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**ASSOILSCHOOL**

Advanced Skills for Services in Oil and Gas Industry School

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TRAINING COURSES AND PROGRAMS



In January 2011, Assomineraria's Equipment and Services Sector and 16 of its associated Companies established, as founding members, the ASSOIL School association (School for Advanced Skills in the Oil and Gas Services Industry).

A training Centre based in Viggiano, Basilicata, was also established to supply courses to employed and non-employed personnel on upstream activity key issues.

The Centre is a permanent organization founded for the use of Member Companies to train and/or re-train a new generation of highly skilled personnel, in the aim of developing new services tailored to local, national and international markets.

Indeed, the Centre will have the opportunity of expanding its activities to offer highly specialised and state-of-the-art training (e.g., on Health and Safety issues) to all Italian and foreign personnel interested in advanced industrial technology, thus laying the foundations for long-term achievements. The courses will be open to founding Members' Companies and all other interested organizations.

The Association is committed to promoting the Project over the years; its ambition is to create in the South of Italy a hub of technical culture and specialization not confined to national boundaries.



## BASIC TRAINING FOR WORKERS – (4 HOURS)

- Concepts of risk
- Legislative Decree no. 81/2008
- Damage
- Prevention
- Protection
- Organization of corporate prevention
- Rights, duties and penalties for the various corporate entities
- Supervision, control and assistance unit



## TRAINING FOR RESPONSIBLES – (8 HOURS)

- Corporate prevention system: duties, obligations, responsibilities
- Relationship between the various internal and external subjects of prevention system
- Definition and identification of risk factors
- Accidents and near miss
- Communication skills and awareness of workers, especially new hires, administered and foreign
- Risk assessment of the company, with particular reference to the context in which the responsible works
- Identification of technical, organizational and procedural prevention and protection





## SEVESO DIRECTIVE – (4 HOURS)

- Short historical analysis;
- Seveso Directive I – Presidential Decree 175/88
- First Ministry Decree of 31th March 1989
- Law of 19th May 1997, n. 137
- Seveso Directive II – Legislative Decree of 17th August 1999, n. 334
- Seveso Directive III – Legislative Decree of 21 September 2005, n. 238



## PES AND PAV – (16 HOURS)

### TECHNICAL NORMS ABOUT SAFETY OF ELECTRICAL WORKERS

- Legislative Decree 81/08, Title IV, Chapter I Article. 96 and Title III, Chapter III, Art. From 80 to 87;
- Legislative Decree, Title IV, Chapter II, Section II art. 117;
- Legislative Decree 81/08, Title I, Chapter I Article. 2-3, Title I, Chapter III, Art. 18-19-20, Title I, Chapter III, Section IV art. 36-37, Title III, Chapter II, Art. 75 to 78
- Legislative Decree 475/92 (IPRs related to electrical work) Legislative Decree no. 81/08 Title III, Chapter II art. from 74 to 79;
- Norm CEI EN 50110-1, EN 50110-2 and CEI 11-27 (excluding work under voltage);
- Selection of the equipment and PPE, CE marking, preservation of the same;
- Electric Arc and its effects;
- Effects on the human body due to electricity and knowledge of first aid;
- For your safety in the preparation of the work area.

### PRACTICAL KNOWLEDGE ABOUT ELECTRICAL WORK

- Preparation of work;
- Risk Assessment;
- Environmental conditions;
- A system for the transmission or exchange of information between people interested in the work;
- Coverage of specific roles:
- Definition, identification and delimitation of the workplace;
- Site preparation;
- Mastery in the execution of operational sequences in order to secure an electrical plant;
- Work in close proximity with the implementation of distance protection with security and surveillance;
- Work in close proximity with implementation of protection with the use of protective devices.

### THEORETICAL KNOWLEDGE TO WORK UNDER VOLTAGE

- Norm CEI EN 50110-1, Norm CEI EN 50110-2 and 11-27 (with regard to the work under voltage);
- General requirements for safety with regard to the characteristics of the electrical components on which we can intervene in the work under voltage;
- Equipment and PPE: Special work under voltage.



## RSPP MODULE A – (28 HOURS)

- Law and evolution of rules of safety at work
- From Legislative Decree n.626/94 to UNIC DECREE 81/08 related to Legislative Decree n.106/09
- Particular categories of works
- Technical standards
- Safety organization
- Subjects of the corporate system, obligations, duties, responsibilities
- Workers
- Public system of prevention
- Law 231 and safety at work
- Risk Evaluation
- RAD (Risk Assessment Document)
- Assessment of specific risks (part I)
- Assessment of specific risks (part II)
- Assessment of specific risks (part III)
- The impact and organizational application of risk assessment
- Final Test

## RSPP MODULO B3 – (60 HOURS)

### **MINERAL EXTRACTION - CONSTRUCTION - OTHER MINING INDUSTRIES**

(Legislative Decree 9 April 2008, no. Smi 81, Art. Agreement and State 32 Regions 01.26.06)

- Risk Assessment
- Risk Analysis (Part I): Risk arising from the organization of work
- Risk Analysis (Part II)
- Exercise
- Documents and emergencies
- Risk Factors in building activities
- Work on the construction site
- Noise
- Vibration
- Manual Handling of Loads e repetitive movements
- Chemical Risk
- Biohazards
- Emergency management
- Safe working
- Contract agreement or Work contract
- Safety management





## RSPP MODULO C – (24 HOURS)

- Management systems (part I)
- Organization and management systems (part II)
- The role of communication
- Psychosocial risk
- Ergonomical risk
- System of relations



## EXPLOSIVE ATMOSPHERES – ATEX (8 HOURS)

- Standard References:
- Annex XI, DM 03/08/2007;
- Two ATEX directives.
- Occurred Event;
- Characteristics of some potentially explosive substances;
- Approach before and after ATEX directive:
- Old approach;
- A new approach: the global approach.
- Directive 94/9/EC:
- Legislative and timing of implementation;
- Scope of application and imprisonment.
- The Annexes to Directive 94/9/EC:
- Categories and areas;
- NEHSR;
- Procedures for conformity assessment: certification of the equipment and production.
- Implementation of Directive 94/9/EC.



## PRESSURE EQUIPMENT – PED (8 HOURS)

- Introduction to the PED
- General basics
- Scope of application of the Legislative LGS N. 93/00 and Directive 97/23/EC (PED)
- Definition of pressure equipment
- Examples of pressure equipment subject to the PED, definitions and technical requirements of ART .3
- Examples of pressure equipment not subject to PED
- Free movement ART.4
- Presumption of conformity ART.5
- Committee of technical standards and regulations ART.6
- Committee “pressure equipment” ART.7



Container for Confined Spaces simulation – Assoil School Viggiano

## CONFINED SPACES AND HAZARDOUS POLLUTION – (16 HOURS)

- Definitions and types of confined spaces
- Legislation in force
- Risks related to confined spaces
- Work Permits
- Safety Procedures
- Personal Protective Equipment
- Specific Equipment: tripod, winches, safety harnesses
- Isolating respirators
- Procedures for emergency and recovery
- Analysis of the atmosphere (gas detection)





## WORK AT HEIGHT - (8 HOURS)

- Notes on the relevant legislation in force
- The fall from above as serious and unpredictable risk
- Risk assessment in work ( primarily – environmental – competitor risk )
- Notes on the safe arrest during the fall from the top
- The fall factor and the air draft
- The semi-static and dynamic ropes
- Use and maintenance of ropes
- Anchors in working with ropes
- Operational methods during working with ropes
- Elements for the security plan of work with ropes
- Teams of work, duties and responsibilities
- Work and tasks organization
- Illustration of the correct use of PPE
- Correct wearing and connection of PPE
- Installation of working and safety cables
- Protection of cables
- Access from above with output down
- Access from above with output up
- Access from the bottom with output down : methods, techniques and operational procedures
- Analysis and comments made about the collective practice
- Verification of learning



H2S Training Gallery – Assoil School Viggiano

## H2S SAFETY - (8 HOURS)

- Reference standards
- H2S-Safetyawareness
- Chemical - physical of H2S
- Concepts of behavior in environments polluted by toxic gas
- Personal protective equipment for toxic gas.
- Knowledge of First Aid related to intoxication H2S gas
- Mask with filter,
- EEBA: Emergency Escape Breathing Apparatus (equipment for escape)
- SCBA: Self Contained Breathing Apparatus (x emergency equipment)
- SABA: Supplied Air Breathing Apparatus (work equipment and escape)
- Sensors
- Air compressor for refilling bottle and charging techniques
- General instructions and emergency alarm





## HANDLING OF LOADS – (4 HOURS)

- Manual handling of loads: legislation in force;
- Structure of the spine;
- Examples of lifting
- Risks associated with incorrect manual handling of loads;
- Lifting of loads;
- Analytical assessment of the risk by NIOSH method;
- Prevention and protection of the spine;
- Mechanical aids;
- Ergonomics at the workplace;
- PPE



## FIRE FIGHTING (LOW RISK) – (4 HOURS)

### FIRE PREVENTION

- Basics of combustion
- Products of combustion
- Extinguishing agents in relation to the type of fire
- Effects of fire on man
- Prohibitions and limitations of exercise
- Behavioral measures

### FIRE PROTECTION AND PROCEDURES TO BE TAKEN IN CASE OF FIRE

- Major fire protection measures
- Evacuation in case of fire
- Call of relief

### PRACTICAL EXERCISES

- Knowledge and clarifications about portable fire extinguishers
- Instructions about use of portable fire extinguishers (with practical tests in use)





## **FIRE FIGHTING (MEDIUM RISK) - (8 HOURS)**

### **FIRE PREVENTION AND FIRE**

- Basics on the combustion and fire
- The extinguishing agent
- Triangle of combustion
- Risks to persons in case of fire
- Main measures and precautions to prevent fires

### **FIRE PROTECTION AND PROCEDURES TO BE TAKEN IN CASE OF FIRE**

- Main protective measures against fire
- Streets of exodus
- Procedures to be taken when you discover a fire or in case of alarm
- Procedures for evacuation
- Dealing with the Fire Fighters
- Equipment and extinguishing systems
- Alarm Systems
- Safety Signs
- Emergency Lighting

### **PRACTICAL EXERCICES**

- Explanations about the most common extinguishing agents
- Clarifications about personal protective equipment
- Tutorials on the use of portable fire extinguishers and how to use fire hoses and hydrants.



## **FIRE FIGHTING (HIGH RISK) – (16 HOURS)**

### **FIRE AND FIRE PREVENTION**

- Principles about the combustion
- Main causes of fire in relation to the specific working place;
- Extinguishing agent;
- Risk for people and environment;
- Specific measures for fire prevention; behavioral measures for prevention;
- Importance of the control of the workplace and of the audits and maintenance on fire-fighting place

### **FIRE PROTECTION**

- Measures of passive protection
- Safe exits , compartments , clearances
- Equipment and extinguishing systems
- Alarm Systems
- Signage , lighting and safety electrical plants

### **PROCEDURES TO BE TAKEN IN CASE OF FIRE**

- Steps to be taken when you discover a fire
- Steps to be taken in case of alarm
- Arrangements for evacuation
- How to call rescue services and collaboration with the firemen in case of intervention
- Exemplification of an operational emergency and procedural arrangements





## WELDERS - (230 HOURS)

- Description of the process
- Main applications
- Equipment
- Safety recommendations
- Final test



## WELDING INSPECTOR - (40 HOURS)

- Duties and responsibilities of a welding inspector;
- Process of fusion welding;
- Typical defects of welded materials;
- Different types of steel, low alloy and stainless steels;
- Hardening, welding and heating procedures;
- Defects of the base metal;
- Visual inspection;
- Testing of metals and welds;
- Destructive tests and techniques for non-destructive testing;
- Certification of welders and welding processes;
- Codes and international regulations;
- Procedures for working safely.



## NDT (NON DESTRUCTIVE TESTING) TRAINING COURSES

- Visual Testing – VT
- Radiographic Testing - RT
- Liquid Penetrant Testing– PT/DPT
- Magnetic Particle Testing – MPT/MT
- Ultrasonic Testing - UT



## FIRST AID – (16 HOURS)

### **Module A (6 hours)**

- Alert stand-rescue system
- Recognizing a medical emergency
- Implement first aid
- Knowledge of specific risks to the asset took place

### **Module B (4 hours)**

- Acquisitions and general knowledge about traumas in workplaces
- Acquisitions and general knowledge about specific diseases in workplaces

### **Module C (6 hours)**

- Acquisition of abilities for practical intervention
- Practical/ theoretical Test verified by medical staff





## FORK LIFT OPERATOR

- Workplace Safety and responsibility of the operator;
- Morphology of forklifts, laws and regulations;
- Risks of using;
- Safety systems, preliminary checks, periodic maintenance;
- The operator of the forklift, physical requirements, features, and clothing;
- Approval and scope with accessories;
- Unit load and stability;
- Center of gravity and load balancing;
- Driving safety;
- Good standards of behavior;
- Loading and unloading maneuvers safely.



## JUNIOR MUD ENGINEER – (80 HOURS)

- Drilling equipment
- Drilling Fluids Functions
- Viscosity calculation
- Clays chemistry
- Drilling Fluid Additives
- Polymers chemistry
- Water base and oil base muds
- Water base and oil base muds testing
- Engineer's job responsibilities





# TRAINING COURSE “SUPPORT ACTIVITIES FOR UPSTREAM OIL INDUSTRIES” (200 HOURS)

## **Health – Safety – Environment module**

Risk evaluation: basic concepts and methods (HAZOP, HAZID, LOPA, QRA).

Environmental technologies and Operations

Training course on: H2S, Confined Spaces, First Aid, and Firefighting

## **Overview of Petroleum and Natural Gas Chain**

Introduction to the Hydrocarbon Industry

Hydrocarbon geology and exploration activities

Principles of reservoir engineering

Drilling and completion techniques

Production phase

Maintenance

Outline of downstream activities

## **Asset integrity management system module**

Basics of Asset Management and Asset Integrity;

Asset Integrity throughout the asset lifecycle:

Human Factors;

Equipment integrity and NDT;

Risk Assessment;

Maintainability Analyses and Maintenance Plan;

Inspection & Monitoring Strategy Including Risk Based Inspection;

Positive impact of Asset Integrity Program (Case Study).

## **Maintenance process activities overview:**

Concepts, modeling and optimization of Maintenance as part of Asset Integrity Management;

Maintenance Strategies;

Activities planning and Budgeting;

Planned activities Scheduling;

Turnaround activities scheduling;

Planned/unplanned activities execution;

Turnaround activities execution;

Maintenance Engineering.

## **Internship.**





## QUANTITY SURVEYOR – (120 HOURS)

- Role and responsibilities of Quantity Surveyor
- Subcontract agreement
- Notes on law against mafia
- Work Progress Condition
- Electrical work
- Mechanical work
- Civil work
- Exercises
- Work risks
- Fire fighting – Medium risk
- First aid

Chiunque smetta di imparare è un vecchio, che abbia 20 anni o 80. Chi continua ad imparare, giorno dopo giorno, resta giovane. La cosa migliore da fare nella vita è mantenere la propria mente giovane ed aperta.





## TRAINING ON SPECIFIC RISKS - (16 HOURS)

- Chemical Risk
- Biohazard
- Electrical Risk
- Optical radiation risk
- Noise and vibration risk
- Microclimate risk



## TRAINING FOR TRAINERS - (24 HOURS)

- Fundamentals for becoming a trainer
- Running a training course
- Delivering a training session successfully
- How to write and structure training
- Factors for effective training skills
- What makes a good trainer?
- Effective training practice and procedure
- Body language and voice projection skills
- Classroom training versus one-to-one training



## Q-HSE SPECIALIST - (160 HOURS)

- Quality Area
- Health and Safety Area
- Environmental Area
- Project Work





## **BUDGETING AND MANAGEMENT CONTROL (24 HOURS)**

- Introduction
- Business plan and representative budget
- Set up of a clear and useful reporting system

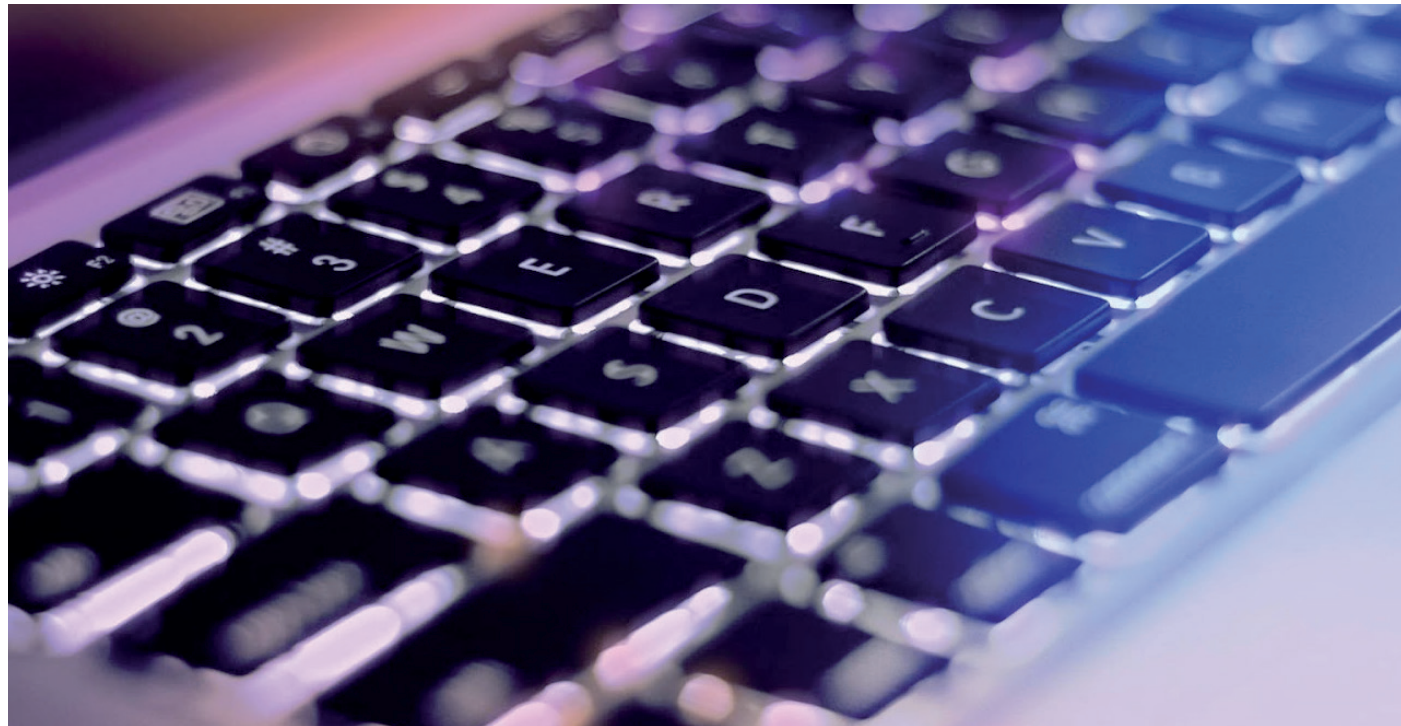
## **SCHEDULING AND COST CONTROL - (40 HOURS)**

- The context of fundamental
- How to assign and estimate the resources
- Scheduling - how to plan the timing
- Baselines
- Managing Change in the project
- Forecasting - evaluate and make predictions
- The exit strategy



## ENGLISH LANGUAGES COURSES

Different levels: from Beginners to Up-Intermediate



## INFORMATION TECHNOLOGY COURSES

Different Levels: from First to Expert User

In order to ensure quality services that meet the standards required by their customers, Assoil School has signed agreements with companies and organizations accredited to issue international certificates for the normed courses, particularly with Maersk H2S Safety Services Italy Srl, AIFOS (Italian Association of Trainers and Practitioners of Safety Work), Global Safety System Srl, CNAIForm and Lloyd's Register.

The lessons are taught by certified teachers; therefore, the teaching methods provide interactive lessons with moments of lectures, presentation of slides with video projector, practice tests and tutorials.





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