

BATTERIES



Powerplants

Problems with batteries are a regular headache for hire companies. Either the machine won't start or, in the case of electric powered platforms, it "runs out of juice" way ahead of the expected time. But, according to the battery manufacturers, none of this should happen if the correct battery is chosen for the job and it is then well maintained.

So, one of the first basic distinctions that needs to be understood is the difference between a deep cycle battery and other types on the market. Optima Batteries defines the difference thus:

"Deep cycle means using the battery in an application that will typically discharge 60% to 70% or more of the battery capacity. An automotive battery is an SLI (starting, lighting, ignition) battery. Its plates are designed to deliver maximum power for a short duration. Starting a car typically discharges an SLI battery only 1% to 3%. When an SLI battery is used in a deep cycle

Batteries are at the heart of almost every machine used in the lifting industry. But not all batteries are the same as *Cranes & Access* reports

application, or in a vehicle with heavy accessory loads, the battery life will be

What do you want from a battery?

These are the things to look for:

- Optimal starting power regardless of temperature
- Extreme vibration resistance
- Long life
- Long storage time
- Non spillable in any position
- Low or no maintenance

shortened proportionally to how deeply it is cycled on a regular basis."

It goes on to say that you should use a deep cell battery: "Any time you need the battery to supply all the operating power for a vehicle or other device. Additionally, deep cycle batteries should be used in vehicles that have heavy accessory loads where the alternator cannot maintain the battery in a fully charged condition."

Optima's batteries are based on its SpiralCell Technology. Instead of flat plates used in traditional batteries, this uses two thin lead plates wound into a spiral cell with a glass-mat between to contain the acid. The technique of winding the cells, which are linked with solid connections, gives maximum performance with a minimum of size and weight says Optima adding that "This makes the battery compact, robust and easy to mount."

There are a large number of companies supplying deep cell batteries to the market and Squadron Batteries has just been awarded the sole UK distribution rights for Trojan Batteries. The contract covers the

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◀ next three years and includes all Trojan products.

“We are delighted with this agreement” said Stuart James, Squadron’s chief executive adding that “our superb next day delivery service and aftersales back-up offers peace of mind to key purchasing decision makers.”

Trojan’s batteries feature the Alpha Plus high-density paste formulation. Alphas are crystals of lead dioxide that reduce the electrical resistance and increase the structural strength of the active material. Squadron believes that Trojan Batteries deliver the industry’s highest concentration of alpha crystals which means stronger, more conductive active material structure – essential for long battery life.

Another feature of Trojan’s maroon coloured batteries is the Maxguard Advanced Design Separator. Separators are thin sheets of electrically insulating, porous material that are used as spacers between the positive and negative plates to prevent short circuits within the cells. Trojan’s design gives “superior electrolyte distribution, reduces negative plate expansion, lowers positive plate shedding and decreases battery maintenance.”

A full range of deep cycle batteries is also available from Dyno which describes them as suitable “for applications which require a permanent and long-lasting supply of electrical energy : electric boom lifts, scissor lifts, industrial cleaning machinery, etc.”

It adds that “These batteries are subject to deep discharge where plate erosion is substantial. To solve this problem, Dyno uses high density oxide to create a stronger cohesive bond of the active material and Flex-Sil multi-rib separator, which aids in deep cycle longer life.”

Dyno’s deep cell batteries are available in wet-charged or dry-charged versions.

One of the US’s largest battery producers is East Penn of Pennsylvania. The company has a 480-acre complex where it

Chargers

Once you have got your battery powered equipment, you need to think about chargers. Dyno offers built-in and separate chargers and offers the following advice to anyone thinking about buying a charger:

Before choosing ask yourself:

- i) Will the battery be partially or totally discharged before going on charge?
- ii) How much time do I have for a complete charge?
- iii) Do I need to charge batteries with different capacities and voltage?

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builds lead-acid batteries and accessories for the automotive, telecom-

munications, marine, commercial, industrial and stationary markets. It has recently joined forces with one of Europe's longest established battery manufacturers, Banner of Linz in Austria, to form a new joint venture company: Banner/East Penn Battery Services GmbH. The primary purpose of this new joint venture company, located in Linz, is to broaden East Penn's customer service in Europe and Banner's customer service in North America in the areas of marketing, distribution, product development, engineering and manufacturing technology.

Daniel R. Langdon, president of East Penn said, "This is an excellent opportunity for both companies to strengthen their international market position and customer service, especially in this era of consolidation of both customers and manufacturers. East Penn customers have been expanding internationally and this joint venture is just one more step in our ability to serve them."

The president of Banner GmbH, Thomas Bawart, also expressed his enthusiasm as he stated, "Banner and East Penn are similar in size, private ownership and philosophy. This joint venture is a natural fit for both companies. We can serve each other's customers well with integrity and superior service while benefiting from technology and engineering exchanges as well."

Banner added that it has achieved major success in selling East Penn Deka batteries to the access platform industry.

A final point to consider is that if the battery doesn't seem to be working properly, it may be that your customer is not looking after it properly. One hire company discovered that the reason its platforms "were not working" was because the electrical outlet that was being used for overnight charging – was always switched off at night! Another interrogated the "black box" data recorder mounted on the electric scissor lift, to find that his scissors were not charging because they were being used for an unauthorised "mini shift" during the night – apparently the security staff had spotted an ideal way for speeding up their night time patrols. ■

