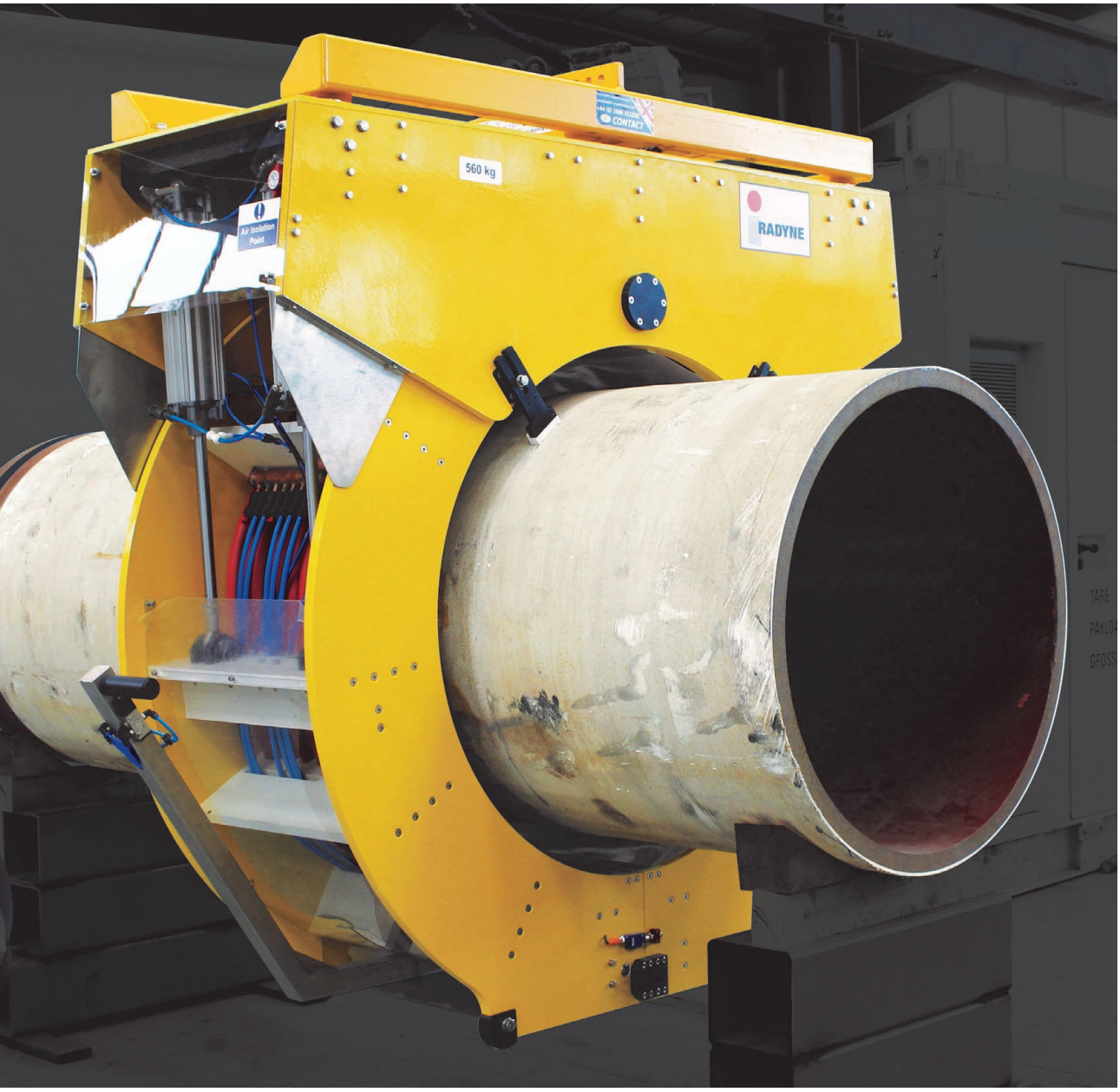
INDUCTOTHERM GROUP

Radyne Offshore

Field Joint Processing Solutions for the Offshore Industry



RADYNE

36" Radyne Merlin™

Shore to Shore

Radyne has been supplying the offshore industry for over 25 years. Our equipment and systems are designed and built at our UK manufacturing site, with full engineering, design and test facilities.

The Radyne Merlin™ system has evolved over two decades proving itself in the field on many prestigious pipe lay projects. Including Blue Stream, Medgaz, Walker Ridge, Guara Lula, Johan Sverdrup and many others.

Radyne UK provides comprehensive after sales support, including teams of experienced fully qualified offshore service engineers to support your projects as required.

Radyne Merlin™

Field Joint Processing Solution for the Offshore Industry

Radyne Merlin™ systems use patented technology to deliver the most efficient means of heating and coating field joints by carrying out both operations simultaneously within a single machine.

This is a major benefit to offshore pipe laying operations as the Radyne Merlin™ provides reduced field joint processing cycle times, allowing faster throughput of field joints prior to laying.

Our system combines integrated induction coils and coating heads for a fully automated heat and coat process. This allows for the precisicion application of a two-coat FBE and co-polymer anti corrosion coating.

With Vertical and Horizontal operational capability and multiple coating heads the Radyne Merlin™ system provides a faster, more even coating. Standard coil modules combined with a PLC recipe system allowing for simple reconfiguration to accommodate multiple pipe sizes and field joint specifications.

The coating process is controlled by thePLC using low temperature pyrometers to measure the surface temperature of the pipe for precise control. The intergrated SCADA software records the system process parameters for use within your quality control system.

The Radyne Merlin™ comes in several standard machine sizes with interchangeable induction coils that covers the full range of pipe sizes.

Product Name	Size of Pipe	Number of Coils
18" Merlin™	8" - 18" Pipe	3
26" Merlin™	20" - 26" Pipe	2
36" Merlin™	28" - 36" Pipe	2
48" Merlin™	38" - 48" Pipe	2

Bespoke sized units for specific projects can be designed at the request of customers.

Radyne Clam Coils

Radyne 36" Clam Coils

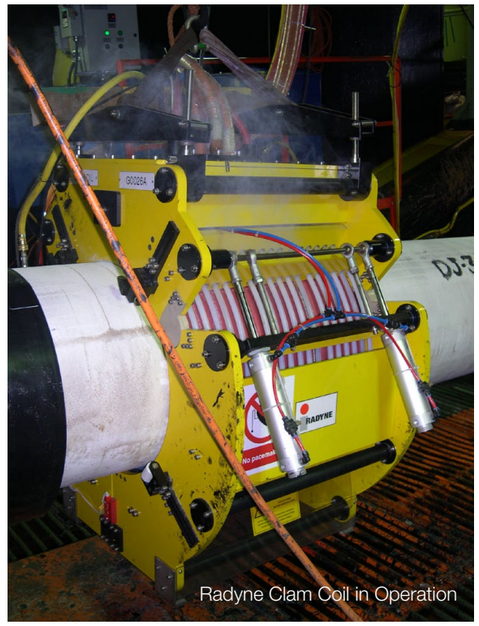
Induction Clam Coils

Radyne Clam Coils provide induction heating of field joints for a range of applications. High powered water cooled induction coils with reliable quick action electrical contacts allow for rapid and efficient heating. The coil opening mechanism is pneumatically actuated for postioning on and off the pipe.

The Clam Coil frame is manufactured in a non-conductive composite material with switches ensures correct coil closure before application of power. Optional integrated pyrometer and PLC control system allow for an automated heat cycle and temperature monitoring.

Designed to suit your needs, our coil heat profiles are optimised using CAE software to give uniform heating in order to meet rigorous field joint specifications. The Heat Affected Zone is minimised, reducing unwanted heating of the parent coating.

Radyne Clam Coils are designed to operate with the Radyne 450 kW TC3 induction convertors, with basic local controls or as part of the advanced integrated Merlin systems.



Radyne Clam Coil in Operation

Applications

Heat Shrink Sleeve Application

Radyne Offshore Clam Coils are used to preheat the field joint prior to the application of heat shrink sleeves. The Radyne induction-powered Clam Coil system offers quicker, safer, controllable and repeatable heating compared to the use of gas fired torches.

Heating Prior to Welding

Pre-weld heating is fundamental to the process of butt welding, to ensure the integrity of the welded joint. The Radyne induction heat process provides the perfect method of heating pipes to the correct temperature within closed limits.

Post Welding Heat Treatment

For post weld heat treatment of field joints, PLC controlled heat programs power the Clam Coil, as dictated by the steel grade of the pipe.

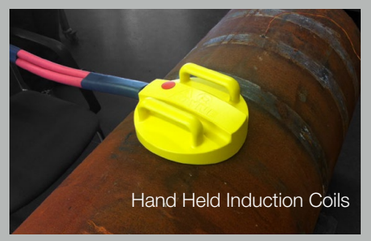
Radyne Containerised System

SMALL but MIGHTY

The Radyne Flexitune power supplies are ideal for use with Hand-Held Induction Coils. A useful tool when a small mobile induction heating solution is required in an offshore production situation.

Used for applications including, coating removal prior to anode instillation. As a mobile patch repair tool, allowing the holiday repair of line pipe coatings to be easily and safely carried out.

The Radyne Flexitune is a compact and flexible induction power solution and is available in capacities from 5kW to 30 kW, with an operating frequency range of 20kHz to 60kHz.


Hand Held Induction Coils

Containerised Systems.

Containerised Solutions for Field Joint Processing Applications.

Radyne Offshore Containerised Systems provide a "Ready to Go" solution that is essential for the customer who require instantly reliable results, flexibility across multipule sites, easy installation and a simple connection to mains power.

This uniquley innovative portable, containerised range has been designed and developed to house a full induction heating system.

Our 20ft container includes two Radyne Offshore 450kW TC3 power supplies and two independant water chillers. The self contained provision of water chillers eliminates the need for a water connection on site which ultimately makes the system easy to accommodate.

So what happens in the unlikely event that our machines breakdown? Radyne Offshore understand that time is money and that any machine breakdown can result in serious amounts of lost revenue. Our containerised system has a high level of failure provision and provides you with a peace of mind that is not normally experienced.

With the provision of two Radyne Offshore 450kW TC3 convertors, one convertor is operational while the second acts as a back-up. With the switch control sited between the two units, operators are able to select either unit to run at any moment in time. The two chillers act in a similar manner to the convertors but with the added ability of electrically switching between the two chillers units using the HMI interface unit.

Our Radyne Offshore Containerised Systems come in two sizes. A 20ft housing containing two systems as described above or a 10ft housing that contains just a single system. Most importantly both of our systems are built to the offshore standard.

DNV2.7-1

Radyne Dual TC Convertor

Offshore Power House.

Built to Withstand the Toughest of Environments.

The powerful combination of advanced engineering, attention to details and 50 years' experience in induction heating has helped Radyne to become a world leader in the production of medium frequency convertors.

The Radyne TC range of convertors offers a wide selection of power and frequency combinations. They incorporate the advance technology ensuring the high efficiency, flexibility and operational reliability suitable for the most challengining climatic and industrial environments. With over one thousand units in the field including many offshore the Radyne TC has proven itself reliable and up to the task.

The Radyne TC convertors are easy to install and operate, featuring extensive safty protection and simple fault diagnosis.

TWIN TANK FLUIDISED BEDS

Twin Tank Fluidised beds comprising of tanks, powder pumps and pneumatics to provide FBE powder and co-polymer to the coating heads of the Radyne Merlin™ Heat and Coating unit.

Electrical activation of the appropriate pumps is pre-programmed through the PLC. The individula parts are mounted on a common base on wheels, complete with the instrument array.

The Fluidised Bed integrates with the Merlin™ control system, which is at the heart of the heating and coating process. Data parameters are collected and stored in order to facilitate fast and simple set up of heat and coat cycles.


Twin Tank Fluidised Bed

We can help you do great things with metal.

Contact us by:
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Radyne End Pre Heat Coils

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