



Solutions for the offshore industry

A guide to the benefits of induction heating

Speed and safety. Why induction heating is ideal for offshore applications.

Flameless, fast, controllable and mobile—these are just some of the features that make induction perfect for a range of offshore applications.

Induction heating looks like it could have been invented specially for the offshore industry. To start with, it's a flameless, no-contact heating method that can be used in areas off-limits to open flames. Induction heating is mobile, too. Compact yet powerful induction systems are easily transported to even the most inaccessible sites. Induction is also flexible. The same system can be used for numerous applications—for everything from pre- and post-heating of pipes to emergency repairs on offshore installations.

Some typical applications

The flexibility of induction heating means it can be used in practically any situation requiring fast, localized and controllable heat. EFD Induction systems can be used for the following applications:

- Post-weld heat treatment
- Pre-weld heat treatment
- Pre-heating before coating
- Tube bending
- Shrink fitting and removal
- Removal of paint and coatings
- Curing of coatings
- Pre-heating prior to cladding
- Pre- and post-heating of swaged ends



EFD Induction at work in the North Sea. The photo shows a pipe laying vessel that carried EFD Induction equipment for post-weld heat treatment.



An example of induction pre-heating. The pipe is being heated prior to receiving an anti-corrosive coating.

Tested and approved

Platform solutions

Several offshore operators and maintenance companies have made EFD Induction their preferred supplier for on-platform shrink fitting applications such as the removal and replacement of coupling hubs, sprockets, gears and thrust collars. Performing these tasks on the platform is a major cost saver, as components do not have to be shipped ashore.

Of course, purchasing induction equipment for occasional “one-off” tasks is not always viable. That’s why we offer project-based solutions. Simply tell us what your problem is, and we supply the equipment and the qualified engineers to fix it.

Pipelines

Our equipment is used for everything from weld heat treatment at spooling bases to overland and subsea pipe laying. Mobile Minacs are ideal for these jobs, thanks to their compact size and compatibility with customized coils. For example, Minacs are often used on pipe-laying vessels to cure pipe coatings, and for pre- and post-weld heat treatment for tie-ins.

Another example of mobile induction technology is a project where we helped implement a subsea hot tapping solution. The result enabled the welding of a branch pipe onto a 20” main high-pressure gas pipe 145m below the surface of the North Sea without any interruption in the flow of gas.



Above: Mobile induction systems perform repairs onsite—even on production platforms. Here, an operator replaces a bearing that has been heated with an EFD Induction mobile Minac system.
Left: Another example of induction pre-heating, this time for pipe welding. Note the shaped copper coil that has been custom designed for this specific application.

The EFD Induction Minac. Proven in the toughest environments.

Minac is one of EFD Induction's five equipment families, and the one most commonly used for offshore applications. Many Minac models come in 'Twin' versions offering two independent power outputs. The Twin versions feature split control panel

displays from which each output can be set up and controlled. Minacs can also be used together with separate heating stations. This lets the Minac support large, flexible coils that can be shaped onsite to fit curved or irregular-shaped workpieces.

EFD Induction systems have been used for hot tap welding on the bed of the North Sea. Here, the subsea work skid that stores the EFD Induction equipment is hoisted back onto the ship.



EFD Induction has to date installed thousands of heating solutions for a vast range of industrial applications—bringing the benefits of induction technology to many of the world's leading manufacturing and service companies. EFD Induction has manufacturing plants, workshops and service centers in the Americas, Europe and Asia.

Learn more about EFD Induction and our solutions that are boosting productivity for companies around the world. Visit: www.efd-induction.com

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