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microfusion inductor

New patent for inductor manufacturing

innovativeheating

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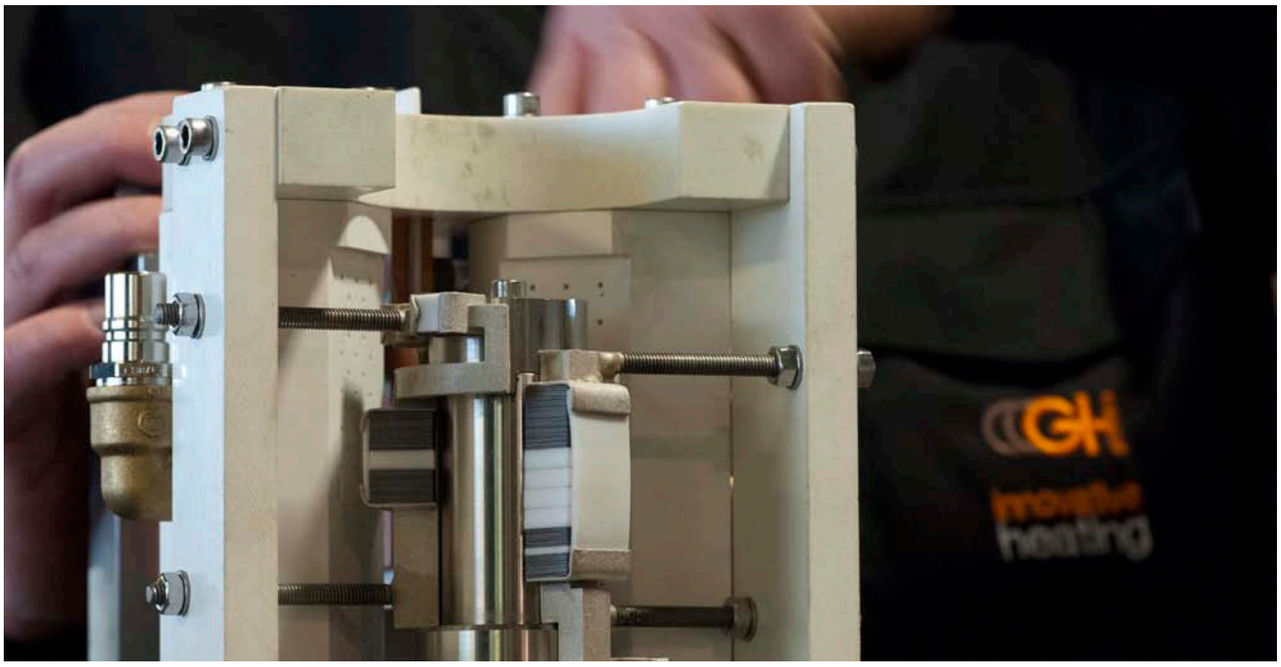


GH Group has patented a revolutionary manufacturing method

One of the most important aspects of an induction heating installation is the inductor itself. GH Group has patented a revolutionary new system for inductor design and manufacturing using exclusive microfusion technology.

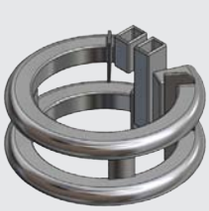
Traditional inductor manufacturing is a one-off process – the raw material is shaped by hand to conform to engineering specifications. This makes it exceptionally difficult to manufacture absolutely identical inductors with the same performance characteristics.

With GH microfusion technology, identical inductors can be produced from the same manufacturing mold. This increases repeatability and consistency when multiple induction systems are running the same process, and significantly reduces maintenance and calibration time when inductors need to changed.

What does this consist of?

The new technique for manufacturing inductors by means of microfusion consists of the following stages:

1



Designing the coil

There are two options: for new design a 3D software is used; and for existing coils design, 3D scanning is performs.

2

3D printing of the manufacturing mould

3

Obtaining the final coil by making use of the microfusion process

What are the advantages over traditional inductors?

The result of microfusion method in comparison with the traditional craftsman manufacturing process is:

Durability

- Increase cooling efficiency.
- The areas where current passes through have improved.
- Weak points such as welds will be avoided.
- Increase in cycles.
- Optionally, it can be used a compound material 25% more conductive than copper

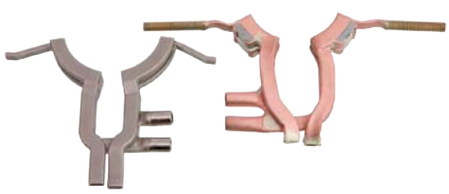
Repeatability

After being designed, the printed coil copies maintain a decimal dimensional accuracy.

This guarantees the precision of the hardening pattern in each inductor which result in the possibility to cut down time required for changing reference.

Delivery times

After designing and parameter the coil, the data will be stored in an online database. The manufacturing will be based on these data. So for spare coils the manufacturing times are reduced and as a consequence, delivery times of inductors can be cut down considerably.



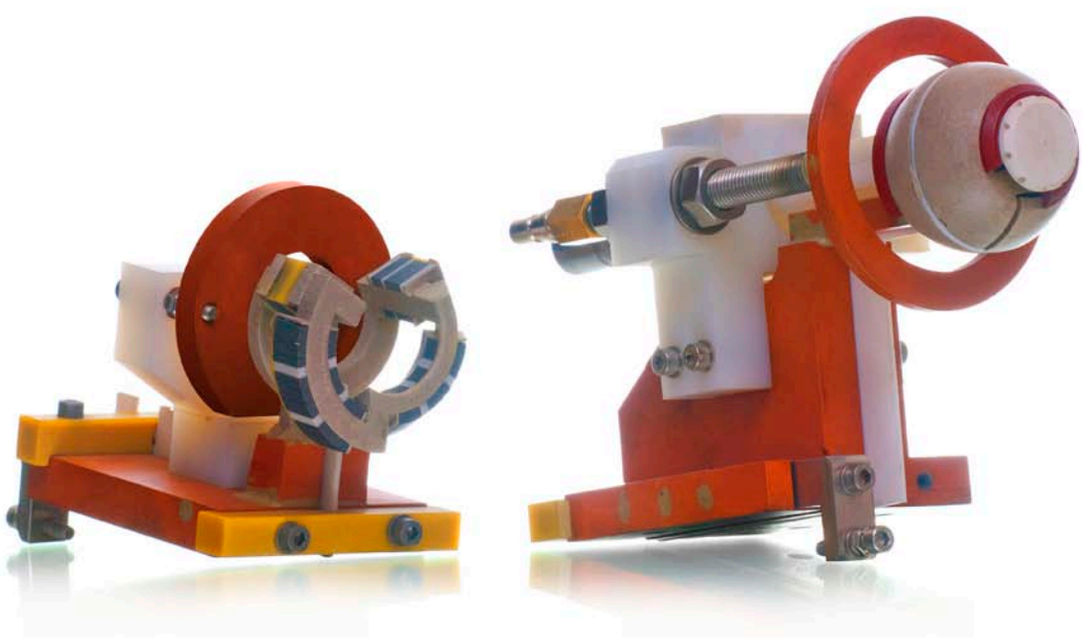
An example of a comparison between microfusion and traditional manufactured inductors

An example in which the reduction of welds can be seen

Another example of an inductor

What can this new technique be applied on?

Crankshafts // Tripods // Wheel hubs // Camshafts // Steering racks // Valves // Rocker arms // Clutches
C.V. joints // Bearings // Gearing // Railway rails and wheels



your business benefits

Increase in production

As microfusion inductors have a longer working life, production stoppages for fixture changes are reduced. And when the inductor does need to be replaced with a new but identical fixture, maintenance and **recalibration time will be minimized.**

Reduction of stocks

The increase in cycles of the inductors combined with the reduction in delivery times result in a reduction of spare stock.

Quality of the parts

Multiple inductors can be made from same pre-qualified mold with high dimensional accuracy. The ability to manufacture and supply identical replacements ensures that heating profiles are maintained when fixtures are changed, and eliminates the need for recalibration.

Savings in maintenance

The increase in cycles reduces the consumption of inductor spares. Furthermore the shorter reference changes minimize the labour time required for such changes

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About GH Group

GH Group is one of the leading induction heating technology group of companies serving different industries using medium and high frequency induction worldwide.

Makes as GKN, Mercedes, BMW, Audi, Renault, Ford, Honda, Volvo, Opel, SEAT and others rely on the quality of the GH Group. So do the wind power sector, the building sector, the electricity sector and even industries making pieces used in everyday life. All of them form part of GH solutions.

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