

Engineering and supply of parts for extraordinary maintenance with replacement of the actuators and remaking of the deck control system of Ceretti&Tanfani CT158 crane at Porto Marghera Venice, Molo B.



Purchaser: **SIEMENS s.p.a.**

Order: 21/02/2005.

Time required: About 6 months.

Mechanism data:

Feeding: 3 kV average tension network with cable reel

Principal transformer: 3/0.4 kV 1600KVA ONAN

Bucket manoeuvre and lifting: two engines in direct current of 300 kW each one.

Principal journey translation: 2 engines in direct current of 50 kW each one.

Jib movement on sea side: 1 75kW asynchronous engine.

Bridge translation: 12 12,5 kW engines with rotor command.

Maximum capacity load of the cables: 45t.

Description:

The grabbing cranes on tracks needed a renewal in the control system in order to implement its reliability. The central PLC type S5 (year 1984) has been replaced with the latest SIEMENS S7 with the possibility of data bus communication and with a floating point computation CPU.

The power part, realised with Thyristors bridges controlled by analogue logic, has been replaced with totally digital conversion groups, maintaining the existing engines.

Replacement and re-engineering of the flexible cable systems lines for the principal journey and operator cab with the replacement of cables and supporting trolley.

All the system is monitored on board by PCs with diagnostic process and report of the alarm signals.

The hardware engineering has engineered the system "ex novo" maintaining only small parts of the existing one and applying the newest technology for safety and control functions.