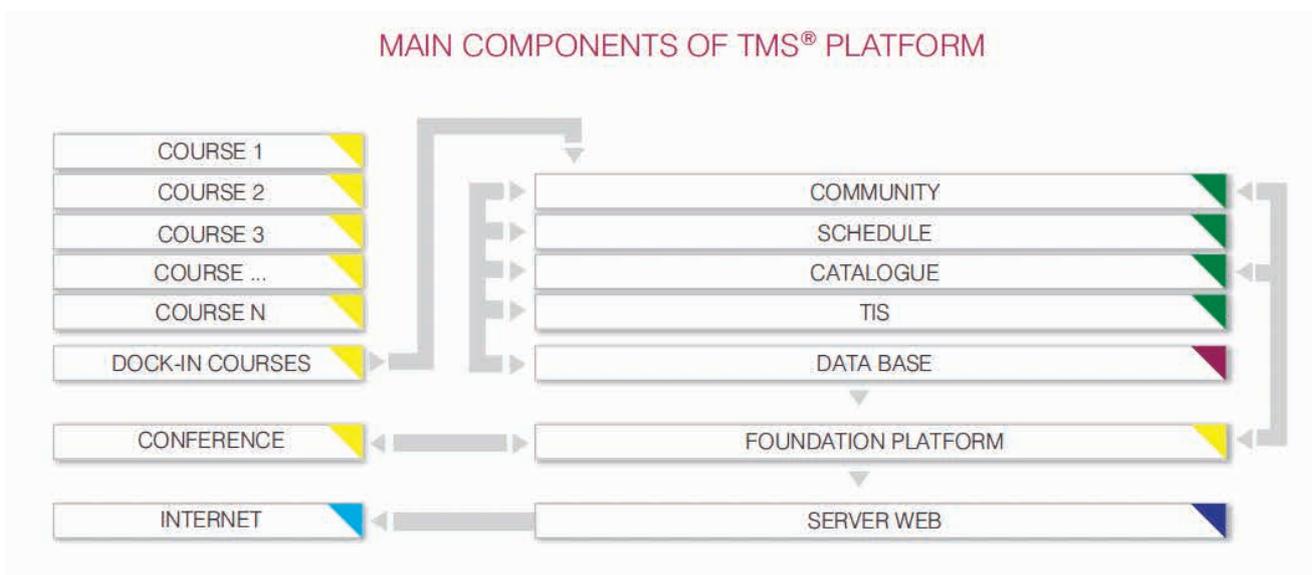
~ *TMS® (Training Management Systems)*
~ *O&MTS (Operation and Maintenance Training Simulator)*

3.1 TMS® (TRAINING MANAGEMENT SYSTEMS)

ISS International Spa manages training services with the use of a dedicated and proprietary Software package, named the **Training Management System** (TMS®), which is an in-house package purposely developed for the management and monitoring of the training.

The diagram below illustrates the characteristics of the training package.

MAIN COMPONENTS OF TMS® PLATFORM

COURSE 1		
COURSE 2	COMMUNITY
COURSE 3	SCHEDULE
COURSE ...	CATALOGUE
COURSE N	TIS
DOCK-IN COURSES	DATA BASE
CONFERENCE	FOUNDATION PLATFORM
INTERNET	SERVER WEB

The **Training Management System (TMS®)** facilitates the management of trainees and training activities such as registration/tracking of entry test results and assessment performed during and after the training.

The input data will be loaded manually, while the software manages and filters data according to criteria.
In addition, the **TMS®** enables the optimisation of the employment of instructors and supports proper project management.
The architecture of the **TMS®** also envisages monitoring of training activities and reporting related to the individual trainee or training activity. A further important feature enables the remote access to the database of specific projects with different levels of protected access.
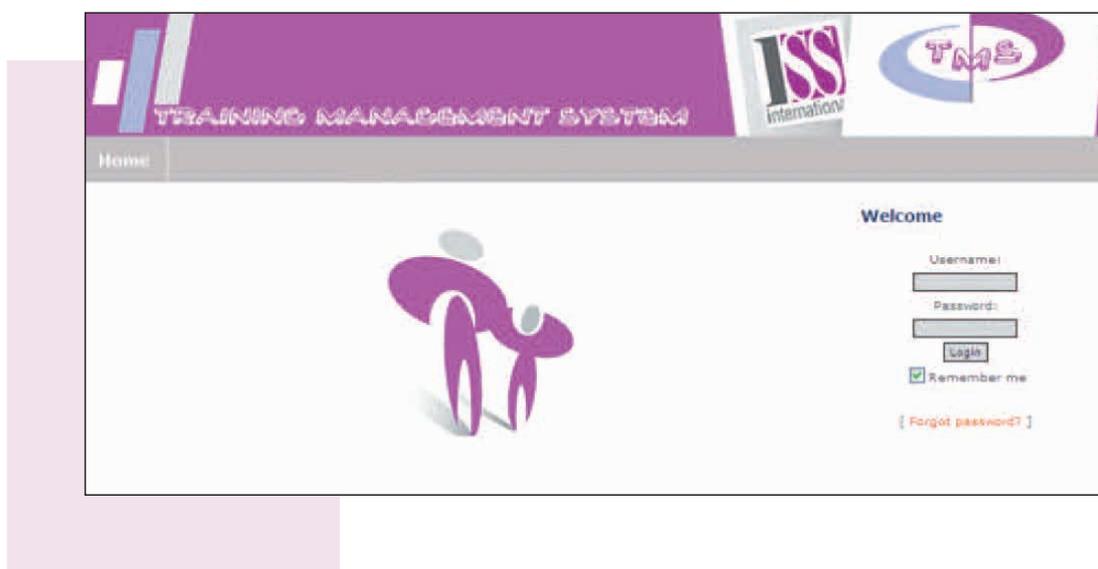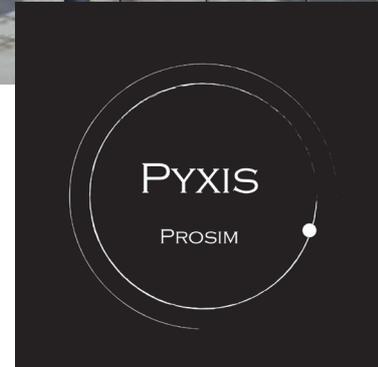
PYXIS
PROSIM

3.2 PYXIS®

A new trend in the industry utilizes Virtual Reality (VR) technologies to create immersive, realistic environmen- ts without the risks associated with site tasks. However, many VR solutions lack industry-specific knowledge, limiting their effectiveness.

PYXIS® aims to address these challenges by creating a virtual replica of industrial plants, providing highly re- alistic simulations. Developed by ISS International SpA, PYXIS® integrates advanced technologies to create a comprehensive platform for both control room and field operators, as well as maintenance personnel.
PYXIS® can be configured for various purposes such as:

~ *Enhanced operating manual*
~ *Training*
~ *Design reviews and checks*
~ *Constructability assessments*
~ *Maintenenance engineering*
~ *Maintenance applications and verification*
~ *Operation support for procedure tests*
~ *Turnaround procedure tests and implementation And much more*
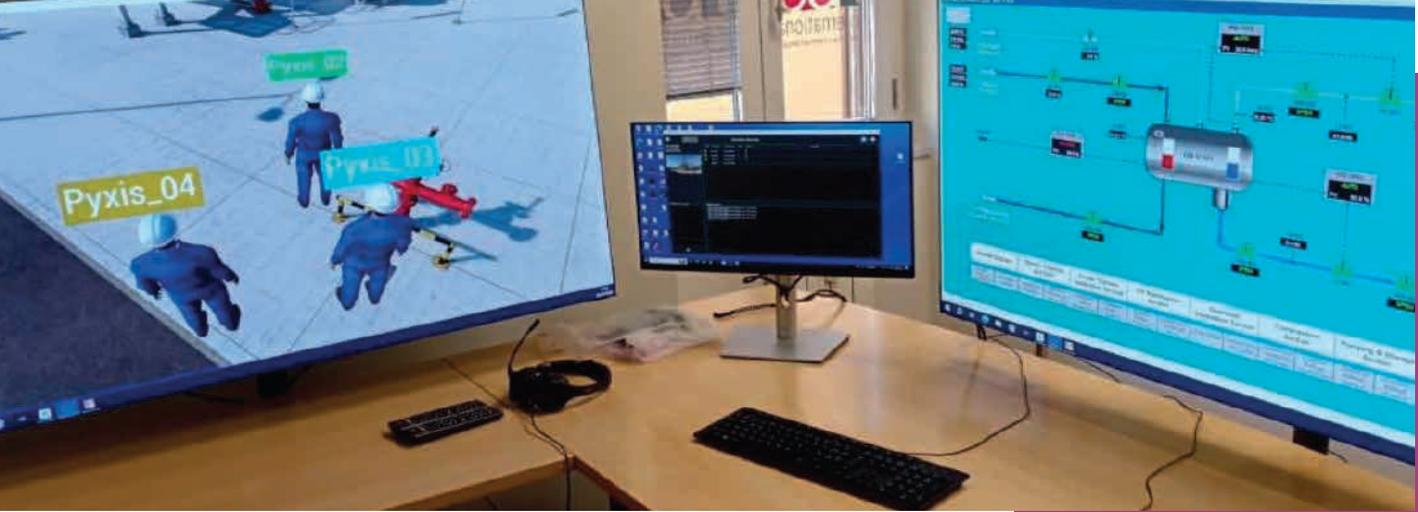
Key Features

Operator & Maintenance Training Simulator (O&MTS): Replicates control room environments and plant behavior with high fidelity.

Interactive 3D Simulator: Allows to perform field tasks and procedures in a three-dimensional environment from any device.

Fully Immersive 3D Environment: Provides an immersive experience, enhancing realism and tasks' effectiveness.

Implementation

PYXIS® will be installed in dedicated rooms for control operators, field operators, and immersive training. It leverages VR technology to offer self-training, instructor-led, and team-based training modes, tailored to the specific needs of the chemical and petrochemical industry.

Technology Readiness

Based on existing products with proven success in the industry, PYXIS® is assigned a Technology Readiness Level (TRL) of 9, ensuring reliability and effectiveness.

3.3 O&MTS (OPERATION AND MAINTENANCE TRAINING SIMULATOR)

The **O&MTS** is a suitable Training tool to build-up a training/learning environment, allowing the development of a sound knowledge of the process. It enables the improvement of the performance of the training programs and a significant reduction of the time needed to achieve the final targets.

It consists of:

~ *IOP (Interactive Operating Procedures)*
~ *IME (Interactive Maintenance Environment)*
~ *IOMS (Interactive Organisation and Management System)*
~ *IPD (Interactive Process Documentation)*
~ *BTS (Basic Training Simulator)*
~ *OTS (Operating Training Simulator).*

IOMS
Interactive Organization and Management System

IPD
Interactive Process Documentation

O&MTS

IOP
Interactive Operating Procedure

IME
Interactive Maintenance Environment

BTS
Basic training Simulator

OTS
Operator Training Simulator
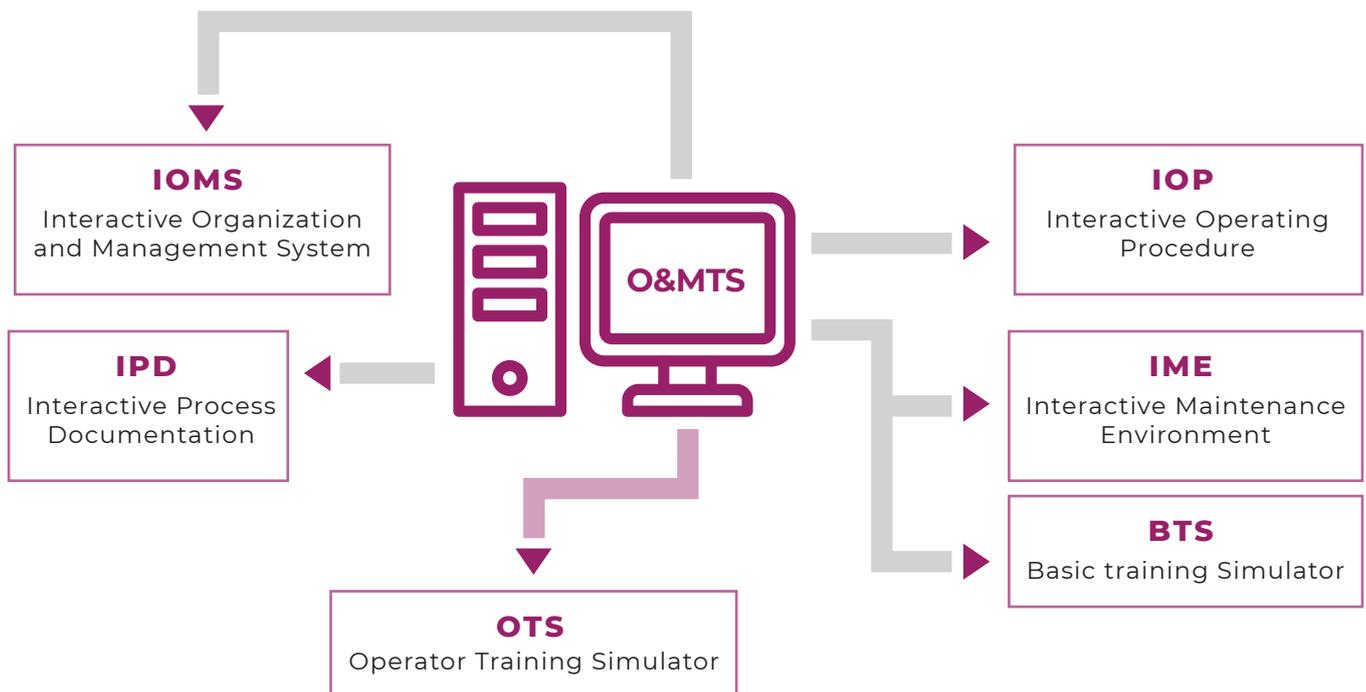
IOP
(Interactive Operating Procedures)

It is a module that enables the trainee to track the operating procedures both in a step-by-step description as well as in the simulation environment.

In the **O&MTS**, it is possible to manage the operating procedures as a specific help module in order to perform start-up and shut-down manoeuvres.

All sets of operating procedures will be implemented in an interactive environment. With a simple mouse click, it is possible to read and browse all the procedures linked to the specific equipment that the trainee is interested in.

IME
(Interactive Maintenance Environment)

It is a module that enables the trainee to have an easy and fast access to all technical data of each equipment through the process training simulator environment in an interactive manner.

With a simple click of the mouse is possible to read and browse all the maintenance documentation, such as maintenance parameters, mechanical drawings, maintenance management system, spare parts, linked to the specific equipment trainee is interested in.

IOMS
(Interactive Organisation and Management System)

It is a module that enables the trainee to follow the operating and management procedures both in a step-bystep description and in the simulation environment.
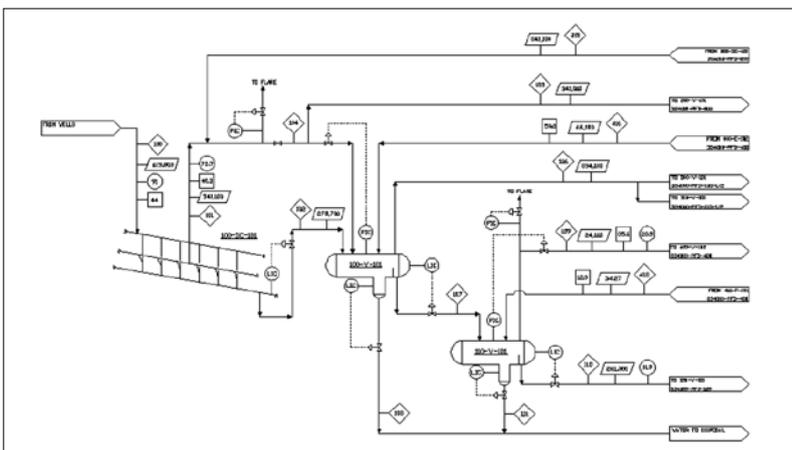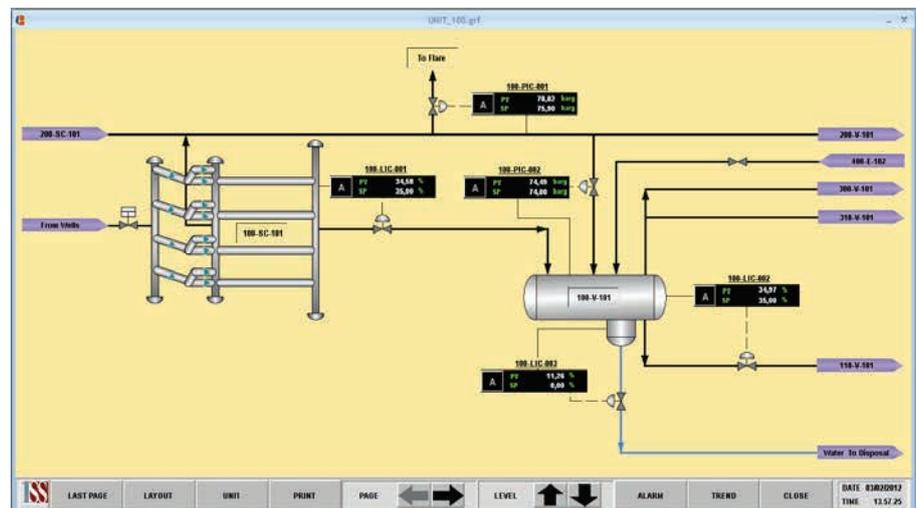
In the **O&MTS**, it is possible to manage the operating and management procedures as a specific help module to study "Who does What". All the sets of the operating and management procedures will be implemented in an interactive environment.
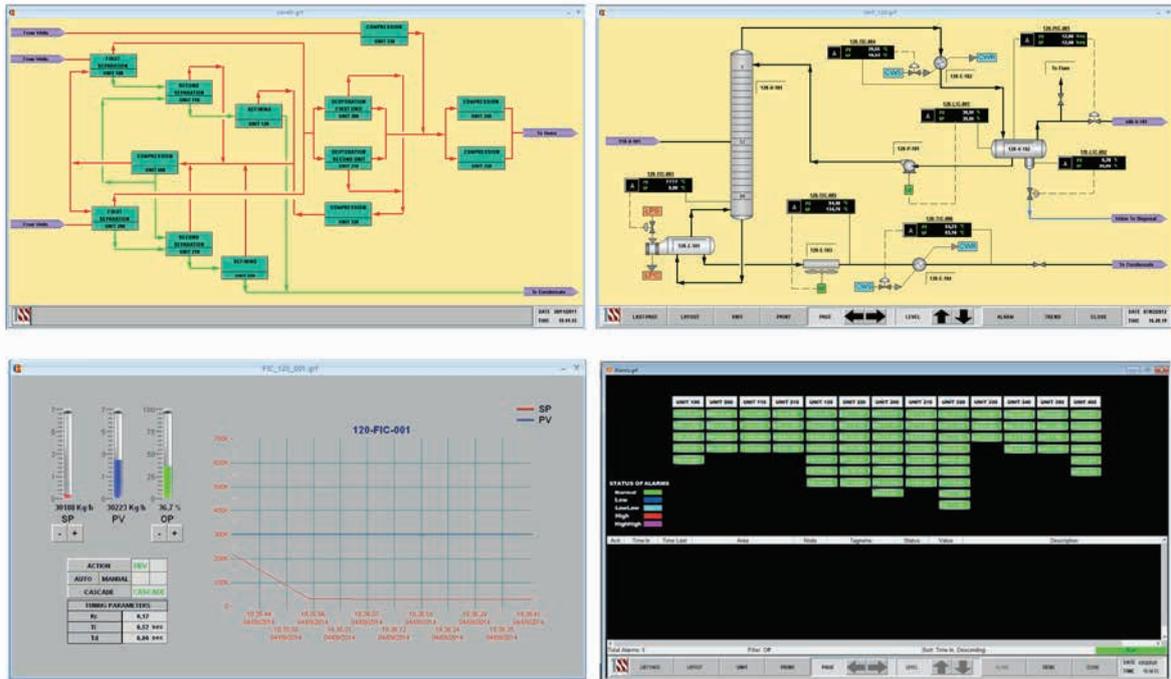
With a simple click of the mouse, is possible to read and browse all the procedures.

IPD
(Interactive Process Documentation)

It is an interactive PFDs and P&IDs Browsing system

BTS
(Basic Training Simulation)

The **BTS** is an off-the shelf tool based on Dynamic Sim-ulation techniques in order to obtain a deeper knowl-edge of the basic notions of thermodynamics, chemistry, fluid dynamics and of specific equipment or instrument. Each equipment item is shown in a single, isolated, dynamic case:

~ *Pumps*
~ *Separators*
~ *Heat Exchangers*
~ *Air Coolers*
~ *Compressors*
~ *Turbines*
~ *Columns*
~ *Mixers*
~ *Reactors*
~ *Furnaces*

OTS
(Operating Training Simulation)

The **OTS** is an off-the shelf Dynamic Simulation, giving deeper knowledge of the basic notions of process and control strategy based on pre-configured plant units (not originally tailored on the customer plant). Each process is shown in a single unique dynamic simulator environment:

~ *Oil & Gas Plant*
~ *Power Generation*
~ *Crude Distillation Unit*
~ *Vacuum Unit*
~ *Reforming Unit*
~ *FCC Unit*
~ *Alkylation*
~ *Sulphur Removal*
~ *Blending*
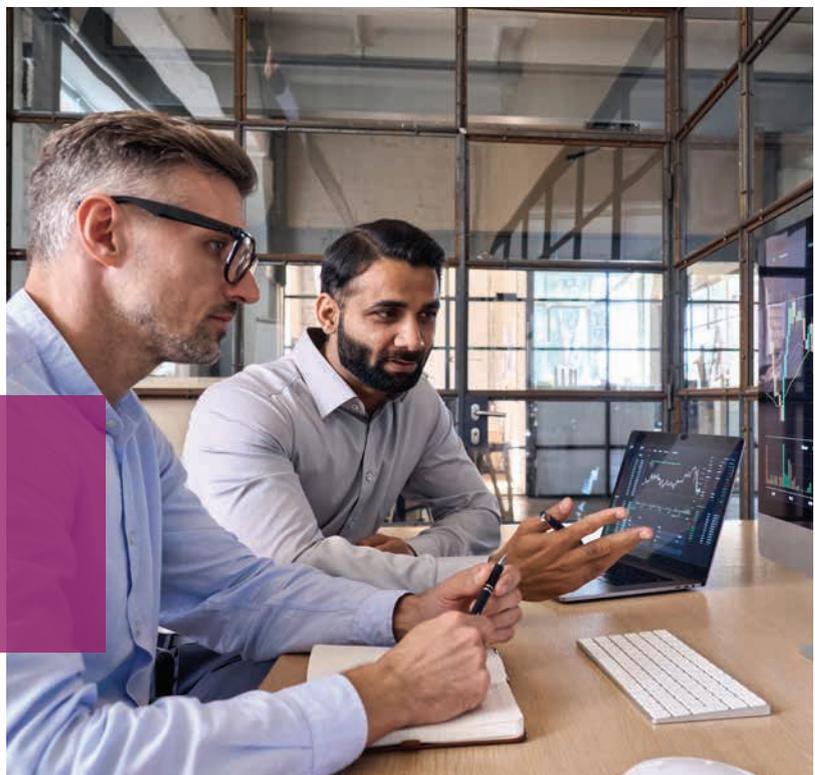
ISS INTERNATIONAL SPA FACILITIES

ISS International Spa is present in Italy and abroad, thanks to its own structures and to several worldwide partnerships, with training facilities:

~ *Multimedia Classrooms fully furnished*
~ *ICT Classrooms with the most advanced simulation tools.*

Training Directory

Courses presented hereinafter are meant to satisfy the requests of persons who need to acquire basic/advanced knowledge in a wide range of technical matters.

Training courses have been designed, organized and approached bearing in mind a wide operating **environment and industrial contexts.**

Tailored courses are normally developed and supplied according to **Client requirements.**

ISS International Spa Training Course Areas are:

~ *Energy and Oil & Gas*
~ *HSE and Quality*
~ *Management*
~ *HR/Soft Skills*
~ *Information Technology*
~ *Master Programs.*

Energy and Oil&Gas Area
(main topic index)

The Energy and Oil&Gas Area is the core business of ISS International Spa. The aim of the courses in this area is to give trainees the knowledge required to develop strong skills.

ISS International Spa is able to design and Supply Training Courses and services for precommissioning, commissioning, start up, operation & maintenance and engineering activities of industrial systems for the oil & gas, petrochemical, ecological and energetic fields.

The main Course areas are:

BASIC KNOWLEDGE
~ *Introduction to Chemistry and Hydrocarbons*
~ *Inorg. & Org. Chemistry*
~ *Distillation & Fractionating*
~ *Introduction to Process Instrumentation*
~ *Principles of Corrosion*
~ *Graphic Symbols in P&IDs and PFDs*
~ *...*

OVERVIEW & DESIGN
TECHNOLOGY
~ *Topping Plant*
~ *Vacuum Plant*
~ *FCC*
~ *Gas Plants*
~ *...*

EQUIPMENTS
FUNDAMENTALS
~ *Centrifugal Compressors*
~ *Boilers*
~ *Centrifugal Pumps*
~ *Columns & Separators*
~ *...*

DESIGN
~ *Pumps & compressors*
~ *Heat exchangers*
~ *Heaters*
~ *Columns*
~ *...*

INSTRUMENTATION & CONTROL
~ *Automatic Control Valves*
~ *Control Type*
~ *Pressure Safety Valves*
~ *...*

PIPING
~ *Piping Engineering Design*
~ *Piping, Fitting & Valves*
~ *...*

ELECTRICAL
~ *Electrical Engineering Design*
~ *Synchronous Generators and Transformers*
~ *...*

EXPLORATION
~ *Hydrocarbon Exploration*
~ *Geology*
~ *...*

WELL AREA
~ *Drilling Rigs & Equipment*
~ *Drilling Technologis*
~ *Workover & Wireline*
~ *Completion Engineering*
~ *...*

RESERVOIR GEOSCIENCES
~ *Reservoir Engineering*
~ *Production Optimization*
~ *...*

OPERATIONS & MAINTENANCE
OPERATIONS
~ *Heat Exchangers*
~ *Ejectors*
~ *Centrifugal Pumps*
~ *...*

INSTRUMENTATION MAINTENANCE
~ *Technical drawing*
~ *Safety*
~ *Fire & Gas Detection system*
~ *Level Measurement*
~ *...*

ELECTRICAL MAINTENANCE
~ *Technical drawing*
~ *Safety*
~ *Protective Devices*
~ *...*

MECHANICAL MAINTENANCE
~ *Mechanical Components*
~ *Measuring Devices and Gauging Applications*
~ *...*

ENGINEERING MAINTENANCE
~ *Statistics and Probability*
~ *Maintenance Function, organisation and policies*
~ *How to gather data, define algorithms, use decision analysis tools and computerised maintenance management systems (CMMS's)*
~ *...*

MISCELLANEA
~ *Columns & separators*
~ *Heat exchangers*
~ *Pumps*
~ *Compressors*
~ *Turbines*
~ *...*

MISCELLANEA
All courses can be developed **in three (3) main levels:**
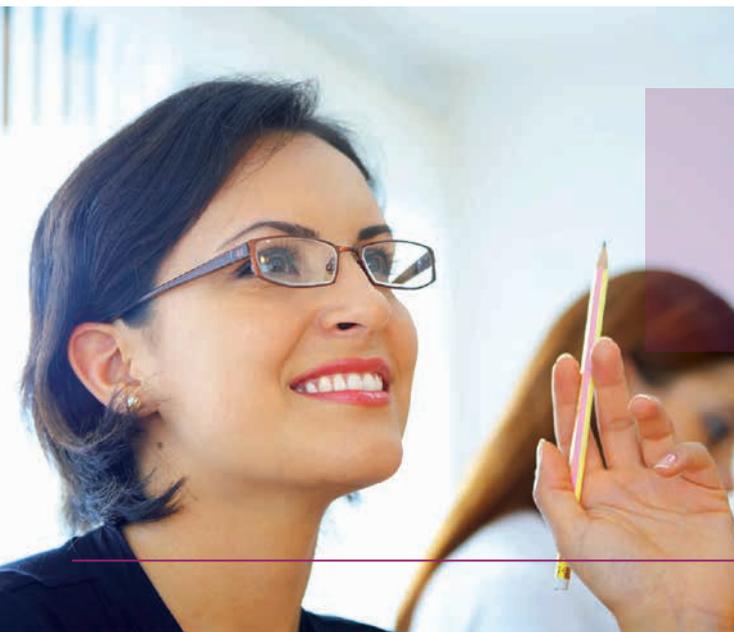
Basic Courses
Basic knowledge for all Oil & Gas Disciplines.
Advanced Courses
Basic Courses and On the Job.
Customized Courses
Courses tailored to Client requirements.

Hse & Quality Area
(main topic index)

Our Courses cover basic/advanced knowledge of **Health and Safety Environmental (HSE) & Quality Area** and they can adopt different solutions according to Client needs through tailored training modules.

These courses are targeted to:
~ *Final Year Students and New-Graduated*
~ *Companies' employees*
~ *Professionals and Free Lancers*

These Courses, designed and managed by ISS International Spa and its partners, are aimed to give HSE guidelines in compliance with current International regulations and new "**Safety Culture**" principles.

The main course areas are:

HSE IN ENERGY AND OIL&GAS OPERATIONS
~ *Basic survival combined training course*
~ *Fire, gas detection and alarm system*
~ *Risk analysis: HazId, HazOp, RAM, FMECA*

LEGISLATION
~ *ASPP & RSPP Training (ATECO codes: 1,2,3,4,5,6,7,8,9)*
~ *SEVESO Directive: Relevant Accident Risk*
~ *REACH Regulation*
~ *ATEX 1999/92/ce directive: plants explosion risk*
~ *management*
~ *...*

RISK MANAGEMENT: ANALYSIS, VALUATIONS, PREVENTIVE AND PROTECTION MEASURES
~ *Chemical Risk*
~ *Electromagnetic Field Exposure Risk*
~ *Cancerogenic and Biological Risk*
~ *...*

ENVIRONMENTAL MANAGEMENT
~ *Waste Material Management: Italian Regulation*
~ *Environmental Regulation*
~ *Environmental Management System: ISO*
~ *14011:2004*
~ *...*

QUALITY
~ *Food Safety Management System: UNI EN ISO*
~ *22000*
~ *Food Quality and Safety: HCCP methodology and production tracking*
~ *Quality logo for agro industrial sector: regulations and pursuances*
~ *Safety and Food Quality for primary production*
~ *Quality and Environmental Management System*
~ *...*

Management Area
(main topic index)

The **Management Area** training Courses provide Manager and Professionals with competence and skills allowing
performance and potential improvement.

We use a systematic/practical approach through "case studies". Courses and seminaries have different durations according to trainees' requirements, using modules
to be assembled.

The main Course areas are:
~ *Project Management*
~ *Time Management*
~ *Team Bulding*
~ *Coaching*
~ *Leadership*
~ *Cost Management*
~ *Time and Target Management*
~ *(Leadership & Personnel Management)*
~ *Business Plan Development*
~ *...*

HR & Soft Skill Area
(main topic index)

Human Resources & Soft Skills Area supplies high level practices and tools of Human Resources and Organization Management. On the basis of new market scenarios, courses on HR & Soft Skills Area improve the personal and professional growth.

The main Course areas are:
~ *Knowledge Management*
~ *HR Management*
~ *Problem Solving*
~ *PNL: Communication Skills*
~ *Public Speaking*
~ *Business English Knowledge Management*
~ *Communication*
~ *Motivation*
~ *...*
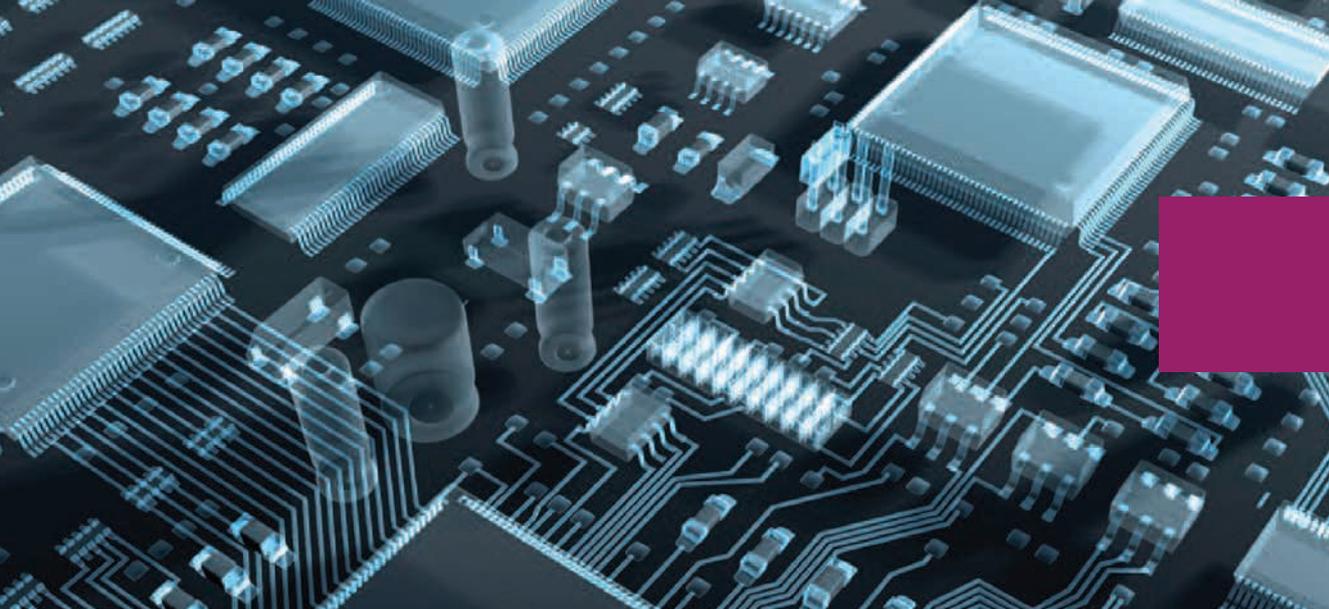
Information Technology Area (main topic index)

Information Technology Area Training paths prepare to use Informatics Systems and applied Technologies.
Courses cover a wide range of suitable training: from basic notions of the EDCL course to the design, management and safety for LAN Networks and their main data transfer
protocols.

ISS International Spa offer is addressed to both basic and expert user in Business Network Administration. Courses are structured in theoretical and practical lessons.

The main Course areas are:
~ *Tcp/Ip Security*
~ *Lan Security Administration*
~ *It Security Scenarios*
~ *Vpn (Virtual Private Networks)*
~ *Linux System Administrator*
~ *Linux User*
~ *Open Office*
~ *Ecdl Program (Europeen License)*
~ *Web Design*
~ *Programming Languages*
~ *Asterisk*
~ *Virtualization Server*
~ *....*

Master Programs (main topic index)

To supply a strong professional development, **ISS International Spa** offers specific "**Master Programs**" to increase **qualified skills and competence**. To reach this target, **ISS International Spa** has entered into many partnerships with the main players of different sectors.

The Master Programs intends to represent the reference point for professionals and Companies that want to develop their **human, technical and professional potentialities.**
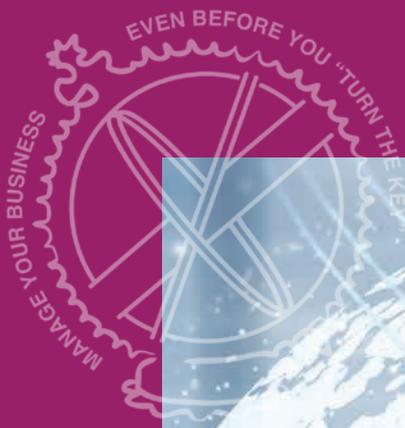Advanced training plans are oriented to young professionals, engineers and managers who want to improve academic education and job skills.

Main topics:
~ *Working in the Oil&Gas Field*
~ *Process Engineering*
~ *Maintenance Engineering*
~ *Power Plant*
~ *Pre Commissioning Technicians*
~ *HSE Management*
~ *Multiutilities & Environment*
~ *...*

ISS International Spa Main & Final Clients

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ISO 9001 EA34
ISO 9001 EA37
ISO 14001
ISO 45001
ISO 37001
ISO 27001