

Extraordinary maintenance on a command and control system of a ORMIG self-propelled crane at SORIMA s.p.a. – Port of Chioggia Venice.



Purchaser: **MULTISERVICE S.R.L.**

Order: January 2002

Time required: About 2 months.

Mechanism data:

Principal diesel engine: MERCEDES BENZ 500 kW for pumps entrainment.

Winch manoeuvre: 2 125 kW RIVA CALZONI hydraulic engines.

Tower rotation: 2 15 kW REXROTH hydraulic engines.

Jib movement: 1 piston L=600mm D=400mm.

Crane translation: 2 50 kW hydraulic engines.

Maximum ropes' capacity: 40t.

Description:

The translating crane on tire needed a renewal in the control system in order to increasing the reliability. A recent SIEMENS S7 control device, with the possibility of communication on data bus and CPU with floating point calculation, has been then proposed instead of the relay logic.

The power movement part has not changed with the employment of pumps and hydrostatic engine. A particular care has been taken of the hydrodynamic system control part with the insertion of new proportional controls for the pumps, new transducers for the system control and new control and command systems of the principal DIESEL engine.

All the system results monitored on board by an HMI operator interface with diagnostic process and report of the alarm signals. Moreover, the system is controlled by a remote modem, which allows to check the machine's state from station with a GSM connection. The hardware engineering has engineered all the system with the aim of maintaining and saving all the existing mechanics and hydraulics in order to bear many working cycles.