



• CERTIFICATION

• INSPECTION

• TRAINING



Office d'Ingénieurs pour la Recherche et le Développement

Etudes — Inspection — Bâtiment — Conseil — Expertise — Formation



INSPECTION



Inspection Catalog

Excellent
Good
Average

☒ ☐ ☐



Essais non Destructifs(END) Non Destructive Testing (NDT)



- Contrôle des équipements par la radiographie industrielle
- Recherche des défauts et mesure d'épaisseur par ultra sons
- L'examen des pièces par le ressuage
- L'examen des pièces par la magnétoscopie
- Les tests d'étanchéité par la ventouse
- Les examens métallurgiques (traction, dureté, macrographie, micrographie, analyse chimique)
- Le contrôle de la radioactivité.
- *Inspection of equipments by radiographic testing*
- *Research of defects and measure hickness by ultra testing*
- *Checking of devices by penetrant testing*
- *Checking of devices by magnetic testing*
- *Vacuum testing*
- *Metallurgical inspection (traction, hardness, macrograph, chemical analysis)*
- *Verification of the radioactivity.*

Essais non Destructifs(END) Non Destructive Testing (NDT)



Excellent
Good
Average



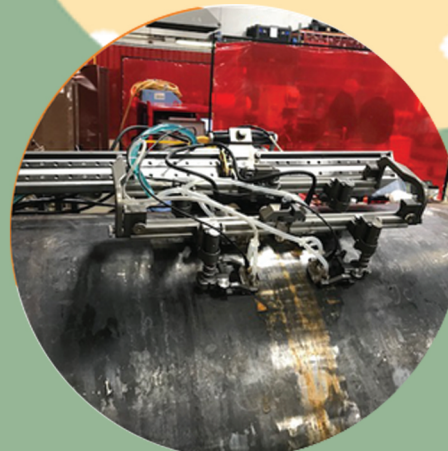


Habilitation ou Homologtion Spécialisée **Specialized Qualification or Certification**

- Qualification de soudeurs
- Qualification du mode opératoire de soudage
- Certification des conducteurs d'engin de levage
- *Welders Qualification*
- *Welding operation mode Qualification*
- *Lifting appliance drivers Certification*

Formation / Training

- Règlements, construction, conduite, exploitation et entretien des appareils à pression, de levage et d'installations électriques
- Initiation aux procédés de soudage
- Initiation aux procédés de revêtements industriels
- *Regulation, construction, driving, exploitation and maintenance of pressure equipments and lifting machines and electrical settings*
- *Introduction of welding methods*
- *Introduction of industrial paint covering methods*



INSPECTION OF THE FORKLIFT TRUCKS

OBJECTIVE OF THE INSPECTION SERVICE

Exam and engineering survey and study for the main elevators.

Contribution to person safety regarding possible risks linked to the use of elevator and linked lifting equipment.

CONTENTS OF THE INSPECTION

Contents

- Visual check of the state of conservation of accessible parts, without dismounting of the equipment, and if needed, of the track,
- The safety test,
- The periodic inspection,
- Write a report of all technical executed investigations



INSPECTION WROF THE LOADER CRANES, TOWER CRANES, MOBILE CRANES, OVERHEAD CRANE

OBJECTIVE OF THE INSPECTION SERVICE

Exam and engineering survey and study for the main elevators.

Contribution to person safety regarding possible risks linked to the use of elevator and linked lifting equipment.

CONTENTS OF THE INSPECTION

Contents

- Visual check of the state of conservation of accessible parts, without dismounting of the equipment, and if needed, of the track,
- The safety test,
- The periodic inspection,
- Write a report of all technical executed investigations



INSPECTION OF WORK ENGINE MACHINES

OBJECTIVE OF THE INSPECTION SERVICE

Exam and engineering survey and study for the main elevators.

Contribution to person safety regarding possible risks linked to the use of elevator and linked lifting equipment.

CONTENTS OF THE INSPECTION

- Make sure that there is no deterioration which might create a danger by carrying out:
 - a visual test of the physical state of equipment
 - an inspection of various parts of the equipment (state and functioning of means of control, functioning of the braking or stop devices with automatic or manual control) in the configuration without dismantling of the equipment
 - an inspection of adjustments and clearances (being a condition for safety)
 - an inspection of the functioning of indicators (measurement equipment, signalling devices)

As specified in regulatory texts, these inspections are limited to visible parts and accessible parts by dismantling of crankcases and bonnets

- Make sure when the equipment is built for lifting use, of the good functioning of the following devices :
 - load lowering device
 - load limiting and movement limiting devices of the lifting appliance
 - overturning moment or load limiting devices
- Write a report of all executed technical investigations



INSPECTION OF PRESSURE TANKS

CONTEXT

Any pressure vessel represents extreme potential danger due to the high pressure under which it operates. They frequently are the source of serious accidents due to explosions. Even non-dangerous gases and liquids, such as air and water, may become hazardous in the event of an accident involving high pressure equipment. The best way to safeguard your workers and property against the risks of such a disaster is to maintain a regular inspection schedule.

SOLUTION

What is Pressure Vessel Inspection?

Pressure Vessel Inspection involves a series of tests performed on pressure vessels to find critical weak points that could potentially lead to dangerous and uncontrollable reactions. ODIR has the expertise to assist at any stage in the life cycle of your equipment, from design through to in-service inspections and maintenance. During a regular inspection, our technicians carry out both an internal and external inspection of each pressure vessel to detect any problems of corrosion.

CONTENTS OF THE INSPECTION

- Internal Inspection
- Internal Imagery
- External Inspection
- Measuring the Thickness of Steel
- Pressure Accessories Inspection
- Documents Inspection
- Ultrasonic Thickness Examination
- Safety Accessory Device Checking
- Hydrostatic Test Function Of Regulatory Period
- Complementaires Remarks
- Conclusion



INSPECTION OF LIFTING TACKLES DURING THEIR FIRST USE OR RESTARTING

OBJECTIVE OF THE INSPECTION SERVICE

Contribution to person safety regarding possible risks linked to the use of lifting tackles

CONTENTS OF THE INSPECTION

- Check by a visual test the state of conservation of accessible parts, without dismounting of the tackle
- Carry out the static overload test of the tackle
- Write a report with all executed technical investigations





Training Catalog



FT/OD01 3 to 5 DAYS
Forklift trucks drivers,
novice or advanced

Teaching objectives

To be able to apply the safety regulations relevant to the position of forklift truck driver to theoretical and practical aspects.

Personnel affected and pre-requisites

Any person with experience in driving forklift trucks.

Teaching

Theoretical ; spent partially in a training room (presentation, questions and exercises) and while driving on the relevant forklift trucks.

Programmes

1/Theoretical training

- Duty and responsibilities of forklift truck drivers.
- Regulatory context.
- Driving and parking safety rules.
- Technology of forklift trucks:
- various categories of forklifts trucks,
- functional specificities,
- safety devices,
- elements of the hydraulic system,
- load capacity,
- stability conditions,
- routine check-up and maintenance before and after using the equipment.

2/ Practical Training

- Routine procedures upon starting work.
- Circulation the equipment, loaded or empty.
- Lifting and lowering down of loads.
- Storage and de-stocking at various rack levels.
- Stacking and un-stacking.
- Loading and unloading a vehicle.
- Handling operations with various types of loads.
- Procedures upon finishing work..

3/Examination

- Test of knowledge and competencies of each trainee.
- Trainees will have to wear working overall, safety gloves and safety boots

Note: a renewal / refresher course is recommended every 3 years.

Training validation

Attendance certificate.

SS/OD02 1 DAY
Slinging - Simple
slinging
practice

Teaching objectives Training employees to perform repetitive slinging operations and evaluating their knowledge and competencies in order to ensure that this training can be followed up by the company manager.

Personnel affected and pre-requisites

Each person must be able to use slings and lifting equipment for slinging operations.

Programmes

1/ Theoretical training

Responsibilities of slingers.
Characteristics of the load and its environment.
Main lifting equipment.
Constraints linked to slinging mode.
Risks linked to the load handling.
Choice of sling equipment.

2/ Practice with equipment

Control of slings and equipment before use.
Simple slinging practice in the company.
Trainees must wear overalls, safety boots, gloves and a helmet (in accordance with each company).

Training validation

Attendance certificate.

LC/OD03 2 to 5 days
Loader cranes, novice and off-shore operators

Teaching objectives

At the end of this training course, participants will be able to drive a mobile crane in accordance with safety regulations.

Personnel affected and pre-requisites
Anyone with little or no experience in driving loader cranes

Teaching

Theoretical training (presentations, questions and exercises) and practice on the corresponding type of device. For those who wish to obtain a Belgian and Dutch SNUG. Certificate of equivalence: a minimum of 3 years' experience in the job is required.

Programmes

1/ Theoretical Training

The work of crane driver/operator: responsibilities.

Technology :

- Terminology, characteristics and technologies of mobile cranes: structure, mechanisms (engines, brakes), cables, controls, safety devices.
 - Stability and nature of loads, distribution of forces, notion of centre of gravity,
 - Principle of hoisting.
 - Slinging angle, influence of angles.
 - Elementary notions of mechanics, hydraulics, electricity.
 - Technology of equipment and accessories for load lifting (slings, straps, hooks, shackles, crosspieces).
- Rules for driving and use :**
- Conditions to be fulfilled to ascertain stability of loader cranes: constraints relating to cantilevered equipment, environment, weather constraints, knowledge and reading of load tables.
 - Routine check-up before and after vehicle use.
 - Conventional gestures and command.
 - Safety rules of loader cranes.
 - Safety rules on site.

2/ Practical Training

- Routine procedures upon starting and finishing work.
- Formalizing results from daily examinations.
- Lifting, shifting and dropping loads.
- Complicated movements with or without a load.
- Handling various loads (long pieces).
- Displacement of loads between markers.
- Control of slack.
- Current maintenance work on the mobile cranes.

3/ Examination

- Test of every trainee's knowledge and skills.

Note : a renewal / refresher course is recommended every 3 years.

Training validation

Attendance certificate.



TC/OD04 3 to 5 DAYS
Tower crane drivers,
novice or advanced

Teaching objectives

To improve tower crane driving (ground or cabin control) and evaluate knowledge and skills.

Personnel affected and pre-requisites

All people meeting the medical pre-requisites.

Teaching

Theoretical training (presentation, questions and exercises) and practice on the corresponding type of device.

Programmes

1/ Theoretical training

- Responsibilities.
- Regulations.
- Knowledge of the material being used.
- Driving techniques.
- Risks relating to the use of an tower crane.
- Hoisting load characteristics.
- Main accessories.
- Slings modes.
- Risks relating to the load handling.

2/ Practice training

- Description of the devices being used.
- Daily checks.
- Different movements with or without loads.
- Load balance exercises.
- Precise movement on a marked course.
- Moving and positioning heavy loads.
- Load slinging.

3/ Evaluation

Test of each trainee's knowledge and skills.

Trainees must wear overall, safety boots, gloves and a helmet (accordance with each company).

Note : a renewal / refresher course is recommended every 3 years.

Training validation

Attendance certificate.

MC/OD05 5 to 11 days
Mobil cranes, novice and off -
shore operators

Teaching objectives

At the end of this training course, participants will be able to drive a mobile crane in accordance with safety regulations.

Personnel affected and pre-requisites

Anyone with little or no experience in driving mobil cranes

Teaching

Theoretical training (presentations, questions and exercises) and practice on the corresponding type of device. For those who wish to obtain a Belgian and Dutch SNUG. Certificate of equivalence: a minimum of 3 years' experience in the job is required.

Programmes

1/ Theoretical Training

The work of crane driver/operator: responsibilities.

Technology :

- Terminology, characteristics and technologies of mobile cranes: structure, mechanisms (engines, brakes), cables, controls, safety devices.
- Stability and nature of loads, distribution of forces, notion of centre of gravity.
- Principle of hoisting.
- Slinging angle, influence of angles.
- Elementary notions of mechanics, hydraulics, electricity.
- Technology of equipment and accessories for load lifting (slings, straps, hooks, shackles, crosspieces).

Rules for driving and use :

- Conditions to be fulfilled to ascertain stability of mobil cranes: constraints relating to cantilevered equipment, environment, weather constraints, knowledge and reading of load tables.
- Routine check-up before and after vehicle use.
- Conventional gestures and command.
- Safety rules of loader cranes.
- Safety rules on site.

2/ Practical Training

- Routine procedures upon starting and finishing work.
- Formalizing results from daily examinations.
- Lifting, shifting and dropping loads.
- Complicated movements with or without a load.
- Handling various loads (long pieces).
- Displacement of loads between markers.
- Control of slack.
- Current maintenance work on the mobile cranes.

3/ Examination

- Test of every trainee's knowledge and skills.

Note : a renewal / refresher course is recommended every 3 years.

Training validation

Attendance certificate.



ES/OD06 2 DAYS

Electrical safety for non-electricians

Teaching objectives

To be able to safely perform non-electrical tasks within electrical areas or premises, in accordance with electrical standards and / or codes of good practice.

Personnel affected and pre-requisites

Non-electrician personnel working around electrical areas.

Teaching

Theoretical and practical training with on-site group exercises.

Programmes

- Theoretical training.
- Producing and distributing electrical energy.
- Accidents and risk analysis.
- Dangers of electricity.
- Behaviour in of the event of an ac-cident.
- Responsibilities.
- Electrical licence.
- Protection devices.
- Portable equipment.
- Individual knowledge test. Workshop
- Visit of the trainee network and facilities
- Risk (electrical) assessment.
- Company safety procedure.

Training validation

After training, a validation certificate will be issued and sent to the employer. Attendance certificate.

Note : a renewal / refresher course is recommended every 3 years.

ES/OD07 3 DAYS

Electrical safety for electricians

Teaching objectives

Upon completing the course, trainees will be able to safely carry out operations on low- and high- voltage electrical equipment and installations.

Personnel affected and pre-requisites

Electricians with responsibility for work, breakdowns and other operations carried out on low- and high- voltage electrical equipment and installations.

Teaching

Theoretical and practical training with on-site exercises in groups.

Programmes

- High-lights
- Dangers of electricity.
- Voltages ranges and Electrical danger zones / areas.
- Insulation and work on disconnected low- or high- voltage installations.
- Work carried out near to exposed low-or high- voltage parts.
- Low- and high- voltage operations.
- Functions of standard electrical equipment.
- Safety equipment and tools.
- Safety during operations.
- Portable electrical appliances.
- Measures to be taken in the event of an accident due to an electrical hazard.
- Practical training
 - Practical training on-site at the trainee's workplace using real work situations ; risk assessment.
 - Study and application of general safety procedures and company specific safety rules.
- Final test

Note: a renewal / refresher course is recommended every 3 years.

Training validation

After the training programme is completed, an validation certificate will be issued and sent to the employer.

Attendance certificate.

ES/OD08 2 DAYS

erecting scaffolding

Teaching objectives

To be aware of :

- the regulation relating to scaffolding,
- the rules relating to erecting scaffolding,
- the risks and how to minimize them,
- the instruction manual.

Personnel affected and pre-requisites

Any person involved in erecting or using scaffolding

Teaching

Classroom and practical workshop.

Programmes

- Various types of scaffolding.
- Responsibilities.
- Preparing to erect.
- Checking the components before assembly.
- Safety while erecting
- Stability.
- Floor, guard rail units.
- Inspections and reports.
- Using the scaffolding.
- Protecting the public.
- Dismantling the scaffolding. Evaluation
 - Test of each trainee's knowledge and competencies.
- Trainees will have to wear an overall, helmet, safety gloves, shoes and harnesses.

Training validation

Attendance certificate.



HWS/OD09 2 DAYS hEIGHT WORKS Safety

Teaching objectives

To be able to:

- identify and evaluate the falls from, works at height risks, according to the workplace and the nature of the work to be performed,
- recognize the safety measures to be taken regarding access, working at height,
- recognize and choose protection means (personal and collective),
- use safety harnesses when required.

Personnel affected and pre-requisites

Any person who, as part of their job, may work occasionally or permanently at height.

Teaching

Classroom and practice exercises.

Programmes

- Working at height.
 - Accident prevention.
 - Responsibilities.
 - Collective means of protection
 - Individual means of protection
 - Choice of protection.
 - Stoppers, absorbers, anchors points, harnesses.
 - Consequences of a fall.
- Practical exercise with the company's equipment.
- Evaluation.
- Test of knowledge and competencies of each trainee.
- Trainees will have to wear an overall, helmet, safety gloves, shoes and harnesses.

Training validation

Attendance certificate.

OCD/OD10 3 DAYS Overhead crane drivers, novice or advanced

Teaching objectives

To improve overhead crane driving (ground or cabin control) and evaluate knowledge and skills.

Personnel affected and pre-requisites

All people meeting the medical pre-requisites.

Teaching

Theoretical training (presentation, questions and exercises) and practice on the corresponding type of device.

Programmes

1/ Theoretical training

- Responsibilities.
- Regulations.
- Knowledge of the material being used.
- Driving techniques.
- Risks relating to the use of an overhead crane.
- Hoisting load characteristics.
- Main accessories.
- Sliding modes.
- Risks relating to the load handling.

2/ Practice training

- Description of the devices being used.
- Daily checks.
- Different movements with or without loads.
- Load balance exercises.
- Precise movement on a marked course.
- Moving and positioning heavy loads.
- Load slinging.

3/ Evaluation

Test of each trainee's knowledge and skills.

Trainees must wear overall, safety boots, gloves and a helmet (accordance with each company).

Note : a renewal / refresher course is recommended every 3 years.

Training validation

Attendance certificate.

AWP/OD11 3 DAYS Aerial work platform (AWP) - novice and ad-

vanced users

Teaching objectives

At the end of this training course, participants will be able to operate an Aerial Work Platform (AWP) in accordance with safety regulations.

Personnel affected and pre-requisites

Any user of an AWP.

Teaching

Theoretical training (presentation, questions and exercises) and driving the corresponding types of AWP.

Programmes

1) Theoretical training

- Working at height,
- Regulations,
- Description and classification of an AWP,
- Who can drive an AWP,
- Handling an AWP,
- After using an AWP,
- Choice of AWP and examination of the equipment according to the work to be done

2) Practical training

Check-up:

- Visual control of the AWP.
- Correct functioning of the safety devices.

Positioning :

- Recognizing of the environment,
- Practical use of the equipment,
- Conventional gestures and commands.

On-site:

- Driving exercises with increasing difficulty adapted to the category of the AWP being used.
- Safety and repairing handlings.
- Carry out exercises.

3) Evaluation

Test of each trainee's knowledge and skills

Note : a renewal / refresher course is recommended every 3 years

Training validation

Attendance certificate.



FA/OD12 1 DAYS

Fire awareness

Teaching objectives

To be able to intervene quickly and efficiently upon the outbreak of fire.

Personnel affected and pre-requisites

Personnel in administrative or industrial establishments likely to initiate immediate response to a fire in the company.

Teaching

Participative and active learning, by studying real situations in a group and performing practical exercises. Number of trainees per session, limited to 6 persons.

Programmes

- Formal instruction.
- Basic mechanisms of combustion.
- The combustion of gas, liquid and solid bodies.
- The effects of combustion.
- The classification of fires.
- Methods and mechanisms of extinguishing a fire.
- Extinguishing agents and how to use them.
- Extinguishing means and their characteristics.
- Practical instruction.
- Extinguishing fires with extinguishers (class A, class B, composite fire).
- Extinguishing gas fires in liquid phase and gas phase without an extinguisher.
- Setting up Fire Hose Cabinets.
- Assessment of the training.

Training validation

Attendance certificate.

PR/OD13 2 DAYS

Personnel protective equipment at work (PPE)

Teaching objectives

To be able to:

- identify risks,
- choose PPE in accordance with the risk and regulation requirements,
- identify and understand the standard marking on PPE,
- comply with training and control requirements.

Personnel affected and pre-requisites

Users, buyers, providers of PPE.

Teaching

Lecture and demonstration by experienced trainers specializing in risk management.

Programmes

- Regulation requirements.
- Responsibilities.
- Assessing suitable PPE.
- CE Marking and other regulations.
- Different types of PPE.
- Protecting :
 - Eyes.
 - Head.
 - Breathing.
 - Body.
 - Hands and arms.
 - Feet and legs.
- Training.
- Maintenance.

Training validation

Attendance certificate.



PR/BW90 2 DAYS

Heavy goods vehicle driving - Defensive driving

Teaching objectives

To be able to:

- master the vehicle,
- master particular driving and traffic conditions,
- adopt a responsible attitude when driving.

Personnel affected and pre-requisites

Heavy goods vehicle drivers.

Teaching

Presentation and debates tousing to figures and diagrams, practical training and theoretical training.

Programmes

The entire training course will be organized according to SMITH method principles.

Driving and methodology :

- Urban environment.
- Semi-urban environment.
- On an asphalt road surface.
- On a dust track.
- On snow.
- Rainy weather.
- Night driving.

Particular operations: (basic mechani-cal principles)

- punctures,
- heavy goods vehicle technology,
- vehicle break-downs,

Vehicle burn : origin

Daily inspections of the vehicle.

Training validation

Attendance certificate.

PR/CW03 2 DAYS

Risk assessment

Practical guidance on identifying, recording and, evaluating risks in the workplace

Teaching objectives

To be able to:

- identify hazards,
- detect who might be harmed and how,
- evaluate risks and decide whether the existing precautions are adequate or whether more should be done,
- record findings,
- review one's own assessments and revise them if necessary.

Personnel affected and pre-requisites

Employers and employees concerned by risk assessment.

Teaching

Theoretical and practical training with on-site visits.

Programmes

- Vocabulary (danger, hazards, risk frequency, risk evaluation).
- Risk identification.
- Risk mitigation.
- Feed back and best practice.
- Eliminating risk.
- Controlling risks.
- Suitable and sufficient records.
- HSE Risk management (OHSAS 18001, ILO OSH 001, MASE...).

Training validation

Attendance certificate.



Nous ont déjà fait confiance :

SOMISY, Mali

SOMILO, Mali

DCS, Mali

EGIF, Mali

EBF, Mali

SAPROCHIM, Bamako Mali

EUROLAIT, Bamako Mali

Ecolog , Bamako Mali

Ecolog, Gao Mali

GMS, Loulou Mali

EMBALMALI, Bamako Mali

FILTISAC, Abidjan

Société de Cimenterie, Abidjan

SOGEF, Abidjan

SICABLE, Abidjan

EUROLAI, Abidjan

NESTLE, Abidjan

CALLIVOIRE, Abidjan

SOGEA-SATOM, Conakry

TOTAL, Burkina Faso

SONABEL, Burkina Faso



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