

POTAIN®

by **Manitowoc**

TRAINING COURSE 2021

Tower cranes – European range

Saint Pierre de Chandieu - France

Yes! We Care

09/2020



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Tools available

Equipment available:

- 5 cranes: IGO 50, IGO T 85 on translation, HUP 32-27, MDT 269, MDT 219,
- 2 lifts: TCL, Cab'IN,
- 1 showroom with 9 technical training benches,
- 1 tower crane driving simulator,
- 5 dedicated classrooms.

Languages spoken:

- French, English, German (limited).
- Other languages with interpreters
- Other languages available at local sites.

Certifications:

- ISQ-OPQF Approved
- DataDock approved.
- Member of ASSOCCA (Association of Certified Organizations CACES [Certification of the Ability to Safely Drive Machines]®)
- Referenced with the Caisse des Depots for the CPF support of the CACES®
- Procedures for QUALIOPi approval in progress
- SUVA Approved Center (for CACES equivalence® in Switzerland)



Costs:

Training costs are noted on each program. Hotels, meal costs and transport are not included and remain your full responsibility.

Equipment:

All our training involves outdoor exercises. Please inform your trainees that they must take their PPE (personal protective equipment), namely: Helmet with chinstrap, safety shoes, high visibility clothing, gloves, and safety harness, eyeglasses, ear plugs for certain specific stages.

Shorts, T-shirts and open shoes are not accepted for training. Long sleeves are mandatory for all troubleshooting stages.

Contact us:

Email address: cdf@manitowoc.com

Training location:

Parc d'activités des Portes du Dauphiné

5 rue Lavoisier

69780 Saint Pierre de Chandieu (close to the airport in Lyon) - FRANCE

04 69 85 92 20

Training center's team presentation

The permanent team of Saint Pierre de Chandieu (Center of Excellence for Training) :

Technical and Driving



Antonio



Christophe



Emmanuel



Sophie



Louis

Manager / Planning / Apprenticeship

Technical and Erection



Didier



Fabrice

Technical and Trouble shooting



Peter



Olivier

Digital



Jean-Jacques

Some of our training can be done on the customer site, if the number of trainees and the means permit.

Feel free to ask for further information if you are interested.

Local training centers :



A team of satellite-operation trainers is available to meet your needs in the different regions.

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Fitting

GMA Fitter

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| | | |
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GMA Beginner Technician Course

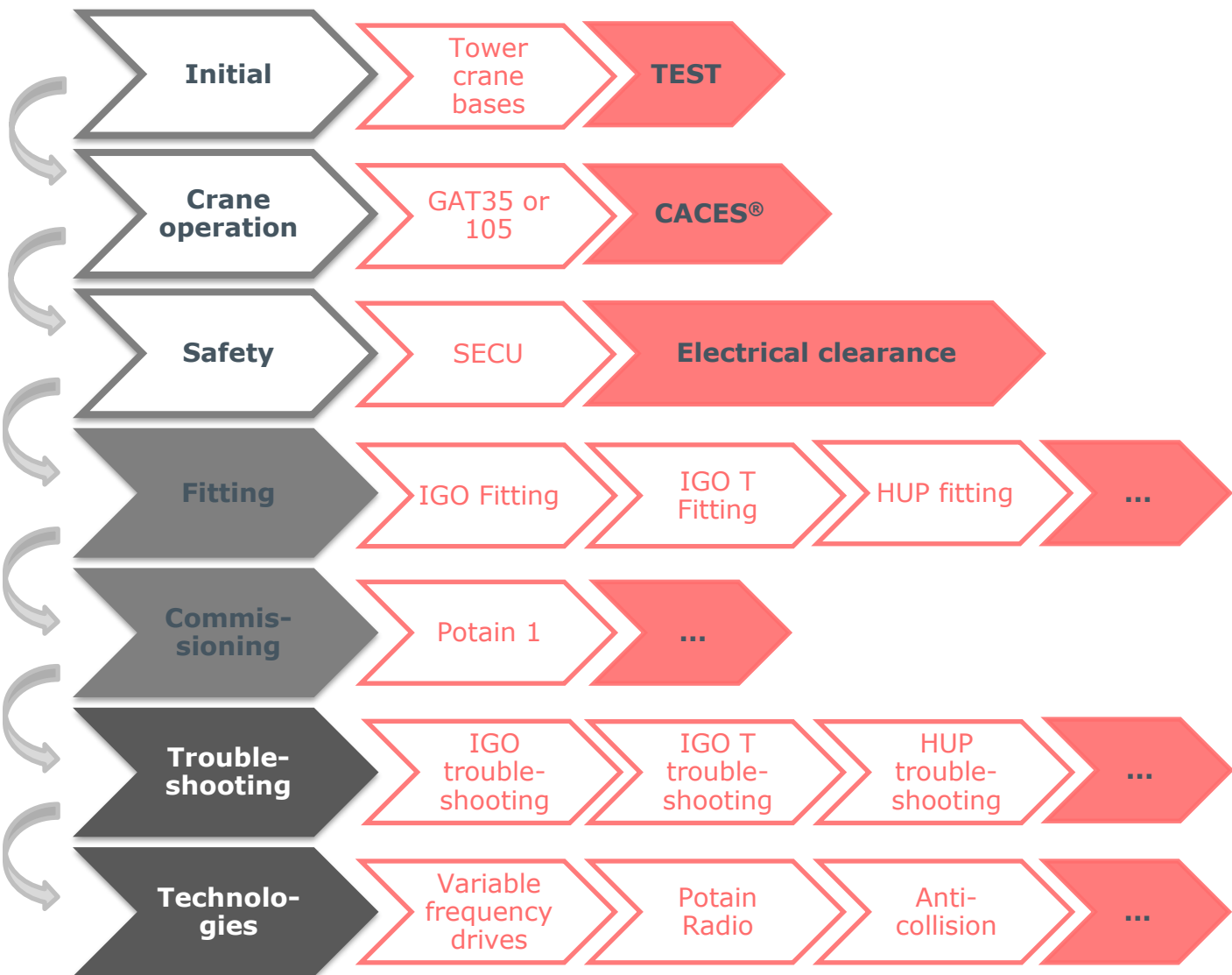
The proposed course must be adapted to each technician according to your crane fleet and his trade (fitter or serviceman).

The first 3 steps are common to all trades.

For the fitters, the troubleshooting and technology steps are not necessary but can be used later to increase skills.

For servicemen, fitting training is strongly recommended.

Electrical clearance is required for the majority of troubleshooting training. It must be performed in an organization specializing in this type of training.



GME Beginner Technician Course

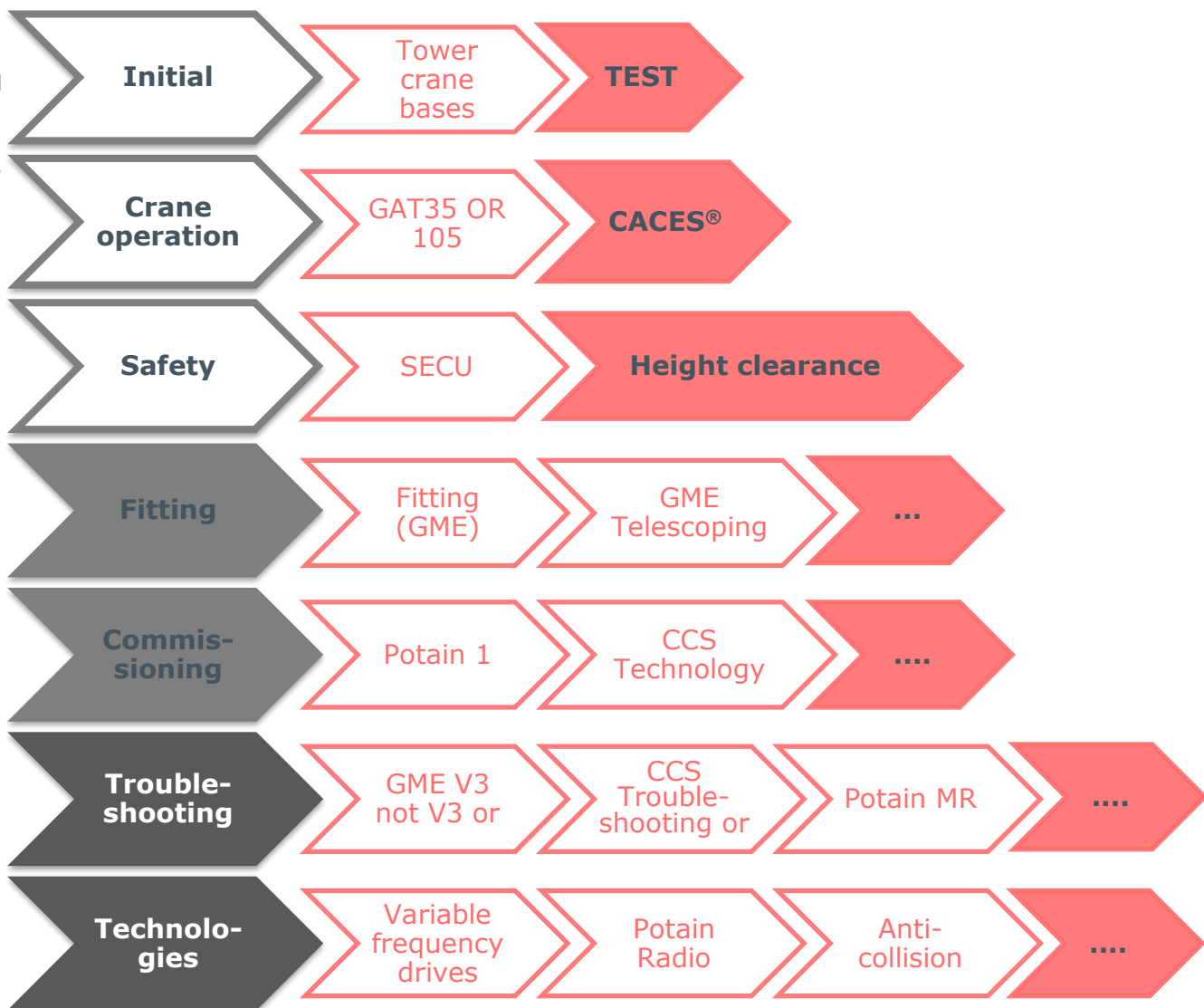
The proposed course must be adapted to each technician according to your crane fleet and his trade (fitter or serviceman).

The first 3 steps are common to all trades.

For the fitters, the troubleshooting and technology steps are not necessary but can be used later to increase skills.

For servicemen, fitting training is strongly recommended.

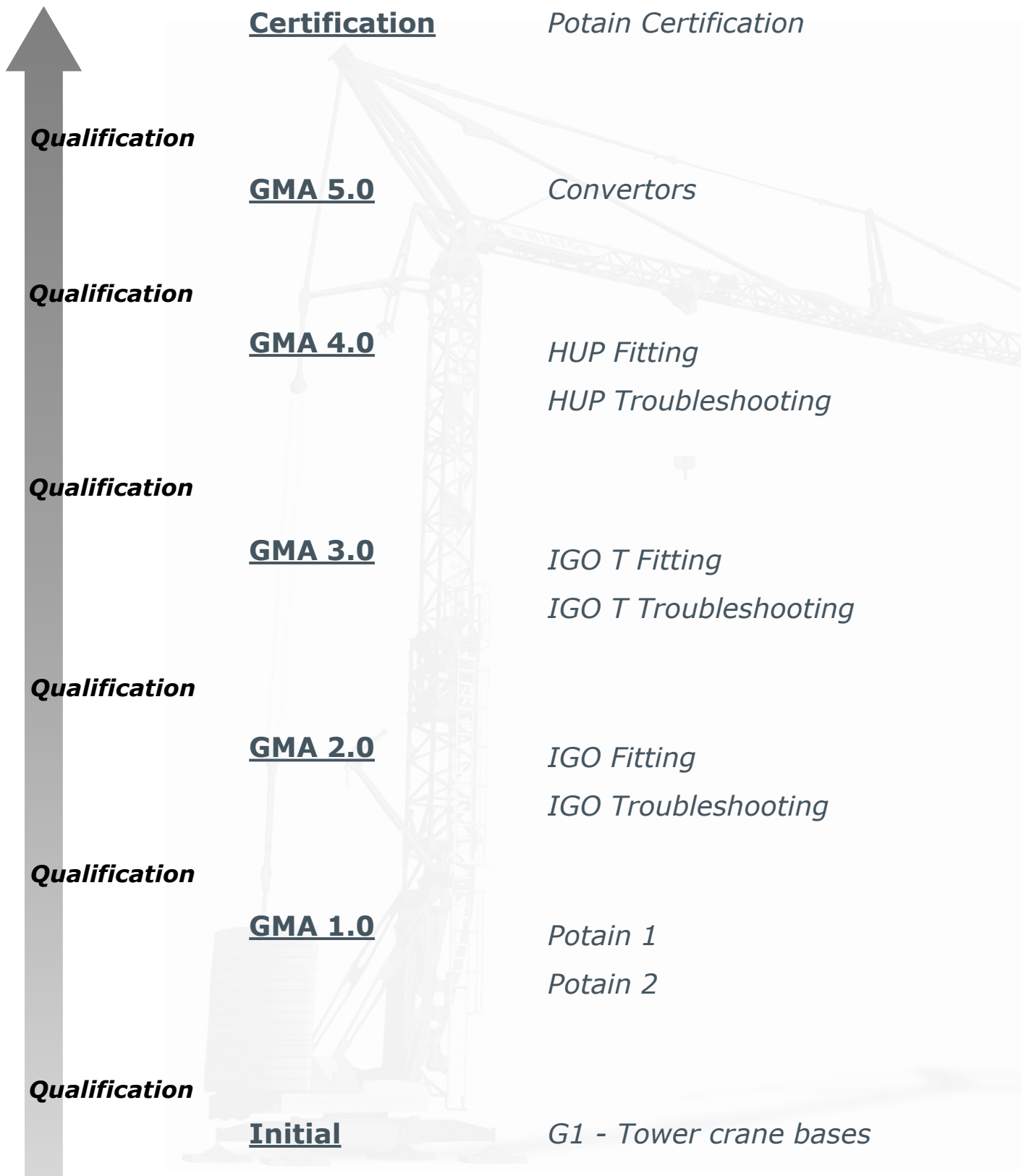
Electrical clearance is required for the majority of troubleshooting training. It must be performed in an organization specializing in this type of training.



Training for GMA Technician Specialist Dealer

GMA Course for referent technician who wants to reach the Potain certification

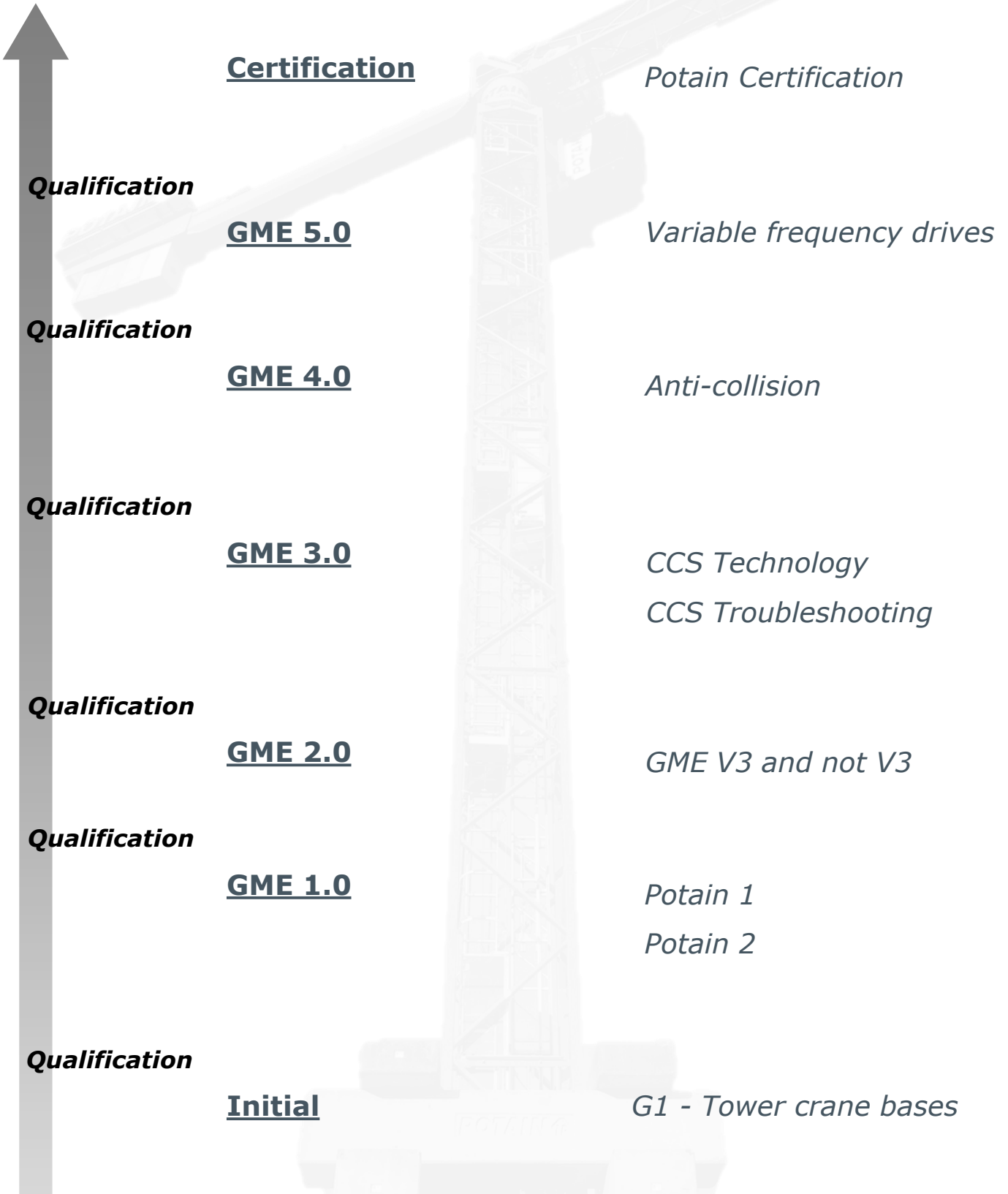
Before passing a level, the final evaluation of the previous level must be validated, thus acquiring the intermediate qualifications.



Course for GME Technician Specialist Dealer

GME Course for technician specialist who wants to reach the Potain certification

Before passing a level, the final evaluation of the previous level must be validated, thus acquiring the intermediate qualifications.



Training equivalencies at MANITOWOC

| St Pierre de Chandieu (France) | Langelfeld (Germany) | Shady Grove (USA) |
|--------------------------------------|---|-------------------------------------|
| Bases | Grundlagen | Basis |
| TP1 : Découverte produit | DC2 | |
| G1 : Bases Grues à tour | DC2 | |
| GAT105 : Formation initiale CACES® | | |
| GAT 35 : Rappels + CACES® | | |
| GAT 21 : Renouvellement CACES® | | |
| SECU : Sécurité, travail en hauteur | | |
| E.S. GAT : Elingage et signalisation | | |
| Potain 1 | | |
| | DT1: Electric Bases | |
| Montage | Fitting | Fitting |
| GMA | | |
| IGO Montage | DM IGO | |
| IGO T Montage | DM IGO T | IGO T70/85/130 EOD |
| Nouvelle IGO T Montage | | |
| HUP Montage | DM HUP | HUP 32-27 / 40-30 EOD |
| HUP M Montage | DM HUP M | |
| HUP C Montage | | |
| | DM HD, GTMR, HDT: fitting the old cranes | |
| GME | | |
| GME Montage MD/MDT | DM GME (series "8") | GME Fitting and Dismantling MDT 219 |
| Cab'IN | | |
| Technologies CCS | DM GME CCS1 | CCS 1&2 - Setup & commission |
| GME Téléscopage | | GME MDT219 Telescoping |
| Potain MRH | | |
| Potain MR (MR 90 C à MR 298) | | |
| Potain MR CCT (MR 418/608/618) | | |
| Dépannage | Fehlerbehebung | Trouble shooting |
| Potain 2 | POTAIN 1+2 | |
| GMA | | |
| IGO Dépannage | DTVF IGO | |
| IGO T Dépannage | DTVF IGO T | |
| Nouvelle IGO T Dépannage | | |
| HUP Dépannage | DTVF HUP | |
| HUP M Dépannage | DTVF HUP M | |
| HUP C Dépannage | | |
| GME | | |
| GME V3 et non V3 | DTVF GME ohne V3/mit V3 | |
| Cab'IN | | |
| Dépannage CCS | DT GME CCS2 | CCS 1&2 - Setup & commission |
| CCS Update & HPL | | CCS 3: Program SCT,CCT, Thumb drive |
| Variateurs | | |
| Inspection | | |
| Potain Certification | | |
| Outils connexes | Administration | Tools |
| Anti-collision | | |
| Potain Radio | DT Funkernsteuerungen | |
| Stabilité et reactions | | |
| GTL,GWX, GPX3, Potain e-tech | DA Admin | |
| Maintenance E-learning | DTVF Maintenance | |
| | TOP TRACING | |

BASICS

| Training | Description | Pages |
|-----------------|---|--------------|
| TP1 | Introduction to the products for support services | 13 |
| G1 | Tower Cranes - European Range | 14 |
| SECU | Safety, working at heights | 15 |
| E.S. GAT | Slinging and Signaling | 16 |
| Potain 1 | Commissioning of the Potain GME/GMA brand | 17 |

TP1: Introduction of the tower crane **POTAIN**

in 4 or 7 hours – Initiation for the support services

by **Manitowoc**

Objectives:

- Acquire general knowledge regarding tower crane technology,
- Describe the operation of a tower crane,
- Use the technical vocabulary for cranes,
- Identify a crane in the Manitowoc range.

Program:

THEORY (for Formula 4 or 7 hours)

- Overview of the GME & GMA tower crane product, history, changes,
- The range,
- The conditions of use,
- Safety devices,
- Mechanisms,
- Peripherals,
- New technologies.

PRACTICAL (for only 7 hours)

- Driving a GME from the cab (subject to medical fitness),
- Driving a GMA with a radio control on the ground.

Teaching methods:

- Detailed presentations,
- Studies and practical exercises,
- Audiovisual and teaching materials,
- Documentation supplied.

Prerequisite:

- For personnel needing knowledge of products to carry out their professional missions as a support service.
- Be declared fit to work by the occupational health doctor.
- PPE: Safety shoes, helmet, high visibility clothing (only if the crane is erected).

Duration:

- 0.5 day - 4 hours
- 1 day - 7 hours

Number of participants:

8 participants



Trainers/contacts:

- C. PRELY Technical Trainer
- A. DOS SANTOS Technical Trainer
- E. KIRCHNER Training manager

Equipment:

- Dedicated classrooms,
- 5 tower cranes, 2 GME and 3 GMA: IGO 50, IGO T 85, HUP32-27, MDT 219 and MDT 269,
- Training benches

Place:

- 5 rue Lavoisier, 69780 St Pierre de Chandieu

Accreditation of learning:

- Checking of knowledge through multimedia testing,
- Issuance of a certificate of participation.

Confirmation of the registration:

- Order form duly filled in with the stamp of the responsible institution.
- Current medical visit or proof of detention.

Cost:

- Price of the course per person:
 - 4 hours: **€232** excl. VAT
 - 7 hours: **€406** excl. VAT
- Meal package: **€17** excl. VAT

Objectives:

- Operate the tower crane product: Understanding tower crane technology, observing the safety rules for the installation and operation of the GME and GMA crane types.
- Update knowledge of technical innovations related to tower crane mechanisms and structures and knowledge related to "tower crane" regulations.

Program:

THEORY

- Tower crane range: GME/GMA.
- Stability,
- Load curves,
- Safety features,
- Driving aids,
- Mechanisms,
- Anti-collision.

PRACTICE

- Installation and operation of a crane,
- Presentation of new products,
- Technical tour of a GMA and/or GME,
- Tour of POTAIN production units.

Teaching methods:

- Detailed presentations,
- Studies and practical exercises,
- Audiovisual and teachings support, materials,

Prerequisite:

- Main people working as responsible for materials, prevention, job drivers, foremen, technical support services.
- Be declared fit to work by the occupational health doctor.
- PPE: Safety shoes, helmet, high-visibility clothing (if the crane is only climbing).

Duration:

4 days - 28 hours spread over 5 days

Number of participants:

8 participants



Trainers/contacts:

- | | |
|-----------------|-------------------|
| • C. PRELY | Technical Trainer |
| • A. DOS SANTOS | Technical Trainer |
| • E. KIRCHNER | Training manager |

Equipment:

- Dedicated classrooms,
- 5 tower cranes, 2 GME and 3 GMA: IGO 50, IGO T 85, HUP32-27, MDT 219 and MDT 269,
- Factory visit if conditions permit

Place:

- 5 rue Lavoisier, 69780 St Pierre de Chandieu

Accreditation of learning:

- Checking of knowledge through multimedia testing,
- Issuance of a certificate of participation.

Confirmation of the registration:

- Order form duly filled in with the stamp of the responsible institution.
- Current medical visit or proof of detention.

Cost:

- Price of the course per person: **€1,624** excl. VAT
- Meal package: **€85** excl. VAT

Objectives:

- Acquire the theoretical knowledge needed to intervene safely on tower cranes,
- Safely apply the operation procedure.

Program:

THEORY

- Characteristics of ranges, names and vocabulary, installations, fitting principles, access,
- Load curves: Principles, rope reeving, diagrams, etc.
- Stability: Concept of moment, reaction in and out of service,
- Safety devices: Recognition, situation, operation,
- Wind legislation, checking, training.

PRACTICE

- Driver's stand, driving aids, environment, commissioning and out-of-service procedures,
- Rules and techniques for slinging, gestures and sound signals for guiding maneuvers,
- Working safely: Risk analysis and accident statistics, PPE, checks, use a safety harness, practical exercises for movement and postures at height for personal protection,
- Use of technical manuals, online access and consultation, routine maintenance and frequency.

Prerequisite:

- Main persons who intervene on tower cranes (fitters, technicians, inspectors).
- Be declared fit to work by the occupational health doctor.
- PPE: Safety shoes, helmet, high-visibility clothing, safety harness.

Duration:

2 Days - 14 hours

Number of participants:

4 participants minimum, 6 maximum



Trainers/contacts:

- | | |
|----------------|-------------------|
| • D. FOREST | Technical Trainer |
| • F. NAUMOWICZ | Technical Trainer |
| • E. KIRCHNER | Training manager |

Teaching methods:

- Detailed presentations,
- Audiovisual and teaching materials,
- Documentation supplied,
- Practice on a crane.

Equipment:

- Dedicated classrooms,
- 5 tower cranes, 2 GME and 3 GMA: IGO 50, IGO T 85, HUP32-27, MDT 219 and MDT 269,
- Dedicated training benches,
- Mechanisms in the workshop.

Place:

- 5 rue Lavoisier, 69780 St Pierre de Chandieu

Accreditation of learning:

- Checking of knowledge through multimedia testing,
- Issuance of a certificate of participation.

Confirmation of the registration:

- Order form duly filled in with the stamp of the responsible institution.
- Current medical visit or proof of detention.

Cost:

- Price of the course per person: **€812** excl. VAT
- Meal package: **€34** excl. VAT

Objectives:

- Be able to carry out the load slinging,
- Be able to guide a suspended load.

Program:

THEORY

- Knowledge of tower cranes,
- Technology: GMA/GME – tower cranes specific names and vocabulary,
- Use of cranes: external signs, environment and restrictions,
- Rules and techniques for slinging,
- Slinger: individual protection.

PRACTICE

- Slings: CMU and influence of the slinging angle, types of slings,
- Load: center of gravity, choice of handling accessories,
- Slinging: Procedure and precautions,
- Maneuvering the loads,
- Command gestures and sound signals,
- Precautions and procedures for safe maneuvering: Before maneuvering, at the start of the maneuver, during movement, during drop-off, after the maneuver,
- Practical slinging and guiding exercises with the site tools.

Teaching methods:

- In-person teaching,
- Multimedia support and documentation supply.
- Practical exercises with the site tools.

Prerequisite:

- Main persons responsible for the slinging and maneuvering of the loads under the cranes, having first experience in handling.
- Be entitled to work at heights by a specialized agency. (valid).
- Be declared fit to work by the occupational health doctor.
- PPE: Safety shoes, helmet, high-visibility clothing.

Duration:

1 day – 7 hours

Number of participants:

4 participants minimum, 6 maximum



Trainers/contacts:

- C. PRELY Technical Trainer
- A. DOS SANTOS Technical Trainer
- E. KIRCHNER Training manager

Equipment:

- Dedicated classrooms,
- 5 tower cranes, 2 GME and 3 GMA: IGO 50, IGO T 85, HUP32-27, MDT 219 and MDT 269.

Place:

- 5 rue Lavoisier, 69780 St Pierre de Chandieu

Accreditation of learning:

- Checking of knowledge through multimedia testing,
- Evaluation of the acquired knowledge by theoretical and practical tests.

Confirmation of the registration:

- Order form duly filled in with the stamp of the responsible institution.
- Current medical visit or proof of detention.
- Document demonstrating the follow-up of a tower crane driving training. (CACES® type)
- Be qualified to work at heights by a specialized agency. (valid)

Cost:

- Price of the course per person: **€406** excl. VAT
- Meal package: **€17** excl. VAT

Objective:

- Acquire the theoretical and practical knowledge necessary for commissioning GME tower cranes in "8" and GMA "T".

Program:

THEORY

- Operating principle of tower cranes,
- Function principle of the safety devices, mechanisms and devices on a tower crane,
- Study the technical documentation of a tower crane (load curves, stability, reactions, etc.),
- Reading Potain wiring diagrams
- Overview and adjustment of the safety devices on tower cranes,
- Overview and use of VISU II and V3 processing unit,
- Use of the variable frequency drive ACS 880.

PRACTICE

- Safety and limit switch adjustments on a GME and GMA crane in the training fleet.

Teaching methods:

- Detailed presentations,
- Audiovisual and teaching materials,
- Documentation supplied,
- Practice on a crane.

Prerequisite:

- Main personnel performing the commissioning of tower cranes (fitters/technicians).
- Be entitled to work at heights by a specialized agency. (valid).
- Be declared fit to work by the occupational health doctor.
- Have an electrical qualification B0 B1 R S which is valid at the time of training.
- PPE: Safety shoes, helmet, high-visibility clothing.

Duration:

4 days-28 hours spread over 5 days

Number of participants:

4 participants minimum, 6 maximum



Trainers/contacts:

- | | |
|----------------|-------------------|
| • D. FOREST | Technical Trainer |
| • F. NAUMOWICZ | Technical Trainer |
| • E. KIRCHNER | Training manager |

Equipment:

- Dedicated classrooms,
- MDT 269 and IGO T 85,
- Mechanisms in the workshop

Place:

- 5 rue Lavoisier, 69780 St Pierre de Chandieu

Accreditation of learning:

- Checking of knowledge through multimedia testing,
- Issuance of a certificate of participation.

Confirmation of the registration:

- Order form duly filled in with the stamp of the responsible institution.
- Current medical visit or proof of detention.
- Electrical qualification B0 B1 R S Valid
- Document demonstrating the follow-up of a tower crane driving training. (CACES® type)

Cost:

- Price of the course per person: **€1,624** excl. VAT
- Meal package: **€85** excl. VAT

FITTING

| Training | Description | Pages |
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| IGO T Fitting | Fitting and commissioning - IGO T cranes | 20 |
| New IGO T Fitting | Fitting and commissioning - New IGO Tcranes | 21 |
| HUP Fitting | Fitting and commissioning - HUP cranes | 22 |
| HUP M Fitting | Fitting and commissioning - HUP M cranes | 23 |
| <i>HUP C Fitting (contact us)</i> | <i>Fitting and commissioning - HUP C cranes</i> | 24 |
| GME Fitter | | |
| GME MD/MDT Fitting | Fitting and commissioning - MD/MDT cranes | 25 |
| Cab'IN | Fitting, commission and troubleshooting - POTAIN external lift | 26 |
| CCS Technologies | Commissioning - GMA and GME CCS cranes | 27 |
| GME Telescoping | Telescoping - GME MD/MDT cranes | 28 |
| <i>Fitting MR/MRH/MR CCT (Contact us)</i> | <i>Fitting and commissioning - MR/MRH/MR CCT cranes</i> | 29 |

Objective:

- Acquire the theoretical and practical knowledge necessary for fitting and commissioning IGO cranes.

Program:

THEORY

- Characteristics of self-fitting cranes,
- Study technical documentation (load curves, stability, reactions, etc.)
- Fitting safely principles,
- Practical application: Fitting and unfolding of a GMA IGO crane,
- Transport rules.

PRACTICE

- Suitability,
- Adjustment of safety devices and indicators,
- Mechanical, electrical, and hydraulic functioning principles.
- Preventive maintenance principle,

Teaching methods:

- Detailed presentations,
- Audiovisual and teaching materials,
- Documentation supplied,
- Practice on a crane.

Prerequisite:

- Principal persons responsible for the installation and maintenance of self-fitting cranes.
- Be declared fit to work by the occupational health doctor.
- Understand concepts of mechanics and electricity.
- Holding a valid permit for working at heights, issued by a specialized agency.
- Have completed tower crane driving training.
- PPE: Safety shoes, helmet, high-visibility clothing, safety harness.

Duration:

4 days - 28 hours spread over 5 days

Number of participants:

4 participants minimum, 6 maximum



Trainers/contacts:

- D. FOREST Technical Trainer
- F. NAUMOWICZ Technical Trainer
- E. KIRCHNER Training manager

Equipment:

- Dedicated classrooms,
- IGO 50 crane

Place:

- 5 rue Lavoisier, 69780 St Pierre de Chandieu

Accreditation of learning:

- Checking of knowledge through multimedia testing,
- Delivery of a certificate of participation in course.

Confirmation of the registration:

- Order form duly filled in with the stamp of the responsible institution.
- Current medical visit or proof of detention.
- Qualification for work at heights valid at the time of the training period.
- Document demonstrating the follow-up of a tower crane driving training. (Type CACES®)

Cost:

- Price of the course per person: **€1,218** excl. VAT
- Meal package: **€68** excl. VAT

Objective:

- Acquire the theoretical and practical knowledge necessary for fitting and commissioning GMA IGO T cranes.

Program:

THEORY

- Characteristics of self-fitting cranes equipped with extension masts,
- Study the technical documentation (load curves, stability, reactions, etc.),
- Fitting safely principles,
- Practical application: Fitting an IGO T (chassis support, unfolding of the mast, unfolding the jib in all working configurations, telescoping, 6-meter mast, installation of the transport axle, use of the radio control).

PRACTICE

- Suitability,
- Adjustment of safety devices, brakes, and indicators,
- Principles of electrotechnical operation, and hydraulics of the IGO T,
- Preventive maintenance principle.

Teaching methods:

- Detailed presentations,
- Audiovisual and teaching materials,
- Documentation supplied,
- Practice on a crane.

Prerequisite:

- Principal persons responsible for the installation and maintenance of self-fitting cranes.
- Be declared fit to work by the occupational health doctor.
- Understand concepts of mechanics and electricity.
- Holding a valid permit for working at heights, issued by a specialized agency.
- Have completed tower crane driving training.
- PPE: Safety shoes, helmet, high-visibility clothing, safety harness.

Duration:

4 days - 28 hours spread over 5 days

Number of participants:

4 participants minimum, 6 maximum



Trainers/contacts:

- | | |
|----------------|-------------------|
| • D. FOREST | Technical Trainer |
| • F. NAUMOWICZ | Technical Trainer |
| • E. KIRCHNER | Training manager |

Equipment:

- Dedicated classrooms,
- IGO T 85 crane.

Place:

- 5 rue Lavoisier, 69780 St Pierre de Chandieu

Accreditation of learning:

- Checking of knowledge through multimedia testing,
- Issuance of a certificate of participation.

Confirmation of the registration:

- Order form duly filled in with the stamp of the responsible institution.
- Current medical visit or proof of detention.
- Qualification for work at heights valid at the time of the training period.
- Document demonstrating the follow-up of a tower crane driving training. (Type CACES®)

Cost:

- Price of the course per person: **€1,624** excl. VAT
- Meal package: **€85** excl. VAT

New IGO T fitting

Fitting, commissioning of the new GMA IGO T cranes

POTAIN
by **MANITOWOC**

Objective:

- Acquire the theoretical and practical knowledge necessary for fitting and commissioning GMA cranes of the new IGO T type.

Program:

THEORY

- Characteristics of self-fitting cranes equipped with extension masts,
- Study the technical documentation (load curves, stability, reactions, etc.),
- Fitting safely principles,
- Practical application: Fitting a new IGO T (chassis support, unfolding of the mast, unfolding the jib in all working configurations, telescoping, 6-meter mast, installation of the transport axle, use of the radio control).

PRACTICE

- Suitability,
- Adjustment of safety devices, brakes, and indicators,
- Principles of electrotechnical operation, and hydraulics of the new IGO T,
- Preventive maintenance principle.

Teaching methods:

- Detailed presentations,
- Audiovisual and teaching materials,
- Documentation supplied,
- Practice on a crane.

Prerequisite:

- Principal persons responsible for the installation and maintenance of self-fitting cranes.
- Be declared fit to work by the occupational health doctor.
- Understand concepts of mechanics and electricity.
- Holding a valid permit for working at heights, issued by a specialized agency.
- Have completed tower crane driving training.
- PPE: Safety shoes, helmet, high-visibility clothing, safety harness.

Duration:

4 days - 28 hours spread over 5 days

Number of participants:

4 participants minimum, 6 maximum



Trainers/contacts:

- | | |
|----------------|-------------------|
| • D. FOREST | Technical Trainer |
| • F. NAUMOWICZ | Technical Trainer |
| • E. KIRCHNER | Training manager |

Equipment:

- Dedicated classrooms,
- New IGO T.

Place:

- 5 rue Lavoisier, 69780 St Pierre de Chandieu

Accreditation of learning:

- Checking of knowledge through multimedia testing,
- Issuance of a certificate of participation.

Confirmation of the registration:

- Order form duly filled in with the stamp of the responsible institution.
- Current medical visit or proof of detention.
- Qualification for work at heights valid at the time of the training period.
- Document demonstrating the follow-up of a tower crane driving training. (Type CACES®)

Cost:

- Price of the course per person: **€1,624** excl. VAT
- Meal package: **€85** excl. VAT

HUP fitting

Fitting, commissioning of GMA HUP cranes

POTAIN

by **Manitowoc**

Objective:

- Acquire the theoretical and practical knowledge necessary for fitting and commissioning HUP cranes.

Program:

THEORY

- Characteristics of self-fitting cranes,
- Range of HUP cranes,
- Study technical documentation (load curves, stability, reactions, etc.)
- Fitting safely principles,
- Practical application: Fitting an HUP (chassis support, ballasting with derrick, mast unfolding, jib unfolding in all working and maintenance configurations, complete folding of the crane and installation of the transport axle, etc.).

PRACTICE

- Suitability,
- Adjustment of safety devices and indicators,
- Use of the computer and radio control,
- Principles of electrotechnical and hydraulic operation of the HUP cranes,

Teaching methods:

- Detailed presentations,
- Audiovisual and teaching materials,
- Documentation supplied,
- Practice on a crane.

Prerequisite:

- Principal persons responsible for the installation and maintenance of self-fitting cranes.
- Be declared fit to work by the occupational health doctor.
- Understand concepts of mechanics and electricity.
- Holding a valid permit for working at heights, issued by a specialized agency.
- Have completed tower crane driving training.
- PPE: Safety shoes, helmet, high-visibility clothing, safety harness.

Duration:

3 days - 21 hours spread over 4 days

Number of participants:

4 participants minimum, 6 maximum



Trainers/contacts:

- | | |
|----------------|-------------------|
| • D. FOREST | Technical Trainer |
| • F. NAUMOWICZ | Technical Trainer |
| • E. KIRCHNER | Training manager |

Equipment:

- Dedicated classrooms,
- HUP32-27 crane.

Place:

- 5 rue Lavoisier, 69780 St Pierre de Chandieu

Accreditation of learning:

- Checking of knowledge through multimedia testing,
- Issuance of a certificate of participation.

Confirmation of the registration:

- Order form duly filled in with the stamp of the responsible institution.
- Current medical visit or proof of detention.
- Qualification for work at heights valid at the time of the training period.
- Document demonstrating the follow-up of a tower crane driving training. (Type CACES®)

Cost:

- Price of the course per person: **€1,218** excl. VAT
- Meal package: **€68** excl. VAT

HUP M fitting

Fitting, commissioning of GMA HUP cranes

Objective:

- Acquire the theoretical and practical knowledge necessary for fitting and commissioning HUP M cranes.

Program:

THEORY

- Characteristics of self-fitting cranes,
- Range of HUP M cranes,
- Study technical documentation (load curves, stability, reactions, etc.)
- Fitting safely principles,
- Practical application: Fitting an HUP M (chassis support, ballasting with derrick, mast unfolding, jib unfolding in all working and maintenance configurations, complete folding of the crane and installation of the transport axle, etc.)

PRACTICE

- Suitability,
- Adjustment of safety devices and indicators,
- Use of the computer and radio control,
- Principles of electrotechnical and hydraulic operation of the HUP M cranes,

Teaching methods:

- Detailed presentations,
- Audiovisual and teaching materials,
- Documentation supplied,
- Practice on a crane.

Prerequisite:

- Principal persons responsible for the installation and maintenance of self-fitting cranes.
- Be declared fit to work by the occupational health doctor.
- Understand concepts of mechanics and electricity.
- Holding a valid permit for working at heights, issued by a specialized agency.
- Have completed tower crane driving training.
- PPE: Safety shoes, helmet, high-visibility clothing, safety harness.

Duration:

3 days - 21 hours spread over 4 days

Number of participants:

4 participants minimum, 6 maximum



Trainers/contacts:

- | | |
|----------------|-------------------|
| • D. FOREST | Technical Trainer |
| • F. NAUMOWICZ | Technical Trainer |
| • E. KIRCHNER | Training manager |

Equipment:

- Dedicated classrooms,
- Grue HUP M 28-22.

Place:

- At customer's site.

Accreditation of learning:

- Checking of knowledge through multimedia testing,
- Issuance of a certificate of participation.

Confirmation of the registration:

- Order form duly filled in with the stamp of the responsible institution.
- Current medical visit or proof of detention.
- Qualification for work at heights valid at the time of the training period.
- Document demonstrating the follow-up of a tower crane driving training. (Type CACES®)

Cost:

- Price of the course per person: **€1,218** excl. VAT
- Meal package: **€68** excl. VAT

HUP C fitting (contact us)

Fitting, commissioning GMA HUP cranes

Objective:

- Acquire the theoretical and practical knowledge necessary for fitting and commissioning HUP C cranes.

Program:

THEORY

- Characteristics of self-fitting cranes,
- Range of HUP C cranes,
- Study technical documentation (load curves, stability, reactions, etc.)
- Fitting safely principles,
- Practical application: Fitting an HUP C (chassis support, ballasting with derrick, mast unfolding, jib unfolding in all working and maintenance configurations, complete folding of the crane and installation of the transport axle, etc.)

PRACTICE

- Suitability,
- Adjustment of safety devices and indicators,
- Use of the computer and radio control,
- Principles of electrotechnical and hydraulic operation of the HUP C cranes,

Teaching methods:

- Detailed presentations,
- Audiovisual and teaching materials,
- Documentation supplied,
- Practice on a crane.

Prerequisite:

- Principal persons responsible for the installation and maintenance of self-fitting cranes.
- Be declared fit to work by the occupational health doctor.
- Understand concepts of mechanics and electricity.
- Holding a valid permit for working at heights, issued by a specialized agency.
- Have completed tower crane driving training.
- PPE: Safety shoes, helmet, high-visibility clothing, safety harness.

Duration:

3 days - 21 hours spread over 4 days

Number of participants:

4 participants minimum, 6 maximum



Trainers/contacts:

- | | |
|----------------|-------------------|
| • D. FOREST | Technical Trainer |
| • F. NAUMOWICZ | Technical Trainer |
| • E. KIRCHNER | Training manager |

Equipment:

- Dedicated classrooms,
- Crane HUP C 40-30.

Place:

- At customer's site.

Accreditation of learning:

- Checking of knowledge through multimedia testing,
- Issuance of a certificate of participation.

Confirmation of the registration:

- Order form duly filled in with the stamp of the responsible institution.
- Current medical visit or proof of detention.
- Qualification for work at heights valid at the time of the training period.
- Document demonstrating the follow-up of a tower crane driving training. (Type CACES®)

Cost:

- Price of the course per person: **€1,218** excl. VAT
- Meal package: **€68** excl. VAT

Objectives:

- Acquire the theoretical and practical skills needed for safely fitting the Potain MD/MDT tower cranes.

Program:

THEORY

- Overview of the Potain GME range,
- Notion of the stability of tower cranes,
- Fitting sequences for the different types of MD/MDT Potain tower cranes,
- Using the technical manuals for tower cranes,
- MDT 219 Fitting E-Learning.

PREPARATION AND ORGANIZATION OF FITTING

- Presentation of assembling techniques with auxiliary lifting equipment, choice of crane truck, slinging instructions,
- Special precautions during the dismantling sequences of the sub-assemblies.

PRACTICE

- Fitting crane,
- Hydraulic notions: units and cylinders, principles, adjustments,
- Notions of electricity,
- Application of functioning of mechanisms, power supply to cranes, and various connections to be carried out.
- Checking compliance with fitting.
- Checks (wire ropes and slings, maintenance, wear criteria),
- Safety devices and driving aids (indicators),
- Brakes: principle, practical adjustments,
- Erection report.

Prerequisite:

- Principal persons responsible for the installation and maintenance of top-slewing cranes.
- Be declared fit to work by the occupational health doctor.
- Understand concepts of mechanics and electricity.
- Holding a valid permit for working at heights, issued by a specialized agency.
- Have completed tower crane driving training.
- PPE: Safety shoes, helmet, high-visibility clothing, safety harness.

Duration:

5 days - 35 hours

Number of participants:

4 participants minimum, 6 maximum



Trainers/contacts:

- | | |
|----------------|-------------------|
| • D. FOREST | Technical Trainer |
| • F. NAUMOWICZ | Technical Trainer |
| • E. KIRCHNER | Training manager |

Teaching methods:

- In-person teaching,
- Multimedia tools,
- E Learning
- Documentation supplied,
- Practical presentations, fitting and adjustments applied to the various technologies.

Equipment:

- Dedicated classrooms,

Place:

- At customer's site.

Accreditation of learning:

- Issuance of a certificate of participation.

Confirmation of the registration:

- Order form duly filled in with the stamp of the responsible institution.
- Current medical visit or proof of detention.
- Qualification for work at heights valid at the time of the training period.
- Document demonstrating the follow-up of a tower crane driving training. (Type CACES®)

Cost:

- Price of the course per person: **€2,030** excl. VAT
- Meal package: **€85** excl. VAT

Objective:

- Acquire the knowledge needed for fitting, commissioning and using the POTAIN tower crane interior lift.
- Acquire the theoretical and practical knowledge needed to diagnose and repair the POTAIN internal lift.

Program:

THEORY

- French Recommendation R495 for improving working conditions in tower cranes,
- Overview of the Cab'IN internal lift,
- Study the equipment: masts/chassis/cab,
- Fitting and dismantling stages of masts for a crane equipped with a Cab'IN lift,
- Commissioning the lift, checking the operation and testing,
- Safety and evacuation procedure,
- Required checks,
- Preventive maintenance procedure.

PRACTICE

- Partial fitting and dismantling of training fleet,
- Retrofit study,
- Study electric equipment,
- Commissioning the lift, checking the operation, testing,
- Safety and evacuation procedure,
- Preventive maintenance procedure,
- Curative maintenance procedure.

Prerequisite:

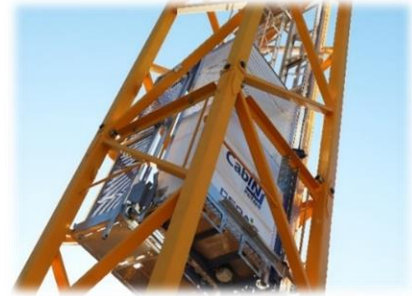
- For fitters and serviceman for tower cranes and lifts.
- Be declared fit to work by the occupational health doctor.
- Understand concepts of mechanics and electricity.
- Holding a valid permit for working at heights, issued by a specialized agency.
- Have completed tower crane driving training.
- PPE: Safety shoes, helmet, high-visibility clothing, safety harness.

Duration:

3 days - 21 hours spread over 4 days

Number of participants:

4 participants minimum, 6 maximum



Trainers/contacts:

- | | |
|----------------|-------------------|
| • D. FOREST | Technical Trainer |
| • F. NAUMOWICZ | Technical Trainer |
| • E. KIRCHNER | Training manager |

Equipment:

- Dedicated classrooms,
- Cab'IN lift and dedicated chassis.

Place:

- 5 rue Lavoisier, 69780 St Pierre de Chandieu

Accreditation of learning:

- Checking of knowledge through multimedia testing,
- Issuance of a certificate of participation.

Teaching methods:

- Detailed presentations,
- Audiovisual and teaching materials,
- Documentation supplied,
- Practice on dedicated Cab'IN lift.

Confirmation of the registration:

- Order form duly filled in with the stamp of the responsible institution.
- Current medical visit or proof of detention.
- Qualification for work at heights valid at the time of the training period.
- Document demonstrating the follow-up of a tower crane driving training. (Type CACES®)

Cost:

- Price of the course per person: **€1,218** excl. VAT
- Meal package: **€68** excl. VAT

Objective:

- Acquire the theoretical and practical knowledge necessary for commissioning GME CCS tower cranes.

Program:

THEORY

- Introduction to the CCS command control,
- Functioning of the CCS safety devices for tower cranes,
- Introduction to CAN technology,
- Presentation of the driving aids,
- Procedure for commissioning a CCS crane (adjustment of limit switches, safety devices, etc.).

PRACTICE

- Commissioning on a training bench in classroom and commissioning of a CCS crane at training site.

Teaching methods:

- Detailed presentations,
- Audiovisual and teaching materials,
- Documentation supplied,
- Practice on test bench and on crane.

Prerequisite:

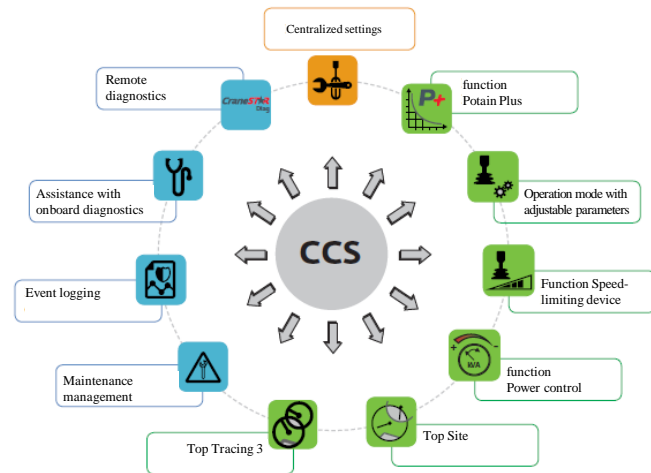
- Principal persons needing knowledge of the commissioning of tower cranes (fitters/technicians/checkers).
- Be declared fit to work by the occupational health doctor.
- Understand concepts of mechanics and electricity.
- Holding a valid permit for working at heights, issued by a specialized agency.
- Have completed tower crane driving training.
- PPE: Safety shoes, helmet, high-visibility clothing, safety harness.

Duration:

3 days - 21 hours spread over 4 days

Number of participants:

4 participants minimum, 6 maximum



Trainers/contacts:

- D. FOREST Technical Trainer
- F. NAUMOWICZ Technical Trainer
- E. KIRCHNER Training manager

Equipment:

- Dedicated classrooms,
- Dedicated training bench,
- MDT 219, MDT 269 crane.

Place:

- 5 rue Lavoisier, 69780 St Pierre de Chandieu

Accreditation of learning:

- Checking of knowledge through multimedia testing,
- Issuance of a certificate of participation.

Confirmation of the registration:

- Order form duly filled in with the stamp of the responsible institution.
- Current medical visit or proof of detention.
- Qualification for work at heights valid at the time of the training period.
- Document demonstrating the follow-up of a tower crane driving training. (Type CACES®)

Cost:

- Price of the course per person: **€1,218** excl. VAT
- Meal package: **€68** excl. VAT

Objective:

- Acquire the theoretical and practical knowledge necessary for fitting GME cranes by telescoping.

Program:

THEORY

- Overview of telescoping systems,
- Principle of telescoping a GME crane,
- Overview of telescoping phases of a GME crane,
- Mechanical, electrical and hydraulic principle of the telescoping system,
- Fundamental knowledge to carry out telescoping safely (balance, stability of the crane, etc.),
- E-Learning training about telescoping on a MDT219.

PRACTICE

- Telescoping of a crane in the training fleet.

Teaching methods:

- Detailed presentations,
- Audiovisual and teaching materials,
- Documentation supplied,
- Practice on a crane.

Prerequisite:

- Principal persons responsible for the installation and maintenance of top-slewing cranes.
- Be declared fit to work by the occupational health doctor.
- Understand concepts of mechanics and electricity.
- Holding a valid permit for working at heights, issued by a specialized agency.
- Have completed tower crane driving training.
- PPE: Safety shoes, helmet, high-visibility clothing, safety harness, plugs, goggles.

Duration:

4 days - 28 hours spread over 5 days

Number of participants:

4 participants minimum, 6 maximum



Trainers/contacts:

- | | |
|----------------|-------------------|
| • C. PRELY | Technical Trainer |
| • D. FOREST | Technical Trainer |
| • F. NAUMOWICZ | Technical Trainer |
| • E. KIRCHNER | Training manager |

Equipment:

- Dedicated classrooms,
- MDT 219 crane.

Place:

- 5 rue Lavoisier, 69780 St Pierre de Chandieu

Accreditation of learning:

- Checking of knowledge through multimedia testing,
- Issuance of a certificate of participation.

Confirmation of the registration:

- Order form duly filled in with the stamp of the responsible institution.
- Current medical visit or proof of detention.
- Qualification for work at heights valid at the time of the training period.
- Document demonstrating the follow-up of a tower crane driving training. (Type CACES®)

Cost:

- Price of the course per person: **€1,624** excl. VAT
- Meal package: **€85** excl. VAT

Objectives:

- Acquire the theoretical and practical skills needed for safely fitting the Potain MR, MR CCT or MRH tower cranes.

Program:

THEORY

- Overview of the Potain GME range,
- Notion of the stability of tower cranes,
- Fitting sequences for the different types of Potain MR, MR CCT ou MRH tower cranes,
- Using the technical manuals for tower cranes.

PREPARATION AND ORGANIZATION OF FITTING

- Presentation of assembling techniques with auxiliary lifting equipment, choice of crane truck, slinging instructions,
- Special precautions during the dismantling sequences of the sub-assemblies.

PRACTICE

- Fitting crane,
- Notions of electricity,
- Application of functioning of mechanisms, power supply to cranes, and various connections to be carried out.
- Checking compliance with fitting.
- Checks (wire ropes and slings, maintenance, wear criteria),
- Safety devices and driving aids (indicators),
- Brakes: principle, practical adjustments,
- Erection report.

Prerequisite:

- Principal persons responsible for the installation and maintenance of top-slewing cranes.
- Be declared fit to work by the occupational health doctor.
- Understand concepts of mechanics and electricity.
- Holding a valid permit for working at heights, issued by a specialized agency.
- Have completed tower crane driving training.
- PPE: Safety shoes, helmet, high-visibility clothing, safety harness.

Duration:

5 days - 35 hours

Number of participants:

4 participants minimum, 6 maximum



Trainers/contacts:

- | | |
|----------------|-------------------|
| • O. GOLLION | Technical Trainer |
| • D. FOREST | Technical Trainer |
| • F. NAUMOWICZ | Technical Trainer |
| • E. KIRCHNER | Training manager |

Teaching methods:

- In-person teaching,
- Multimedia tools,
- Documentation supplied,
- Practical presentations, fitting and adjustments applied to the various technologies.

Equipment:

- An MR crane at customer's site.

Place:

- At customer's site.

Accreditation of learning:

- Issuance of a certificate of participation.

Confirmation of the registration:

- Order form duly filled in with the stamp of the responsible institution.
- Current medical visit or proof of detention.
- Qualification for work at heights valid at the time of the training period.
- Document demonstrating the follow-up of a tower crane driving training. (Type CACES®)

Cost:

- Price of the course per person: **€2,030** excl. VAT
- Meal package: **€85** excl. VAT

TROUBLESHOOTING

| Training | Description | Pages |
|--|--|-------|
| Potain 2 | GME and GMA wiring and troubleshooting | 30 |
| <i>GMA serviceman</i> | | |
| IGO Troubleshooting | Diagnostics and troubleshooting of the IGO type cranes | 31 |
| IGO T Troubleshooting | Diagnostics and troubleshooting of the T type cranes | 32 |
| New IGO T Troubleshoot. | Diagnostics and troubleshooting of cranes type new IGO T | 33 |
| HUP Troubleshooting | Diagnostics and troubleshooting of the HUP type cranes | 34 |
| HUP M Troubleshooting | Diagnostics and troubleshooting of the HUP M type cranes | 35 |
| HUP C Troubleshooting | Diagnostics and troubleshooting of the HUP C type cranes | 36 |
| <i>GME serviceman</i> | | |
| GME V3 and not V3 | Corrective maintenance, mechanisms, frequency converters, brakes, troubleshooting of the MD and MDT cranes | 37 |
| Cab'IN | Fitting, commissioning and troubleshooting of the POTAIN external lift | 25 |
| CCS Troubleshooting | Diagnostics and troubleshooting of the GMA and GME CCS cranes | 38 |
| CCS Update & HPL | CCS update, HPL winch teach-in programming - GME cranes | 39 |
| Convertors | Installation and adjustments of frequency drives | 40 |
| <i>Potain MR (Contact us)</i> | <i>commissioning and troubleshooting cranes of the MR90C to MR298 types</i> | 41 |
| <i>Potain MR CCT (coming soon)</i> | <i>commissioning and troubleshooting cranes of the MR 418/608/618 type cranes</i> | 42 |
| <i>MRH Potain (Contact us)</i> | <i>commissioning and troubleshooting of the MRH type cranes</i> | 43 |
| <i>Inspection (coming soon)</i> | <i>Steps to follow to inspect a crane</i> | 44 |
| Potain Certification | Technical adviser certification | 45 |

Objective:

- Acquire the theoretical and basic practical knowledge needed to perform simple diagnostics of the tower crane – wiring.

Program:

THEORY

- Operating principle of a tower crane,
- Principle of the operation of a variable frequency drive, a three-phase motor and a transformer,
- Basic knowledge of electrical diagram reading,
- Able to read electric diagrams for a three-phase motor and wiring on plates.

PRACTICE

- Failure diagnostics methods,
- Adjustment of the weathervaning.

Teaching methods:

- Detailed presentations,
- Audiovisual and teaching materials,
- Documentation supplied,
- Practice on training bench

Prerequisite:

- Main personnel performing the commissioning of tower cranes (fitters/technicians).
- Be a holder of a valid low voltage electrical B0 B1 R S qualification at the time of training.
- Be declared fit to work by the occupational health doctor.
- PPE: Safety shoes, helmet, high-visibility clothing for the outside, long sleeves mandatory for the benches.

Duration:

4 days - 28 hours spread over 5 days

Number of participants:

4 participants minimum, 6 maximum



Trainers/contacts:

- | | |
|----------------|-------------------|
| • O. GOLLION | Technical Trainer |
| • P. DARJINOFF | Technical Trainer |
| • E. KIRCHNER | Training manager |

Equipment:

- Dedicated classrooms,
- Wiring plates and mechanisms in workshop.

Place:

- 5 rue Lavoisier, 69780 St Pierre de Chandieu

Accreditation of learning:

- Checking of knowledge through multimedia testing,
- Issuance of a certificate of participation.

Confirmation of the registration:

- Order form duly filled in with the stamp of the responsible institution.
- Current medical visit or proof of detention.
- Have an electrical B0 B1 R S qualification which is valid at the time of training.
- Document demonstrating the follow-up of a tower crane driving training. (CACES® type)

Cost:

- Price of the course per person: **€1,624** excl. VAT
- Meal package: **€85** excl. VAT

Igo Troubleshooting

Troubleshooting the GMA IGO-type cranes

Objective:

- Carry out the commissioning and corrective maintenance of IGO and IGOM tower cranes .
- Update knowledge of mechanisms for tower cranes equipped with frequency converters.

Program:

THEORY

- Study the variable frequency mechanisms used on cranes and IGOM,
- Application to classic LVF hoisting winches,
- Application to RVF slewing mechanisms,
- Application to DVF trolleying mechanisms,
- Application to IGO cranes mechanisms (LVF Optima, RVF, DVF),
- Study integrated radio control equipment (transmitter/receiver, "Crane teach-in programming" and study menus.

PRACTICE

- Studies and exercises on training benches and dedicated cranes (troubleshooting, adjustments, commissioning).

Teaching methods:

- In-person teaching,
- Dedicated support.

Prerequisite:

- Personnel performing the putting in service of GMA tower cranes (fitters/technicians).
- Have followed and validated the POTAIN 1 & 2 training periods.
- Be a holder of a valid low voltage electrical B0 B1 R S qualification at the time of training.
- Be declared fit to work by the occupational health doctor.
- PPE: Safety shoes, helmet, high-visibility clothing for the outside, long sleeves mandatory for the benches.

Duration:

3 days - 21 hours spread over 4 days

Number of participants:

4 participants minimum, 6 maximum



Trainers/contacts:

- | | |
|----------------|-------------------|
| • O. GOLLION | Technical Trainer |
| • P. DARJINOFF | Technical Trainer |
| • E. KIRCHNER | Training manager |

Equipment:

- Dedicated classrooms,
- Dedicated IGO 50
- Mechanisms in the workshop.

Place:

- 5 rue Lavoisier, 69780 St Pierre de Chandieu

Accreditation of learning:

- Checking of knowledge through multimedia testing,
- Issuance of a certificate of participation.

Confirmation of the registration:

- Order form duly filled in with the stamp of the responsible institution.
- Current medical visit or proof of detention.
- Document demonstrating the follow-up of a tower crane driving training. (CACES® type)
- Have an electrical B0 B1 R S qualification which is valid at the time of training.

Cost:

- Price of the course per person: **€1,218** excl. VAT
- Meal package: **€68** excl. VAT

Objectives:

- Perform corrective maintenance for the IGO T tower cranes (Level 3 NF 60010),
- Update knowledge of mechanisms for cranes equipped with frequency converters and radio controls.

Program:

THEORY

- Specific details for the fitting of IGO T cranes,
- Analysis of the sequences for fitting the IGO T cranes and studies of the electrotechnical and hydraulic operational diagrams according to the fitting phases,
- Commissioning of the driving aid systems,
- Details of commissioning procedures, practical exercises for checking parameters,
- Application to the commissioning of indicators,
- Study the radio control equipment/Smartcom V3.

PRACTICE

- Practical methods and exercises for looking for malfunctions,
- Commissioning and maintenance of cranes equipped with slave mechanisms,
- Overview of operating principles, commissioning procedures,
- Application to commissioning of cranes equipped with LVF Optima and 33 LVF 20 Optima winches (mCG 71).
- Application to commissioning of cranes equipped with RVF+51 and RVF 161 Optima + mechanisms (ABB).
- Application to commissioning of cranes equipped with DVF and 5DVF 5 winches (mCG 71).

Prerequisite:

- Principle tower crane servicemen having validated POTAIN 1&2.
- Be a holder of a valid low voltage electrical B0 B1 R S qualification at the time of training.
- Be declared fit to work by the occupational health doctor.
- PPE: Safety shoes, helmet, high-visibility clothing for the outside, long sleeves mandatory for the benches.

Duration:

4 days - 28 hours spread over 5 days

Number of participants:

4 participants minimum, 6 maximum



Trainers/contacts:

- O. GOLLION Technical Trainer
- P. DARJINOFF Technical Trainer
- E. KIRCHNER Training manager

Teaching methods:

- In-person teaching with multimedia materials and documentation.
- Personal studies and exercises (troubleshooting, adjustments, commissioning).

Equipment:

- Dedicated classrooms,
- IGO T 85 tower crane,
- Mechanisms in the workshop.

Place:

- 5 rue Lavoisier, 69780 St Pierre de Chandieu

Accreditation of learning:

- Issuance of a certificate of participation.

Confirmation of the registration:

- Order form duly filled in with the stamp of the responsible institution.
- Current medical visit or proof of detention.
- Document demonstrating the follow-up of a tower crane driving training. (CACES® type)
- Have an electrical B0 B1 R S qualification which is valid at the time of training.

Cost:

- Price of the course per person: **€1,624** excl. VAT
- Meal package: **€58** excl. VAT

New IGO T Troubleshooting

Troubleshooting the new IGO T cranes

Objectives:

- Perform corrective maintenance for the New IGO T tower cranes (Level 3 NF 60010),
- Update knowledge of mechanisms for tower cranes equipped with frequency converters and radio controls.

Program:

THEORY

- Specific details for the fitting of New IGO T cranes,
- Analysis of the specific sequences for fitting the New IGO T cranes and studies of the electrotechnical and hydraulic operational diagrams according to the fitting phases,
- Commissioning of the driving aid systems,
- Details of commissioning procedures, practical exercises for checking parameters,
- Application to the commissioning of indicators,
- Study the radio control equipment/Smartcom V3.

PRACTICE

- Practical methods and exercises for looking for malfunctions,
- Commissioning and maintenance of cranes equipped with slave mechanisms,
- Overview of operating principles, commissioning procedures,
- Application to commissioning of cranes equipped with LVF Optima and 33 LVF 20 Optima winches (mCG 71).
- Application to commissioning of cranes equipped with RVF+51 and RVF 161 Optima + mechanisms (ABB).
- Application to commissioning of cranes equipped with DVF and 5DVF 5 winches (mCG 71).

Prerequisite:

- Principle tower crane servicemen having validated POTAIN 1&2.
- Be a holder of a valid low voltage electrical B0 B1 R S qualification at the time of training.
- Be declared fit to work by the occupational health doctor.
- PPE: Safety shoes, helmet, high-visibility clothing for the outside, long sleeves mandatory for the benches.

Duration:

4 days - 28 hours spread over 5 days

Number of participants:

4 participants minimum, 6 maximum



Trainers/contacts:

- | | |
|----------------|-------------------|
| • O. GOLLION | Technical Trainer |
| • P. DARJINOFF | Technical Trainer |
| • E. KIRCHNER | Training manager |

Teaching methods:

- In-person teaching with multimedia materials and documentation.
- Personal studies and exercises (troubleshooting, adjustments, commissioning).

Equipment:

- Dedicated classrooms,
- New tower crane IGO T,
- Mechanisms in the workshop.

Place:

- 5 rue Lavoisier, 69780 St Pierre de Chandieu

Accreditation of learning:

- Issuance of a certificate of participation.

Confirmation of the registration:

- Order form duly filled in with the stamp of the responsible institution.
- Current medical visit or proof of detention.
- Document demonstrating the follow-up of a tower crane driving training. (CACES® type)
- Have an electrical B0 B1 R S qualification which is valid at the time of training.

Cost:

- Price of the course per person: **€1,624** excl. VAT
- Meal package: **€85** excl. VAT

Objective:

- Acquire the theoretical and practical knowledge needed to diagnose and troubleshooting a GMA HUP crane.

Program:

THEORY

- Overview of the CCS system for GMA cranes,
- Overview of the safety components for the GMA HUP cranes,
- Introduction to CAN technology,
- Study the electrical architecture,
- Overview of mechanisms.

PRACTICE

- Ergonomics and feedback from the radio control: target positions/messages,
- Diagnostics methodology and failures.

Teaching methods:

- Detailed presentations,
- Audiovisual and teaching materials,
- Documentation supplied,
- Practice on test bench and on crane.

Prerequisite:

- Principal tower crane servicemen having validated HUP fitting.
- Holding a low voltage electrical clearance B0 B1 R S which is valid at the time of the stageEtre declared suitable for work by occupational medicine.
- PPE: Safety shoes, helmet, high-visibility clothing for the outside, long sleeves mandatory for the benches.

Duration:

4 days - 28 hours spread over 4 days

Number of participants:

4 participants minimum, 6 maximum



Trainers/contacts:

- | | |
|----------------|-------------------|
| • O. GOLLION | Technical Trainer |
| • P. DARJINOFF | Technical Trainer |
| • E. KIRCHNER | Training manager |

Equipment:

- Dedicated classrooms,
- HUP32-27 crane,
- Training bench.

Place:

- 5 rue Lavoisier, 69780 St Pierre de Chandieu

Accreditation of learning:

- Checking of knowledge through multimedia testing,
- Issuance of a certificate of participation.

Confirmation of the registration:

- Order form duly filled in with the stamp of the responsible institution.
- Current medical visit or proof of detention.
- Document demonstrating the follow-up of a tower crane driving training. (CACES® type)
- Have an electrical B0 B1 R S qualification which is valid at the time of training.

Cost:

- Price of the course per person: **€1,624** excl. VAT
- Meal package: **€85** excl. VAT

HUP M troubleshooting

Troubleshooting the HUP M cranes

Objective:

- Acquire the theoretical and practical knowledge needed to diagnose and troubleshooting a GMA HUP M crane.

Program:

THEORY

- Overview of the CCS system for GMA cranes,
- Overview of the safety components for the GMA HUP M cranes,
- Introduction to CAN technology,
- Study the electrical architecture,
- Overview of mechanisms.

PRESENTATION

- Ergonomics and feedback from the radio control: target positions/messages,
- Diagnostics methodology and failures.

Teaching methods:

- Theory with dedicated training materials,
- Practice on training benches,
- Practice on a crane.

Prerequisite:

- Principal tower crane servicemen having validated HUP M fitting.
- Holding a low voltage electrical clearance B0 B1 R S which is valid at the time of training.
- Be declared fit to work by the occupational health doctor.
- PPE: Safety shoes, helmet, high-visibility clothing for the outside, long sleeves mandatory for the benches.

Duration:

3 days - 21 hours spread over 4 days

Number of participants:

4 participants minimum, 6 maximum



Trainers/contacts:

- | | |
|----------------|-------------------|
| • O. GOLLION | Technical Trainer |
| • P. DARJINOFF | Technical Trainer |
| • E. KIRCHNER | Training manager |

Equipment:

- Dedicated classrooms,
- HUP M 28-22,
- Training bench.

Place:

- 5 rue Lavoisier, 69780 St Pierre de Chandieu

Accreditation of learning:

- Checking of knowledge through multimedia testing,
- Issuance of a certificate of participation.

Confirmation of the registration:

- Order form duly filled in with the stamp of the responsible institution.
- Current medical visit or proof of detention.
- Document demonstrating the follow-up of a tower crane driving training. (CACES® type)
- Have an electrical B0 B1 R S qualification which is valid at the time of training.

Cost:

- Price of the course per person: **€1,218** excl. VAT
- Meal package: **€68** excl. VAT

HUP C troubleshooting

Troubleshooting HUP C cranes

Objective:

- Acquire the theoretical and practical knowledge needed to diagnose and troubleshooting a GMA HUP C crane.

Program:

THEORY

- Overview of the CCS system for GMA cranes,
- Overview of the safety components for the GMA HUP C cranes,
- Introduction to CAN technology,
- Study the electrical architecture,
- Overview of mechanisms.

PRESENTATION

- Ergonomics and feedback from the radio control: target positions/messages,
- Diagnostics methodology and failures.

Teaching methods:

- Theory with dedicated training materials,
- Practice on training benches,
- Practice on a crane.

Prerequisite:

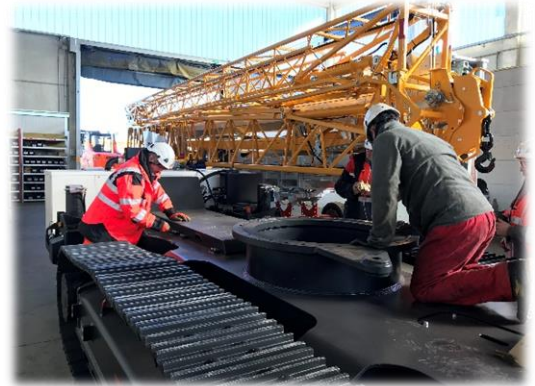
- Principal tower crane servicemen having validated HUP M fitting.
- Be a holder of a valid low voltage electrical B0 B1 R S qualification at the time of training.
- Holding a valid permit for working at heights, issued by a specialized agency.
- Be declared fit to work by the occupational health doctor.
- PPE: Safety shoes, helmet, high-visibility clothing for the outside, long sleeves mandatory for the benches.

Duration:

3 days - 21 hours spread over 4 days

Number of participants:

4 participants minimum, 6 maximum



Trainers/contacts:

- | | |
|----------------|-------------------|
| • O. GOLLION | Technical Trainer |
| • P. DARJINOFF | Technical Trainer |
| • E. KIRCHNER | Training manager |

Equipment:

- Dedicated classrooms,
- Crane HUP C 40-30.
- Training bench.

Place:

- On Customer's site

Accreditation of learning:

- Checking of knowledge through multimedia testing,
- Issuance of a certificate of participation.

Confirmation of the registration:

- Order form duly filled in with the stamp of the responsible institution.
- Current medical visit or proof of detention.
- Document demonstrating the follow-up of a tower crane driving training. (CACES® type)
- Have an electrical B0 B1 R S qualification which is valid at the time of training.
- Entitlement to work at a valid height at the time of the training period

Cost:

- Price of the course per person: **€1,218** excl. VAT
- Meal package: **€68** excl. VAT

GME in "8" V3 and non V3

Commissioning and troubleshooting of the MDT98 to 218 cranes

Objectives:

- Perform corrective maintenance of the MD and MDT tower cranes with designation in "8".
- Update knowledge of mechanisms for tower cranes equipped with frequency converters.
- Perform troubleshooting of tower cranes equipped with frequency converters.
- Carry out brake adjustments of the various mechanisms.
- Acquire a methodology for troubleshooting.

Program:

THEORY

- Study the V3 processing unit and the variable frequency mechanisms used on MD-MDT cranes: LVF hoisting (KEB), RVF slewing (ABB), DVF trolleying (KEB):
 - *Study operations, adjustment, configuration, special functions.*
 - *Study the parameters, search for failures.*
- Study wiring diagrams
- Study the working principle and adjustment of the brakes for each mechanism.

PRACTICE

- Practical work for finding failures.
- Calibration of the VISU, VISU II indicators.
- Study the radio control option.

Prerequisite:

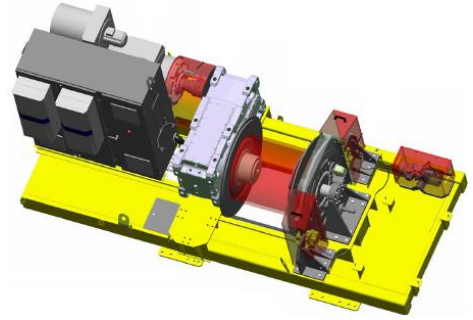
- Principal tower crane servicemen who have validated courses: commissioning GME/GMA and Potain 2.
- Holding a low voltage electrical clearance B0 B1 R S which is valid at the time of training.
- Be declared fit to work by the occupational health doctor.
- PPE: Safety shoes, helmet, high-visibility clothing for the outside, long sleeves mandatory for the benches.

Duration:

4 days - 28 hours spread over 5 days

Number of participants:

4 participants minimum, 6 maximum



Trainers/contacts:

- | | |
|----------------|-------------------|
| • O. GOLLION | Technical Trainer |
| • P. DARJINOFF | Technical Trainer |
| • E. KIRCHNER | Training manager |

Teaching methods:

- Detailed presentations,
- Audiovisual and teaching materials,
- Documentation supplied,
- Practice on test bench.

Equipment:

- Dedicated classrooms,
- Mechanisms in the workshop.

Place:

- 5 rue Lavoisier, 69780 St Pierre de Chandieu

Accreditation of learning:

- Checking of knowledge through multimedia testing,
- Issuance of a certificate of participation.

Confirmation of the registration:

- Order form duly filled in with the stamp of the responsible institution.
- Current medical visit or proof of detention.
- Document demonstrating the follow-up of a tower crane driving training. (CACES® type)
- Have an electrical B0 B1 R S qualification which is valid at the time of training.

Cost:

- Price of the course per person: **€1,624** excl. VAT
- Meal package: **€85** excl. VAT

CCS troubleshooting

Study systems and troubleshooting of the CCS Tower cranes

POTAIN

by **Manitowoc**

Objective:

- Acquire the theoretical and practical knowledge needed to diagnose a GME CCS crane.

Program:

THEORY

- Review of commissioning a CCS crane,
- Study the CAN Network on the GME CCS range,
- Method for diagnosing a GME CCS crane,
- Overview of diagnostics aid for the CCS system,
- Overview of data recorded by the CCS system,
- Working principle of the CraneSTAR DIAG system for remote diagnostics,
- Procedure for updating the computer software and the CCS screen.

PRACTICE

- Diagnostics exercise on the training bench.

Teaching methods:

- Detailed presentations,
- Audiovisual and teaching materials,
- Documentation supplied,
- Practice on training bench.

Prerequisite:

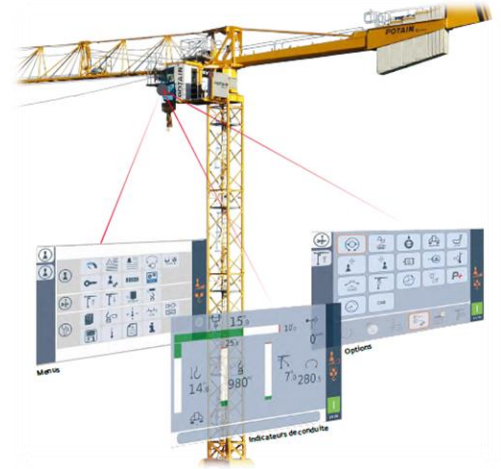
- Took and validated the CCS technology module.
- Be a holder of a valid low voltage electrical B0 B1 R S qualification at the time of training.
- Be declared fit to work by the occupational health doctor.
- PPE: Safety shoes, helmet, high-visibility clothing for the outside, long sleeves mandatory for the benches.

Duration:

4 days-28 hours spread over 5 days

Number of participants:

4 participants minimum, 6 maximum



Trainers/contacts:

- | | |
|----------------|-------------------|
| • O. GOLLION | Technical Trainer |
| • P. DARJINOFF | Technical Trainer |
| • E. KIRCHNER | Training manager |

Equipment:

- Dedicated classrooms,
- Dedicated training bench,
- MDT 219, MDT 269 crane.

Place:

- 5 rue Lavoisier, 69780 St Pierre de Chandieu

Accreditation of learning:

- Checking of knowledge through multimedia testing,
- Issuance of a certificate of participation.

Confirmation of the registration:

- Order form duly filled in with the stamp of the responsible institution.
- Current medical visit or proof of detention.
- Document demonstrating the follow-up of a tower crane driving training. (CACES® type)
- Have an electrical B0 B1 R S qualification which is valid at the time of training.

Cost:

- Price of the course per person: **€1,624** excl. VAT
- Meal package: **€85** excl. VAT

Objective:

- Reminder of the functions of the CCS system and understand the new functions in the latest version,
- Specific questions,
- Teach-in programming of the HPL winch.

Program:

THEORY

- CCS system functions
- Procedure for commissioning a CCS crane,
- Driving aids,
- Diagnostics aids,
- Overview of new functions,
- Procedure for updating the computer software and the CCS screen,
- Overview of HPL range and the winch 75HPL30,
- CCS and non-CCS Architecture (control switch chart),
- Specific functions (optimized power, power control, maximum speed limit, etc.).

PRACTICE

- Resistor box, reduction gear, and motor temperature monitoring,
- Service brake control,
- Control panel layout,
- Variable frequency drive adjustment
- Use of downgraded and local modes.

Prerequisite:

- Took and validated the CCS technology and CCS troubleshooting modules.
- Be a holder of a valid low voltage electrical B0 B1 R S qualification at the time of training.
- Be declared fit to work by the occupational health doctor.
- PPE: Safety shoes, helmet, high-visibility clothing for the outside, long sleeves mandatory for the benches.

Duration:

2 Days - 14 hours

Number of participants:

4 participants minimum, 6 maximum



Trainers/contacts:

- | | |
|----------------|-------------------|
| • O. GOLLION | Technical Trainer |
| • P. DARJINOFF | Technical Trainer |
| • E. KIRCHNER | Training manager |

Teaching methods:

- Detailed presentations,
- Audiovisual and teaching materials,
- Documentation supplied,
- Practice on test bench and on crane.

Equipment:

- Dedicated classrooms,
- Dedicated HPL training bench,
- MDT 219, MDT 269 crane.

Place:

- 5 rue Lavoisier, 69780 St Pierre de Chandieu

Accreditation of learning:

- Checking of knowledge through multimedia testing,
- Issuance of a certificate of participation.

Confirmation of the registration:

- Order form duly filled in with the stamp of the responsible institution.
- Current medical visit or proof of detention.
- Document demonstrating the follow-up of a tower crane driving training. (CACES® type)
- Have an electrical B0 B1 R S qualification which is valid at the time of training.

Cost:

- Price of the course per person: **€812** excl. VAT
- Meal package: **€34** excl. VAT

Variable frequency drive

Maintenance of frequency converters

Objectives:

- Update knowledge of mechanisms for tower cranes equipped with frequency converters.
- Perform troubleshooting of tower cranes equipped with frequency converters.
- Acquire a methodology for troubleshooting.

Program:

THEORY

- Study the variable frequency mechanisms used on the Potain,
 - LVF hoisting,
 - RVF orientation,
 - DVF trolley
- Specific study of the EBB, KEB and Schneider converters
- Study operations, adjustment, configuration, special functions.

PRACTICE

- Practical work for finding failures.
- Calibration.

Teaching methods:

- Detailed presentations,
- Audiovisual and teaching materials,
- Documentation supplied,
- Practice on test bench.

Prerequisite:

- Principal tower crane servicemen who have validated courses: commissioning GME/GMA and Potain 2.
- Be a holder of a valid low voltage electrical B0 B1 R S qualification at the time of training.
- Be declared fit to work by the occupational health doctor.
- PPE: Safety shoes, helmet, high-visibility clothing for the outside, long sleeves mandatory for the benches.

Duration:

3 days - 21 hours spread over 4 days

Number of participants:

4 participants minimum, 6 maximum



Trainers/contacts:

- | | |
|----------------|-------------------|
| • O. GOLLION | Technical Trainer |
| • P. DARJINOFF | Technical Trainer |
| • E. KIRCHNER | Training manager |

Equipment:

- Dedicated classrooms,
- Mechanisms in the workshop.

Place:

- 5 rue Lavoisier, 69780 St Pierre de Chandieu

Accreditation of learning:

- Checking of knowledge through multimedia testing,
- Issuance of a certificate of participation.

Confirmation of the registration:

- Order form duly filled in with the stamp of the responsible institution.
- Current medical visit or proof of detention.
- Document demonstrating the follow-up of a tower crane driving training. (CACES® type)
- Have an electrical B0 B1 R S qualification which is valid at the time of training.

Cost:

- Price of the course per person: **€1,218** excl. VAT
- Meal package: **€68** excl. VAT

Objective:

- Acquire the theoretical and practical knowledge needed to carry out troubleshooting of a GME MR (MR 90 C to MR 298) tower crane.
- Acquire and supplement knowledge of mechanisms for MR tower cranes equipped with frequency converters.

Program:

THEORY

- Fitting kinematics,
- Adjustments and working principle of the safety devices,
- Mechanisms:
 - 33 to 150 LVF,
 - RVF 152 to 172,
 - 50 to 100 VVF.

PRACTICE

- Practical cases:
 - Variable frequency drive inputs outputs
 - Adjusting the slewing parameters,
 - Adjusting the VISU II indicators,
 - Maintenance and adjustment of the emergency brake.
- Diagnostics exercise on the training bench or crane.

Teaching methods:

- Detailed presentations,
- Audiovisual and teaching materials,
- Documentation supplied,
- Practice on training bench or crane.

Prerequisite:

- Have completed and followed and validated the modules: commissioning GME/GMA and Potain 2.
- Be a holder of a valid low voltage electrical B0 B1 R S qualification at the time of training.
- Be declared fit to work by the occupational health doctor.
- PPE: Safety shoes, helmet, high-visibility clothing for the outside, long sleeves mandatory for the benches.

Duration:

3 days - 21 hours spread over 4 days

Number of participants:

4 participants minimum, 6 maximum



Trainers/contacts:

- | | |
|----------------|-------------------|
| • O. GOLLION | Technical Trainer |
| • P. DARJINOFF | Technical Trainer |
| • E. KIRCHNER | Training manager |

Equipment:

- Dedicated classrooms,
- Training bench
- Winch on the ground

Place:

- 5 rue Lavoisier, 69780 St Pierre de Chandieu
- On customer site if an MR crane is available

Accreditation of learning:

- Checking of knowledge through multimedia testing,
- Issuance of a certificate of participation.

Confirmation of the registration:

- Order form duly filled in with the stamp of the responsible institution.
- Current medical visit or proof of detention.
- Have an electrical B0 B1 R S qualification which is valid at the time of training.
- Document demonstrating the follow-up of a tower crane driving training. (CACES® type)

Cost:

- Price of the course per person: **€1,218** excl. VAT
- Meal package: **€68** excl. VAT

Potain MR CCT (coming soon)

Commissioning and troubleshooting of MR 418/608/618 cranes  by 

Objective:

- Acquire the theoretical and practical knowledge needed to carry out troubleshooting of a GME MR (MR 418/608/618) tower crane.
- Acquire and supplement knowledge of mechanisms for MR tower cranes equipped with frequency converters.

Program:

THEORY

- Fitting kinematics,
- Adjustments and working principle of the safety devices,
- Mechanisms:
 - 150 and 270 LVF,
 - RVF 152 and 173,
 - 150 VVF.

PRACTICE

- Practical cases:
 - Variable frequency drive inputs outputs
 - Adjusting the slewing parameters,
 - Adjusting the CCT indicators,
 - Maintenance and adjustment of the emergency brake.
- Diagnostics exercise on the training bench or crane.

Teaching methods:

- Detailed presentations,
- Audiovisual and teaching materials,
- Documentation supplied,
- Practice on training bench or crane.

Prerequisite:

- Have completed and followed and validated the modules: commissioning GME/GMA and Potain 2.
- Be a holder of a valid low voltage electrical B0 B1 R S qualification at the time of training.
- Be declared fit to work by the occupational health doctor.
- PPE: Safety shoes, helmet, high-visibility clothing for the outside, long sleeves mandatory for the benches.

Duration:

3 days - 21 hours spread over 4 days

Number of participants:

4 participants minimum, 6 maximum



Trainers/contacts:

- | | |
|----------------|-------------------|
| • O. GOLLION | Technical Trainer |
| • P. DARJINOFF | Technical Trainer |
| • E. KIRCHNER | Training manager |

Equipment:

- Dedicated classrooms,
- Training bench
- Winch on the ground

Place:

- 5 rue Lavoisier, 69780 St Pierre de Chandieu
- On customer site if an MR crane is available

Accreditation of learning:

- Checking of knowledge through multimedia testing,
- Issuance of a certificate of participation.

Confirmation of the registration:

- Order form duly filled in with the stamp of the responsible institution.
- Current medical visit or proof of detention.
- Have an electrical B0 B1 R S qualification which is valid at the time of training.
- Document demonstrating the follow-up of a tower crane driving training. (CACES® type)

Cost:

- Price of the course per person: **€1,218** excl. VAT
- Meal package: **€68** excl. VAT

Objective:

- Acquire the theoretical and practical knowledge necessary for fitting and dismantling MRH cranes.

Program:

THEORY

- Provide basic knowledge about fitting, balancing and commissioning the MRH cranes,
- Load curves,
- Study the hydraulic and electrical components,

PRACTICE

- On-site installation,
- Fitting the mast section,
- Balancing the crane,
- Installing the upper slewing crane part,
- Adjusting safety devices,
- Using the technical documentation,
- Study the wiring diagram,
- Preventative maintenance of the crane.

Teaching methods:

- Detailed presentations, specific materials,
- Audiovisual and teaching materials,
- Documentation supplied,
- Practice on the crane for fitting and adjusting the MRH crane.

Prerequisite:

- Have completed
- Have completed and validated the modules: commissioning GME/GMA and Potain 2.
- Be a holder of a valid low voltage electrical B0 B1 R S qualification at the time of training.
- Be declared fit to work by the occupational health doctor.
- PPE: Safety shoes, helmet, high-visibility clothing for the outside, long sleeves mandatory for the benches.

Duration:

4 days - 28 hours spread over 5 days

Number of participants:

4 participants minimum, 6 maximum



Trainers/contacts:

- | | |
|----------------|-------------------|
| • O. GOLLION | Technical Trainer |
| • P. DARJINOFF | Technical Trainer |
| • E. KIRCHNER | Training manager |

Equipment:

- MRH125 or MRH175 on customer site

Place:

- At customer's site.

Accreditation of learning:

- Checking of knowledge through multimedia testing,
- Issuance of a certificate of participation.

Confirmation of the registration:

- Order form duly filled in with the stamp of the responsible institution.
- Current medical visit or proof of detention.
- Document demonstrating the follow-up of a tower crane driving training. (CACES® type)
- Have an electrical B0 B1 R S qualification which is valid at the time of training.

Cost:

- Price of the course per person: **€1,624** excl. VAT
- Meal package: **€85** excl. VAT

Dealers only

Objectives:

- The certification process makes it possible to differentiate technicians with extensive practical experience in troubleshooting and diagnostics from other technicians.
- This test is an accreditation of learning about: mechanical adjustments, frequency drives, maintenance, resolving failures and interference.

Program:

THEORY

- MDT CCS technology and troubleshooting,
- HUP technology and troubleshooting,

PRACTICE

- Adjustment of the weathervaning,
- Finding failures,
- Slewing variable frequency drive configuration,
- Visual + limit switch adjustment,
- Special functions hoisting variable frequency drive: downgraded mode, speed adjustment, keyboard control, etc.
- Preventive maintenance,
- Interference adjustment.

Teaching methods:

- The "referent Technician" certification consists of a series of practical tests performed on a full day.
- The evaluation will be carried out by a trainer; the technician must be able to carry out the exercises using the appropriate tools and the Manitowoc technical manuals within a given time.

Prerequisite

- Principal experienced technicians.
- Have followed the recommended POTAIN GME/GMA course
- Be up to date with the latest technologies.
- Be a holder of a valid low voltage electrical B0 B1 R S qualification at the time of training.
- Be declared fit to work by the occupational health doctor.
- PPE: Safety shoes, helmet, high-visibility clothing for the outside, long sleeves mandatory for the benches.

Duration

1 Day – 8 hours

Number of participants

2 participants maximum



Trainers/contacts:

- O. GOLLION Technical Trainer
- P. DARJINOFF Technical Trainer
- E. KIRCHNER Training manager

Equipment:

- Dedicated classrooms,
- 5 tower cranes, 2 GME and 3 GMA: IGO 50, IGO T 85, HUP32-27, MDT 219 and MDT 269,
- Mechanisms in the workshop.

Place:

- 5 rue Lavoisier, 69780 St Pierre de Chandieu

Accreditation of learning:

- The grading for this test is 100 points; technicians must get a result greater than or equal to 70 points in order to validate their certification.
- If a technician passes, they will be provided with the Crane Care booklet® and a certified technician card that is valid for 3 years.
- Recognition by the employee's superiors of their skills.

Confirmation of the registration:

- Order form duly filled in with the stamp of the responsible institution.
- Current medical visit or proof of detention.
- Document demonstrating the follow-up of a tower crane driving training. (CACES® type)
- Have an electrical B0 B1 R S qualification which is valid at the time of training.

Cost:

- Price of the course per person: **€925** excl. VAT
- Meal package: **€17** excl. VAT

RELATED TOOLS

| Training | Description | Pages |
|---|--|-------|
| Anti-collision | Installation and adjustments of the interference systems | 47 |
| <i>Potain Radio (coming soon)</i> | <i>Installation, adjustment and troubleshooting of radio controls</i> | 48 |
| Stability and reactions | Stability and reactions of tower cranes - available through e-learning | 49 |
| CraneSTAR Diag | Remote Diagnostic of GME cranes – available in e-learning | 50 |
| <i>GTL, GWX, GPX3, Potain e-tech (Contact us)</i> | <i>Introduction and use of Potain tools – available in e-learning</i> | 51 |
| <i>E-Learning Maintenance (contact us)</i> | <i>Potain cranes maintenance</i> | 52 |

Objectives:

- Train tower crane technicians about the installation and commissioning of the interference systems at job sites.
- Carry out the installation, adjustments, maintenance, and programming of the interference control equipment TT2, MC602, MC603 and TT3.

Program:

THEORY

- Overview of the anti-collision standard,
- Interference between cranes and prohibited zones,
- Principles of interference between cranes.

PRACTICE

- Fitting and maintenance of the TT2, MC602, MC603 and TT3 systems,
- Programming and calibration of these systems,
- Adjustment of prohibited zones,
- Calibration of the TT2, MC602, MC603 and TT3 systems by participants on interfering cranes.
- Making adjustments,
- Practical evaluation on the different systems.

Teaching methods:

- In-person teaching,
- Multimedia tools,
- Documentation supplied,
- Overview and details of the TT2, MC602, MC603 and TT3 systems.
- Programming, calibration and adjustments of the systems on training benches and interfering cranes.

Prerequisite:

- Applies to level 3 technicians and/or experienced servicemen.
- Be a holder of a valid low voltage electrical B0 B1 R S qualification at the time of training.
- Be declared fit to work by the occupational health doctor.
- PPE: Safety shoes, helmet, high-visibility clothing

Duration:

3 days - 21 hours spread over 4 days

Number of participants:

4 participants minimum, 6 maximum



Trainers/contacts:

- P. DARJINOFF Technical Trainer
- E. KIRCHNER Training manager

Equipment:

- Dedicated classrooms,
- 5 tower cranes, 2 GME and 3 GMA: IGO 50, IGO T 85, HUP32-27, MDT 219 and MDT 269,
- Training benches in classrooms.

Place:

- 5 rue Lavoisier, 69780 St Pierre de Chandieu

Accreditation of learning:

- Checking of knowledge through multimedia testing,
- Issuance of a certificate of participation.

Confirmation of the registration:

- Order form duly filled in with the stamp of the responsible institution.
- Current medical visit or proof of detention.
- Document demonstrating the follow-up of a tower crane driving training. (CACES® type)
- Have an electrical B0 B1 R S qualification which is valid at the time of training.

Cost:

- Price of the course per person: **€1,218** excl. VAT
- Meal package: **€68** excl. VAT

Potain Radio *(coming soon)*

Installation, adjustment and troubleshooting of the radio controls by 

POTAIN

Objectives:

- Carry out the installation, adjustments and maintenance of the tower crane radio controls

Program:

THEORY

- Conventional radio controls,
- Technical characteristics,
- Current legislation,
- Transmitter – receiver,
- Crane interface, management box,
- Electrical installation.

PRACTICE

- Transmitter–receiver frequency adjustments,
- Test points,
- Available adjustment frequencies,
- Operational tests.

Teaching methods:

- In-person teaching with materials,
- Practical case studies (measures, adjustments, check).
- Exercises for looking for malfunctions.

Prerequisite:

- Principle tower crane servicemen having validated POTAIN 1&2.
- Have experience in industrial equipment.
- Be a holder of a valid low voltage electrical B0 B1 R S qualification at the time of training.
- Be declared fit to work by the occupational health doctor.
- PPE: Safety shoes, helmet, high-visibility clothing

Duration:

2 Days - 14 hours

Number of participants:

4 participants minimum, 6 maximum



Trainers/contacts:

- O. GOLLION Technical Trainer
- E. KIRCHNER Training manager

Equipment:

- Dedicated classrooms,
- 5 tower cranes, 2 GME and 3 GMA: IGO 50, IGO T 85, HUP32-27, MDT 219 and MDT 269,
- Mechanisms in the workshop.

Place:

- 5 rue Lavoisier, 69780 St Pierre de Chandieu

Accreditation of learning:

- Issuance of a certificate of participation.

Confirmation of the registration:

- Order form duly filled in with the stamp of the responsible institution.
- Current medical visit or proof of detention.
- Document demonstrating the follow-up of a tower crane driving training. (CACES® type)
- Have an electrical B0 B1 R S qualification which is valid at the time of training.

Cost:

- Price of the course per person: **€925** excl. VAT
- Meal package: **€34** excl. VAT

Stability and reactions

Stability and reactions of tower cranes

Objective:

- Study tower crane standards
- Understand the stability and forces of tower cranes
- Understand the reactions of tower cranes

Program:

THEORY

- Standard and legislation,
- EN 14439:
 - The new European standard
 - Modification of the calculation of the conditions for putting out of service,
 - On-site installation of crane,
 - Consequence of crane configuration,
- Load curve calculations:
 - The xx8 generation cranes,
 - Transition to CCS generation cranes.
- Balancing the tower crane,
- Forces:
 - Loads on the tower cranes,
 - Load combinations,
 - Determining forces + example,
 - Concept of static, elastic buckling, fatigue.
- Stability,
- Reaction calculations, database and technical data,
- Special cases: Cranes with anchorage, elevated cranes, equipped with lifts.

Teaching methods:

- In-person teaching with materials,
- Practical case studies and use of specific documents.

Prerequisite:

- For highly experienced principal technicians or people with engineering degrees.
- Be declared fit to work by the occupational health doctor.

Duration:

3 days - 21 hours spread over 4 days

Number of participants:

4 minimum participants, 8 maximum



Trainers/Contacts:

- E. KIRCHNER Training manager

Equipment:

- Dedicated classrooms,
- Presentation materials.
- E-Learning available.

Place:

- 5 rue Lavoisier, 69780 St Pierre de Chandieu
- E-learning

Accreditation of learning:

- Issuance of a certificate of participation.

Confirmation of the registration:

- Order form duly filled in with the stamp of the responsible institution.
- Current medical visit or proof of detention.

In person price:

- Price of the course per person: **€1,218** excl. VAT
- Meal package: **€68** excl. VAT

E-Learning price:

- Price of the training per person: per quotation

Objectives:

- Acquire a methodology to carry out remote diagnostics on GME CCS cranes using the CraneSTAR Diag system.

Program:

THEORY

- Overview of the CraneStar Diag system,
- Overview of diagnostic menus proposed by the CCS system,
- Use of the system in real time.

Potential teaching methods:

- Detailed presentations,
- Audiovisual and teaching materials,
- Practice on test bench.
- Connection to cranes for real time diagnostics.

Educational methods for e-learning:

- Detailed presentations,
- Audiovisual and teaching materials,
- Connection to cranes for real time diagnostics.

Prerequisite:

- Have completed training and be a holder of a valid low voltage electrical authorization at the time of training.
- Have taken the CCS technology course.
- Be declared fit to work by the occupational health doctor.

Duration:

0.5 day - 4 hours

Number of participants:

4 participants minimum, 6 maximum



Trainers/contacts:

- J.J. HABIB Digital Trainer
- E. KIRCHNER Training center manager

Equipment:

- Dedicated classrooms,
- CraneSTAR Diag system on the testing bench.

Place:

- 5 rue Lavoisier, 69780 St Pierre de Chandieu
- E-learning

Accreditation of learning:

- Checking of knowledge through multimedia testing,
- Delivery of a certificate of participation in course.

Confirmation of the registration:

- Order form duly filled in with the stamp of the responsible institution.
- Current medical visit or proof of detention.
- Have an electrical B0 B1 R S qualification which is valid at the time of training.

In person price:

- Price of the course per person: **€232** excl. VAT
- Meal package: **€15** excl. VAT

E-Learning Price:

- Price of the training per person: **per quotation**

Objectives:

- Acquire a methodology to be able to use the dedicated tools developed by our company.

Program:

THEORY

- Overview of POTAIN Tools:
 - GTL:
 - GWX:
 - GPX3:
 - Potain e-tech:
- Use of the systems.

Teaching methods:

- Detailed presentations,
- Audiovisual and teaching materials,

Potential presentation methods:

- In-person teaching with materials,
- Research exercise to master the tools.

Educational methods for e-learning:

- Pedagogy taught by videoconference.
- Research exercise to master the tools.

Prerequisite:

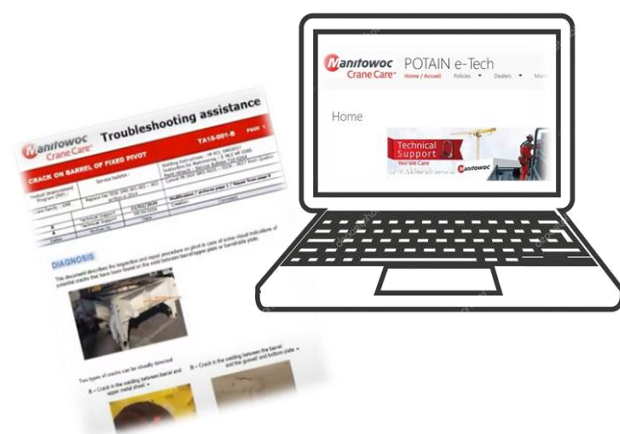
- Have completed.
- Evolve in technical services and need these tools in its work.
- Be declared fit to work by the occupational health doctor.

Duration:

0.5 day - 4 hours

Number of participants:

4 participants minimum, 6 maximum



Trainers/contacts:

- J.J. HABIB Digital Trainer
- E. KIRCHNER Training center manager

Equipment:

- Dedicated classrooms,
- Touch screen tablets,

Place:

- 5 rue Lavoisier, 69780 St Pierre de Chandieu
- E-learning

Accreditation of learning:

- Issuance of a certificate of participation.

Confirmation of the registration:

- Order form duly filled in with the stamp of the responsible institution.
- Current medical visit or proof of detention.

In person price:

- Price of the course per person: **€232** excl. VAT
- Meal package: **€15** excl. VAT

E-Learning Price:

- Price of the training per person:
per quotation

Dealers only

Objectives:

- Carry out preventive and quarterly maintenance of tower cranes,
- Explain regulatory knowledge needed to check the completion of the detailed maintenance procedure.

Program:

THEORY

- Acquire the knowledge needed for the preventive maintenance technique:
 - Understand how to define maintenance operations,
 - Carry out the technical visit,
 - Check the different crane elements,
 - How to use a visit report,
 - Using the technical manuals for tower cranes.
- Carry out in-situ preventive maintenance:
 - Visually check the condition,
 - Check wear, measure, adjust, replace, lubricate.
 - Record observations in a visit report.
- Regulations:
 - Explain the role of the regulatory bodies,
 - Use the maintenance logbook,
 - Explain the content of the detailed exam,
 - Understand the manufacturer information,
 - Explain a schedule for maintenance.



Trainers/contacts:

- O. GOLLION Technical Trainer
- E. KIRCHNER Training manager

Teaching methods:

- In-person teaching.
- Multimedia materials and documentation supplied.
- Practical cases of in-situ checks, dismantling of mechanisms and control of reduction gear.
- Technical visit with check list.

Equipment and place:

- E-Learning

Accreditation of learning:

- Checking of knowledge through multimedia testing,
- Issuance of a certificate of participation. This is not a certification.
- PLEASE NOTE: The certificate does not validate the ability to carry out detailed maintenance on POTAIN cranes.

Confirmation of the registration:

- Order form duly filled in with the stamp of the responsible institution.
- Current medical visit or proof of detention.
- Document demonstrating the follow-up of a tower crane driving training. (CACES® type)
- Have an electrical B0 B1 R S qualification which is valid at the time of training.

Cost:

- Price per person: Contact us

Prerequisite

- Technicians experienced in fitting and maintenance of tower cranes (minimum 3 years of experience).
- Have already carried out fitting of tower cranes, standard replacements and commissioning of tower crane mechanisms.
- Be a holder of a valid low voltage electrical B0 B1 R S qualification at the time of training.
- Be declared fit to work by the occupational health doctor.
- PPE: Safety shoes, helmet, high-visibility clothing

Duration:

Contact us

Registration mode

Terms:

- It is imperative to provide all requested documents on the purchase order to validate the registration. The requested documents must be valid for the duration of the training period (medical aptitude, electrical certification, certification of work at heights).

Prerequisites and PPE:

- Registration is considered validated when all expected documents are provided. As long as some are missing, the registration is not validated.
- The authorization to "work on cranes", issued by the occupational health doctor, is imperative.
- The electrical authorization, issued by a specialized agency, is mandatory for all "troubleshooting" training periods and the training periods mentioned.
- Certification of work at heights is required for most of our courses. It is issued by specialized bodies.
- The training Center is a technical place. Shorts, T-shirts, open shoes, and torn clothing (by fashion) are not allowed.
- In the machinery room (applies to all training periods), long sleeves are mandatory.
- PPE are mandatory on the training ground: safety shoes, harness (for training period), high visibility clothes (no shorts, no T-shirt except at a temperature exceeding 35 °C), gloves, helmet and goggles. Earplugs are mandatory for the GME telescoping training.
- The trainee must behave respectfully, delays are not accepted.

Invitation:

- Three weeks before the start of the class, we will send:
 - The invitation,
 - A list of local accommodations with negotiated prices.

Invoicing:

- At the end of the course, we will give you:
 - A training invoice,
 - a certificate of participation,
 - attendance

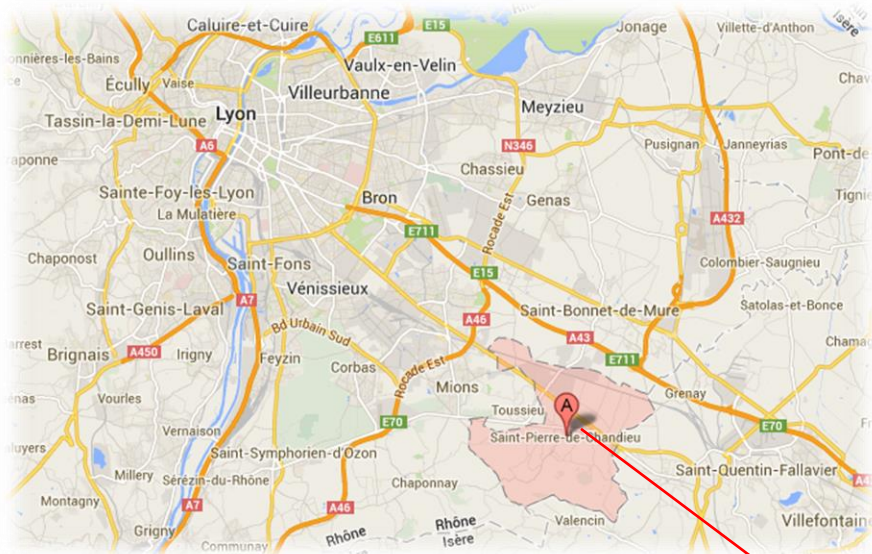
➤ *Prices are for information only: valid as of October 2020. They can be modified according to the economic conditions, within the limits authorized by current legislation or by unilateral decision by Manitowoc Crane Group SAS.*

Localisation



MANITOWOC CRANE GROUP FRANCE SAS
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69780 SAINT PIERRE DE CHANDIEU
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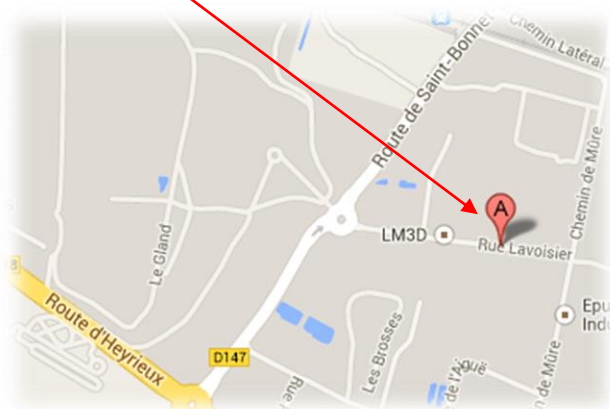
(+33) 4 69 85 92 20



GPS :

Latitude : 45° 38' 47" N






Longitude : 05° 00' 53" East





Satisfaction rate 2020

Like any approved and referenced training center, we are required to collect the opinions of our trainees both hot (at the end of the training) and cold (3 months later). These questionnaires are important and not only allow us to improve our training, reception method ... but also to maintain a quality of training that allows us to be eligible for OPCO funding.

In 2020, here are the results we obtained: (response rate 47%)

| | Average On-the-spot evaluation |
|---|--|
| Was the training helpful to you? | 3,84  |
| Was the training satisfactory? (quality of exercises, theory-practice distribution, etc.) | 3,72  |
| Was the entertainment satisfactory? (explanations from the trainer, clear practical cases) | 3,85  |
| Was the completion of the training satisfactory? (tools, course materials ...) | 3,69  |
| Was the organization of the training satisfactory? (reception, hotels, restaurant ...) | 3,61  |

| | Average delayed evaluation |
|---|---|
| Have the skills acquired during the training been useful to you during the last 3 months? | 3,4  |
| Is the content of the training appropriate for your work in the field? | 3,6  |

Number of trainees trained in 2020

As a technical training center, we train technicians in products and tools but also the public for the passage of CACES® test.

Here is the breakdown of the number of trainees trained in 2020

| Designation | Number of training | Success rate |
|------------------|--------------------|--------------|
| BASIS | 44 | 100,0% |
| TROUBLE SHOOTING | 106 | 99,7% |
| MONTAGE/ERECTION | 209 | 99,7% |
| TOOLS | 27 | 100,0% |
| TOTAL | 598 | |

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