



PARMAPROGETTI  
*pipeline technology*



Since 1976 Building Knowledge Innovation and Expertise

# Providing Pipeline Heating Solutions

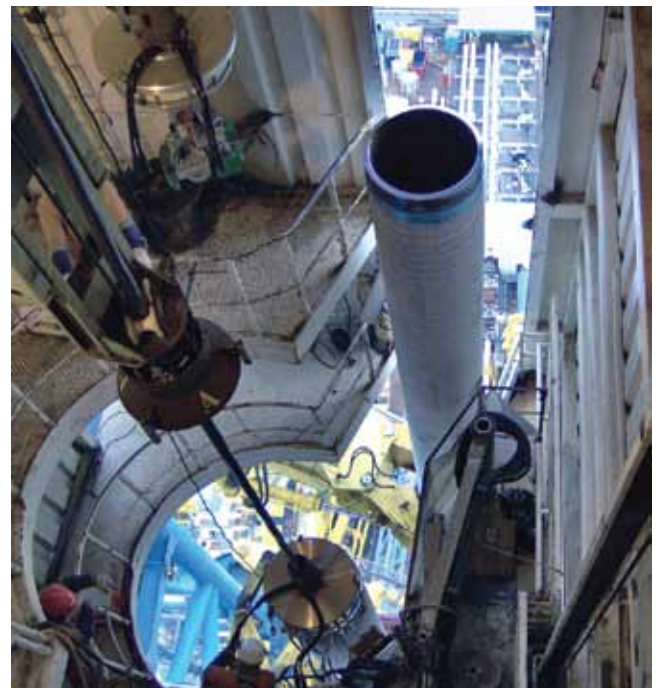
For decades PARMAPROGETTI has stood out for its customisable products and services. We have collaborated in the most important pipeline projects with our innovative and high performing products



## ONSHORE

Our **GIANO** generators are the most efficient solution for onshore fields: they are self-powered with a genset which powers a built-in inverter for the induction heating and can power other equipment at the same time (welding machines, grinders, etc.).

Onshore operations require pipeline vehicles that can work under any environmental condition and with sources of electricity of different power. Our Giano generator can be easily fitted on pipeline vehicles providing all the necessary power.



## OFFSHORE

Our **DELTA** generators, thanks to their high reliability and short heating times, are the perfect compromise for offshore operations where production cycles and time-scales are well defined, scheduled and have to be strictly followed.

**DELTA** units are interchangeable and can work independently and in cluster (in case production has to be speeded up or more power is needed). **DELTA** generators can be easily fitted in closed environments, such as vessels, or where the space is limited.

We provide complete offshore systems, both for shallow water S-Lay (horizontal installation) and deep-water J-Lay (vertical installation) projects, as well as complete onshore systems including tracked or wheeled means of transport



# Equipment for Pipe Applications

PARMAPROGETTI designs, manufactures, sells and rents products and accessories for the pipeline industry. Our induction and resistance heating equipment is mainly used in these applications



## PREHEATING

### Before welding

Both our induction and resistance heating systems are used to preheat the bevel of the pipe to avoid defects such as cracking and lack of fusion. Induction heating is the most efficient method for quick and repeated heating, as in the case of pipeline construction, while resistance heating is commonly used for small joints.

### Before coating

Our induction heating generators, used with our coils, are the most suitable and easy to control solution for preheating the pipe surface before the application of thermal insulation or heat-shrink materials.

## HEAT TREATMENT (PWHT)

Welded parts are subject to high pressure whilst in operation and require a further process of stress relieving and tempering. This particular heat treatment is called post weld heat treatment (PWHT), a controlled heating cycle consisting of a heating phase, a holding time and a controlled cooling. Our induction heating systems are the best choice when the parts to be heated are too large or non-transportable and the process cannot be carried out in a furnace. When the parts vary and are large in number, we recommend our resistance heating generators and accessories.

## COATING

Special protective coatings, such as FBE or heat shrink sleeves, are always applied on pipelines tubes, except for the jointing area which is coated with the protective material once the joint has been welded. Induction heating is used to preheat the pipe surface as this prevents oxidation and allows the insulating material to adhere well and quickly, without affecting the adjacent areas. Our induction heating generators and coils can be used for any coating applications onshore, offshore and in coating plants.

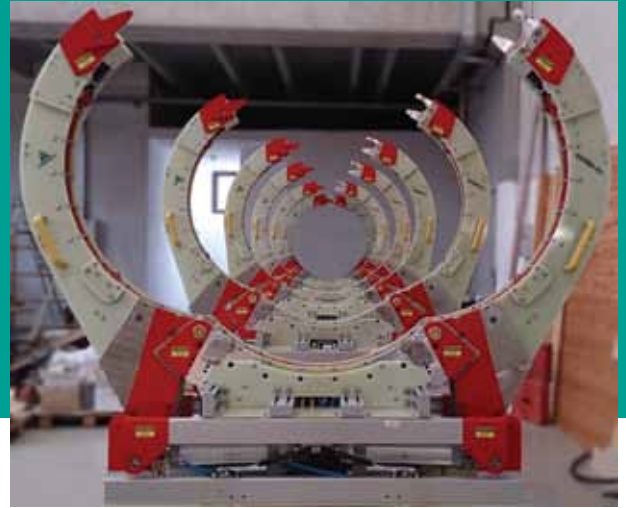


We provide solutions with any power that can fit any size of pipe, and with set-ups designed to customers' specifications



Our extensive experience and know-how are completely at the service of the customer and are constantly applied in researching and developing high-tech equipment to meet all the needs of the sector

# Our Products and Customised Solutions



## INDUCTION HEATING GENERATORS

The process of heating pipes and metal objects by induced magnetic fields is much more versatile, safer and faster than any other traditional heating method (such as the flame). As the heat is generated inside the metal object itself, induction heating allows the transfer and control of high powers even in limited areas, it guarantees temperature evenness across the heated surface and prevents oxidation.

### Inverter Static Generators Series **DELTA**

- Compact , easy-to-handle and user friendly
- High performing and efficient
- Power adjustable
- Operate always with power factor 1 ( $\cos\phi = 1$ ), thus preventing magnetic loss in the output cables and allowing for runs of more than 100m to be set up
- Can be supplied by a 3-phase network, a genset or a 3-phase alternator connected to the PTO
- Can operate connected in clusters, multiplying the power available
- Allow different levels of programming
- Suitable for all pipeline applications

### Self-powered Inverter Generator **GIANO200**

- Equipped with a static inverter and a genset
- Dual function: one single-phase output for induction heating and one 3-phase output for other service power lines (welding machines, grinders etc.)
- Achieves the best performance levels in all onshore preheating and coating applications

## RESISTANCE HEATING GENERATORS

The process of wrapping with appropriately insulated resistance heaters a pipe or a metal workpiece is the traditional heating method for parts that cannot be transported or that have a complex geometric shape.

### Static Generator **DELTA3R**

- Multiple independent outputs each supplying our 80-volt insulated resistance heaters
- Automatic heating cycles working in any conditions
- Recommended for PWHT in power and chemical plants

**Our equipment is natural air cooled and does not require additional cooling systems. Optional remote control is available.**



Thanks to PARMAPROGETTI's exclusive software, all our generators give the same high performance, whether they are 3-phase line-powered or self-powered with a built-in diesel genset: they are designed to carry out automatic heating cycles in all working conditions

Our team of engineers and technicians are always available to provide on-field and remote assistance and support to customers at every step of the project

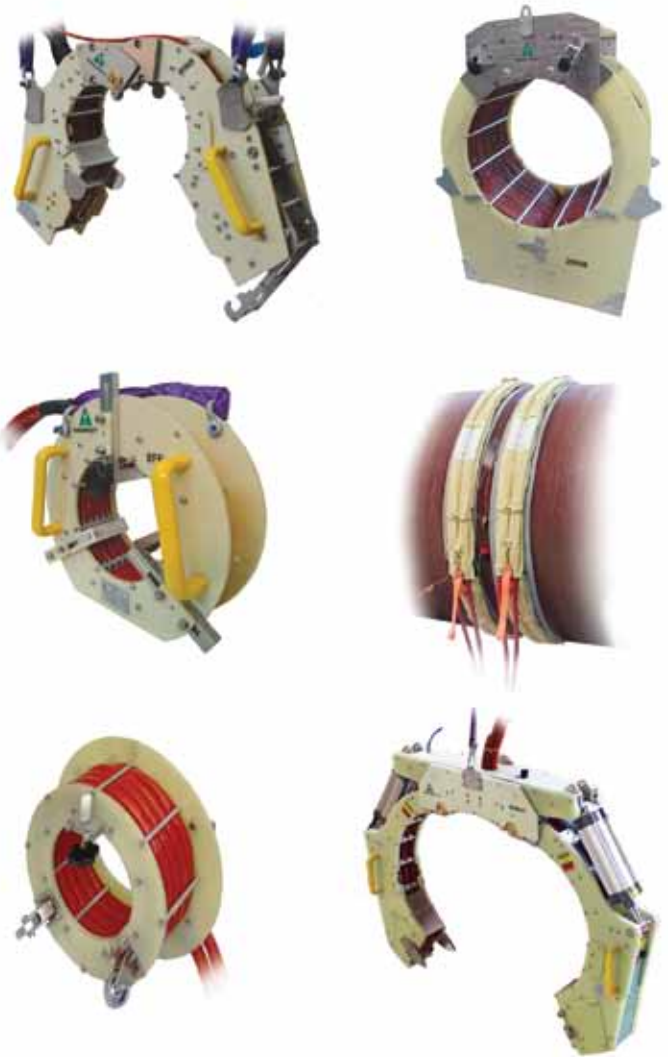
## COILS

We design and manufacture a wide range of induction coils suitable for all applications:

- Openable external coils and fixed internal/external coils for Welding Preheating
- Openable external coils for Joint Coating Preheating
- Fixed/openable external coils for PWHT
- With automatic handling systems and with opening/closing systems on request

## OTHER ACCESSORIES

- Resistance heaters
- Insulating materials
- Temperature reading and recording devices
- Cables and thermocouples





PARMAPROGETTI



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