



## CERTIFICATION TRAINING – 4 DAY TRAINING PACKAGE

**Duration:** 4 days – 14 hours of hands-on training & 18 hours of classroom theory  
**Level:** Beginner & Advanced  
**Attendees:** Technicians and Engineers working in Services Stations  
**Locations:** Oskarsham (Sweden), North Haven (US) and Singapore (Asia)  
 (Intra-company training)  
**Specifications:** Certificate delivered upon successful completion of the training course

### Learning objectives

This training leads to the certification of technicians and engineers and ensures the knowledge transfer required to install a Ni-Cd battery in a stationary application and ensure maintenance for maximum performance and reliability from power systems.

- ✓ To learn the basics of Ni-Cd stationary batteries,
- ✓ To acquire maximum autonomy to install a battery,
- ✓ To assure maintenance for maximum performance and reliability battery systems
- ✓ To resolve battery problems
- ✓ To obtain Alcad certification for service stations.

### Who should attend?

This training is dedicated to beginners and advanced people, like Technicians and Engineers in charge of the installation and maintenance of batteries onsite and working as members of Alcad certified service stations. Each participant will receive a training certificate after successful completion of the written test (minimum score of 65% required).

### Requirements

This training requires working knowledge of the basics of electricity and power electronics.

### Content Outlines

#### Day 1

Battery history  
 Battery fundamentals  
 Battery technologies generals
 

- Pocket plate
- Sintered PBE
- ULM

 Factory tour (Oskarshamn)  
 Sintered PBE manufacturing  
 AC/DC Systems

Constant voltage  
 Charge efficiency  
 Discharge properties

#### Day 3

Water consumption & ventilation  
 Battery commissioning charge principles  
 Battery installation  
 Battery commissioning  
 Practice  
 Battery capacity & service test

#### Day 2

Battery safety rules  
 Electrolyte preparation  
 Electrolyte preparation practice  
 Electrical characteristics  
 Charging principles  
 Constant current

#### Day 4

Battery maintenance & Troubleshooting  
 Battery sizing  
 Battery capacity & service test practice  
 Troubleshooting  
 Final evolution test  
 Questions & Answers

### Registration

You can register online, or download a registration form to mail or fax to us, or contact us to register over the telephone. If you have any questions or need additional information, please don't hesitate to contact us.

#### ALCAD LTD.

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