

***Extraordinary maintenance with boards and control system replacement of a COSTAMASNAGA CM163 crane at Terminal molo B – Porto Marghera VENICE.***



Purchaser: **T.M.B. S.R.L.**

Order: 15/01/2001

Time required: About 4 months.

**Mechanism data:**

Feeding: from 400 Vac low network with cable reel.

Bucket manoeuvre and lifting: 2 90 kW asynchronous engines.

Jib movement on sea side: 1 35 kW asynchronous engine with inverter.

Bridge translation: 6 12 kW engines with rotary control.

Maximum ropes' capacity: 30t.

**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.

The power part has been realised for the lifting manoeuvres, bucket manoeuvre, bridge translation, with a control system of slip-ring motors with start on rotor resistances. The manoeuvres with the need of repeatability and precision have been realised with Siemens SIMOVERT frequency converters, which make the existing engines start with a rotor short circuit.

All the system results monitored on board by an HMI operator interface with diagnostic process and report of the alarm signals. The hardware engineering has engineered all the system with the aim of maintaining and saving all the existing mechanics in order to bear many working cycles.