

# Terminal de Cruzeiros de Lisboa – 2.ª fase Santa Apolónia, Lisboa

Lisbon Cruise Liner Terminal – 2<sup>nd</sup> Stage Santa Apolónia, Lisboa

# Work perfomed

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 m3 deck slab)

and 13,062 m3 (for the piles) **Dredging** - +- 65,000 m3

Precast beams - 513 units (556,000 kg of rebar cages

and 2,405 m3 of concrete)

**Precast slabs** – 1,327 units (438,000 kg of rebar cages and 2,587 m3 of concrete)





#### Resumo da Obra

## Work Summary

Cliente APL Client

Administração do Porto de Lisboa

Tipo de contrato

Data de construção

Custo

Administração do Porto de Lisboa

Contract type

Construction period

Cost



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# Estacas de Guiamento dos Pontões

Plataforma Avançada e de uma Retenção Marginal Interface do Cais do Sodré, Lisboa

# **Guiding Piles for Floating Pontoons**

Dettached Platform and Bank Retention Cais do Sodré Transit Interface, Lisbon

Fornecimento de estacas para guiamento dos pontões, criação de uma plataforma avançada e de uma retenção marginal no Interface do Cais do Sodré, na cidade de Lisboa.

#### O âmbito dos trabalhos incluiu:

- Dragagem e demolição
- Enrocamentos e assentamentos de pedras para reforço e revestimento do perret
- Execução de estacas moldadas no terreno
- · Cravação de estacas metálicas
- Betão armado

#### **Work Description**

- Guiding piles for floating pontoons
- · Dredging and demolition works
- · Supply and placing of armour stones
- Concrete piles (casting in-situ)
- · Reinforced concrete works



Vista geral das estacas de guiamento. General view of piling to guide floating pontoons





## Resumo da Obra

# **Work Summary**

Cliente

Data de construção

Tipo de contrato

Custo Classificação Metropolitano de Lisboa Concepção-Construção Design-Build

2002-2003

EUR: 2.424.619,00 RINAVE Client Contract type

Contract type

Construction period Cost

Classification



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# Ponte Pedonal Alcácer do Sal, Portugal Pedestrian Bridge

Alcácer do Sal, Portugal

## Ponte atirantada

#### Características dimensionais

Comprimento: 121 m Largura: 3,5 m

Vão máximo entre pilares: 27 m Altura livre máxima: 6 m Pilares: estacas metálicas (Ø 708 e 508 mm)

#### Características construtivas

Aço em estacas metálicas: 110 t Aço no tabuleiro e plataformas

dos encontros: 169 t Betão armado: 62 m³

Madeira exótica no tabuleiro: 1300 m<sup>2</sup>



#### Dimensional features

Length: 121 m Deck width: 3,5 m

Maximum span between pylons: 27 m Maximum height above water: 6 m

Pylons: driven tubular piles (Ø 708 and 508 mm)

#### Construction features

Steel piles: 110 t

Steel deck and abutments: 169 t Reinforced concrete: 62 m<sup>3</sup> Exotic wood on deck: 1300 m<sup>2</sup>









Topo: A ponte acabada.
Top: The finished bridge.

# Resumo da Obra Work Summary

Cliente

Tipo de contrato

Data de construção

Custo Projectista C.M. Alcácer do Sal Concepção-Construção *Design-Build* 2001

EUR **1.855.000,00** 

Eng<sup>o</sup> Luís Colen

Client Contract type

Construction period Cost

Architect & Engineer



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# Terminal de Contentores de Kamsar e Terminal de Descarga de Barcaças Porto de Kamsar, República da Guiné

Kamsar Container Terminal and Barge Unloading Facility- Port of Kamsar

Republic of Guinea

#### **Work Description**

Seth has completed the design/construction of the Container Terminal at the port of Kamsar in the Republic of Guinea. The contract awarded for the sum of 18 million euro with a duration of 18 months.

The construction of the quay is part of the project for the construction of an alumina refinery at Sangarédi, located in the interior of this West African country, the employer being the multinational enterprise Guinea Alumina Corporation.

The Republic of Guinea has one of the worlds biggest reserves of bauxite (the raw material for the manufacture of aluminium), and the refinery will have a production capacity of 3.3 million tonnes per annum (Mtpa) manufactured from 9.4 Mtpa of bauxite extracted from the site.

The quay comprises a berthing facility for cargo vessels and barges bringing the building materials required for the construction of the alumina export terminal infrastructures at Kamsar and for the refinery at Sangarédi. It is a precast reinforced concrete structure supported on circular steel piles of a diameter of 914 mm.

The quay is 230m metres long and can berth ships of up to 10,000 tons dwt. Its construction is essential to the project as there is no other quay in the region able to receive equipment of the dimension and weight of the equipment to be installed at the refinery.







# Resumo da Obra

## **Work Summary**

Cliente GAC Client

Guinea Alumina Corporation
Tipo de contrato

Lump Sum
Contract type

2011-2012

Construction period

Custo **EUR 18.000.000,00** Cost

PISO 9001
PISO 19001
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