

**Terminal de Cruzeiros de Lisboa – 2.ª fase  
Santa Apolónia, Lisboa**
***Lisbon Cruise Liner Terminal – 2<sup>nd</sup> Stage  
Santa Apolónia, Lisboa***
**Work performed**

The 2<sup>nd</sup> stage of the job involving the Rehabilitation and Reinforcement of the Quay between Santa Apolónia and Jardim do Tabaco, at a cost of € 38 million, has been concluded by a consortium that includes Seth.

This stage concluded the rehabilitation of the present quay between the Santa Apolónia liner terminal and the Navy Dock, as well as the construction of a new advanced structure, ensuring greater water depth to allow the berthing of present-day liners.

The river-front crown of the new berth now stands at a level of +5.70 m (chart datum), which means that continuity will be given to the present Santa Apolónia Quay with which it is now connected following the conclusion of the job.

The works also involved general dredging of the manoeuvring basin and berthing basin, improvement of the foundation soils behind the existing quay. Besides these, other works were carried out, such as reinforcement of the massif of the superstructure of the existing quay including soil-nailing and sealing fissures, as well as the construction of pile caps, placement of pre-beams, erection of pre-slabs and complementary concrete-pouring work.

The contract also includes construction of a new quay 475 metres long and a variable width of between 20 m and 55 meters, using reinforced concrete piles.

The technical infrastructure works and the fitting out of the quays include the water, electricity and storm-water networks, as well as connecting up with the existing water mains.

**Main Quantities:**

**Piles** – 435 units (1,000 mm internal diameter piles of an average depth of 38 m)

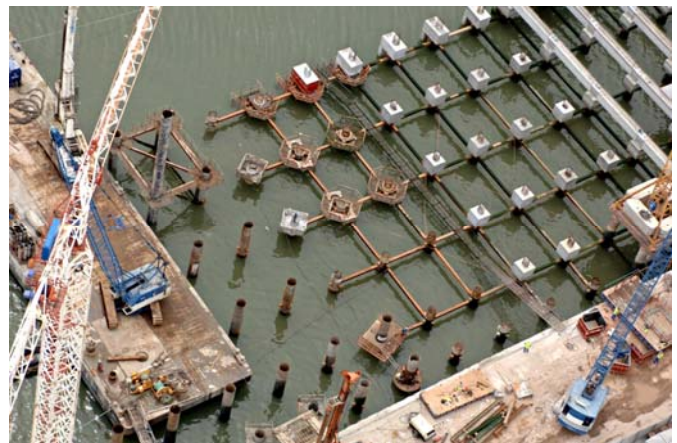
**Rebar cages** – 1,673,766 kg (piles)  
238,937 Kg (pile caps) 629,318 kg (deck slab)

**Concrete** – 7,705 m<sup>3</sup> deck slab  
and 13,062 m<sup>3</sup> (for the piles)

**Dredging** - +- 65,000 m<sup>3</sup>

**Precast beams** – 513 units (556,000 kg of rebar cages and 2,405 m<sup>3</sup> of concrete)

**Precast slabs** – 1,327 units (438,000 kg of rebar cages and 2,587 m<sup>3</sup> of concrete)


**Resumo da Obra**
***Work Summary***
**Cliente**
**APL  
Administração do Porto de Lisboa**
*Client*
**Tipo de contrato**
**Valor Global**
*Contract type*
**Data de construção**
**2009-2011**
*Construction period*
**Custo**
**EUR 38.200.000,00**
*Cost*