

# Powering up Milan's water supply

Massenza has recently delivered a new electric rig for a continuing well-rehabilitation project in Milan, Italy

**P**iacenza-based drilling company Idrogeo is working together with Milan Underground Integrated Water Service, the company in charge of the Milan aqueduct, to restore non-functioning or disused water wells for the city.

As previously reported in *GeoDrilling International*, the purpose of the project is to return the wells back to full flow and to maintain them to the highest standard.

In order to achieve this, Idrogeo has acquired a new drilling rig – the Massenza MI55, which is suitable for water-well, mineral-exploration, geothermal and coring applications to great depths. With 55t pull-up and a 28.5t pull-down capacity, and due to a rotary head with a maximum torque of 23,500Nm and maximum speed of 150rpm, the MI55 can reach up to 1,400m. The rig can be used for direct and reverse-circulation applications with mud, air or water, as well as coring.

What makes the new machine truly stand out, however, is the fact that it's an electric rig with zero emissions. This innovative solution, strongly sought-after by Idrogeo, has been realised thanks



to the close cooperation between the company and Massenza's technical department.

The rig is driven by two electric motors mounted on the machine, one with 160kW power at 1,490rpm and one with 200kW at 1,490rpm. The motors are driven by a separate generator.

## URBANISED RIG

According to Massenza, the benefits of this innovative system are numerous, especially for use in urban areas, where regulations can create problems or extra costs for the contractor.

Firstly, since the equipment has no diesel engine, this means zero emissions emitted from the rig itself. This can also solve the issues caused by continuous changes in city centre rules regarding engines. Today more than ever, only the latest versions of engines are accepted.

The generator, which powers the electric motors of the Massenza MI55, can be rented, which means the drilling com-

pany can always hire the latest generation model and meet the current requirements regarding pollution.

Moreover, the drilling rig is relatively quiet, which is a benefit for drillers on the job site, but also solves the problem of drilling noise in the city centre.

## FIT FOR THE JOB

Idrogeo needed the MI55, particularly, to finish a technically difficult 450/400mm well, which presented the company with many additional problems.

The old well casing had to be removed from the well, and the pull effort needed for this was great, but it was well within the capabilities of the Massenza MI55.

The higher mast capacity of 60t and the main winch with 15,600kg of pull capacity has made the whole operation feasible using only the rig. The old wells were thus removed and the new ones installed without the help of a special crane. ▼

*Above: recently delivered to Idrogeo, the new electric MI55 is now working in Milan*

*Left: Idrogeo needed the MI55 to finish a technically difficult well installation*