



Do ferroresonant chargers still have a place in battery charging?

One of the larger battery/charger companies selling chargers in the USA have announced that they are no longer manufacturing ferroresonant chargers and have set 7/31/15 as the last date to accept orders.

Is there something wrong with ferroresonant charging that should make all charger companies follow that lead?

Let's consider ferroresonant technology. The purpose of a ferroresonant transformer is to step the AC line voltage to match the voltage of the lead acid battery to charge. This is accomplished by using magnet wire, steel laminations and magnetic shunts to form a transformer. A ferroresonant transformer has no moving parts and can run for up to 50,000 hours trouble free. This technology has been used for over 50 years. Does that mean it is antiquated and outdated? Hardly, the lead acid battery is over 100 years old and is still the staple of the material handling industry today. How about internal combustion engines? Now there's a 125 year old technology. Just because the technology has been around for a long period of time does not mean it is out of date for today's requirements and applications. While the transformer itself may be "old technology" today's sophisticated charger controls brings that technology to current standards very nicely.

What are some common misconceptions about ferroresonant technology?

1. *Poor Efficiency.* The ferroresonant chargers we manufacture have an efficiency of 87% - Higher than some of the high frequency chargers that are on the market today.
2. *Ferroresonant chargers cannot control output so they over-charge and heat the battery.*

The ferroresonant transformer is designed for a specific battery amp-hour range. The curve is designed/built into the transformer so chargers matched to battery correctly will produce a perfect charge every time.

The use of sophisticated charge controls allow our ferroresonant chargers to be much more intuitive with respect to battery /charger interaction so our chargers can determine when the battery has completed its charge and shut down preventing overcharge and heat.

What are some of the advantages of ferroresonant technology?

1. Dependable, failsafe battery charging. As stated, a properly matched battery and ferroresonant charger will result in a correctly charged battery every time. If a component fails on the charger, it will either go to a low output, or no output condition to protect the battery.

2. Better protection against AC line problems and other “environmental” issues. No equipment likes to have transient spikes course thru it or be subjected to heat and humidity but the brilliance of the ferroresonant transformer is that it can handle a wide range of these problems and keep charging batteries. – (a real weakness of the newest technology PC board produced high frequency charger.)
3. High efficiency and power factor. Modern ferroresonant transformers with current controls are very efficient. Better than some of the high frequency models being sold today.
4. Long life! It is not unusual to see ferroresonant chargers in service for 15+ years.
5. Easy field diagnosis and repair. One of the biggest advantages of the ferroresonant charger is that the logic is easy to follow and repair parts are standard to the industry. Most repairs are done in one visit.
6. Availability in every AC line voltage : Single phase and three phase.
7. Long term warranty, typically 10 years. The HF charger will claim long term warranty but only on components that are not likely to be damaged by the aforementioned problems that they are confronted with.

So, Ferro Magnetics will continue to provide the highest quality, high efficiency ferroresonant chargers for a long time. We will also continue to manufacture the highest quality high frequency charger so the *application* can dictate which is best, not the limitation of the supplier.

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