



Industrial Batteries (UK) Limited

Main distributor of Alcad Ni-Cd Batteries in the UK
and suppliers of Battery Support Services

Industrial Batteries (UK) Limited

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Evaluating the expected Lifetime of your Battery

A quality battery is a major investment from both security and financial standpoints and it is important to establish its reliability and expected lifetime. This is not always simple and it may be prudent to have a site survey to evaluate the following factors:

- The installation should be checked to assess that it is the best option to give the optimum life from the system.
- Examine the maintenance procedures to ensure that they are compatible with providing the best service from the installation.
- Ensure that the charging system is compatible with the complete installation and see if modifications are required.
- Carry out an 'expected life' survey to establish.
 - ✓ The actual age of the battery which may not be known where a new user has taken on the responsibility for the system.
 - ✓ The condition of the battery in terms of its actual health when compared to a battery which has been well maintained under ideal conditions.
 - ✓ The real expected life under the actual application conditions allowing for ...
 - ▲ Actual environmental and maintenance conditions.
 - ▲ Proposed environmental and maintenance conditions



An understanding of the battery and application are important in maintaining a good life. To achieve this the battery should be correctly maintained and should not be prematurely replaced when remedial actions could be taken to ensure that an extended life can be obtained.

Application Conditions.

The application conditions have a significant impact on the lifetime of the battery. This is a particular problem if the conditions have not been considered when the original specification was drawn up and the principle factors affecting the life of the battery are:

- The technology: Different battery technologies have different expected lifetimes.
- The temperature: high temperatures reduce battery life, particularly with lead acid batteries where each 10°C above ambient reduces lifetime by 50%.
- The number and depth of cycles required: Some batteries are not designed for deep cycling and cannot recover from this. This is not a significant problem for Ni-Cd batteries.
- The ruggedness of the battery: How well will it tolerate ripple, overcharge, over-discharge etc.

What should you look for?

Before attempting to do anything with the battery, please ensure your personal safety. It is important to follow the advice given in the installation and operating instructions which have been supplied and should be with the equipment.

In the case of open cells with translucent/transparent containers a visual inspection can give immediate information.

Examining the electrolyte level over a period can identify abnormal behaviour such as incorrect charging and poor maintenance procedures, all of which can affect battery life. Following this with simple voltage and current measurements will give additional information.

It is also important to look for leaks, any sign of overheating, cable damage, electrolyte leakage onto racks and containers, and problems with the venting system.

Although many of these items do not require specialist equipment to carry them out, the answers to them are reliant on many factors and require experience and expert advice to ensure that the correct remedial actions are taken.

In the case of Valve Regulated Lead Acid (VRLA) cells, very few measurements are possible and visual inspection can do little more than identify a battery which has experienced thermal runaway, which is, of course, too late. This means that electrical monitoring of the battery is more critical than with flooded cells as battery condition cannot be evaluated visually or with simple measurements.

How can IBLUK help you?

Industrial Batteries (UK) Limited - IBLUK - are a UK company specialising in premium quality industrial nickel-cadmium batteries and support. In addition to being the main distributor of Alcad Batteries in the UK and supplier of the full range of Saft Industrial Batteries, it also offers an extensive selection of approved accessories and post and presale services.

These include:

- A full range of **maintenance** accessories and documentation to help you in maintaining the batteries we supply to the required standard and, if you wish to have your maintenance carried out by an external company, we can arrange this.
- A **site survey service** to give an overview of the installation and give recommendations on the options possible. This can be simply recommendations on maintenance procedure to maintain the life of the battery, refurbishment options to extend the life of the battery and, if neither of these are possible, then to give recommendations for replacement.
- A **design analysis service** to ensure that you choose the right battery for your application and a survey service to evaluate your application requirements.
- A one-day **training course** for personnel involved with industrial battery installations and systems. This in-depth nickel cadmium battery course is designed for those with limited knowledge of the product and for those who wish to improve their knowledge.
- A **battery disposal and recycling** service to customers on a consultancy basis to support and guide you through the practicalities of the regulations.



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