



# **73 AZEVEDO & TRAVASSOS ENGENHARIA LTDA**

## **EXTENSÃO DO EMISSÁRIO DO COMPERJ (BRAZIL)**

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Soc. Cap. €110.000,00 I.V. – R.E.A. N. 128067 – Comp. Reg. n. 15829 – Tax Code n. 01206570390

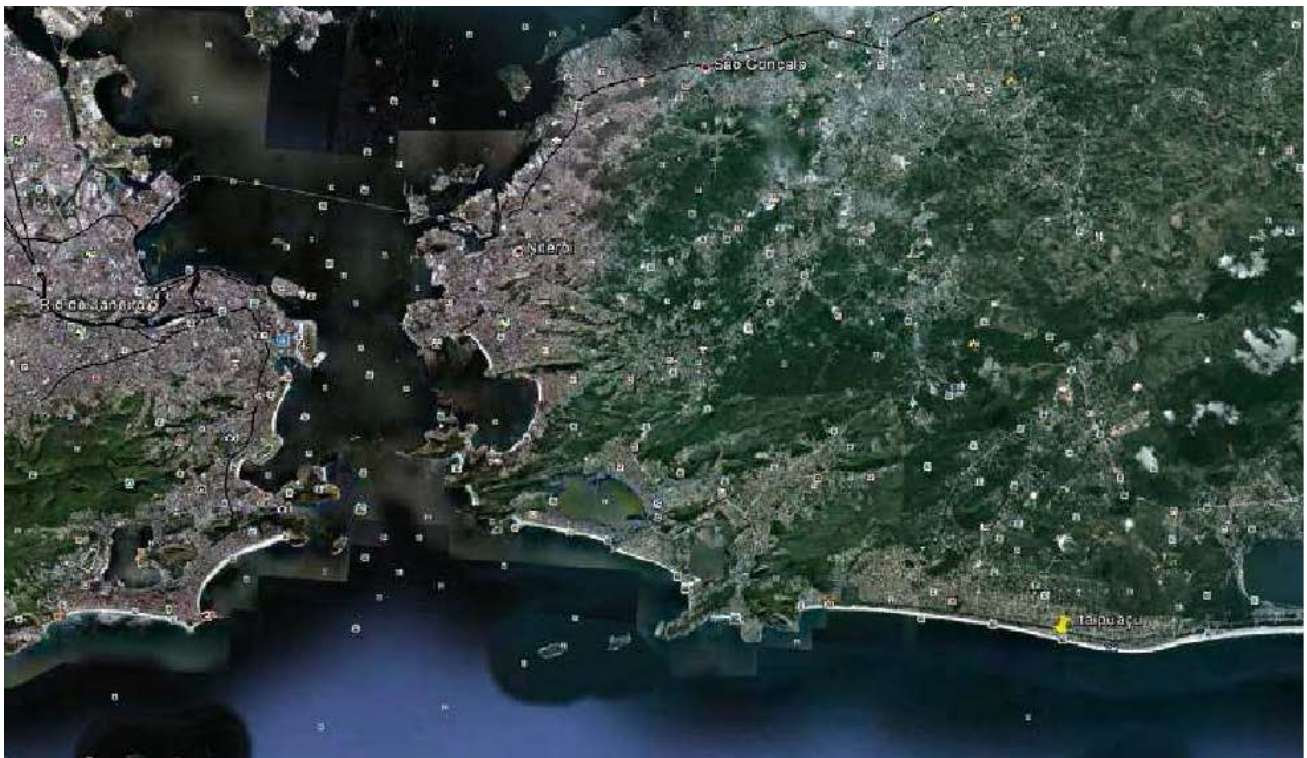
## 73 AZEVEDO - EXTENSÃO DO EMISSÁRIO DO COMPERJ RIO DE JANEIRO - BRAZIL

### 1 General project Overview and Reference

PETROBRAS installed a 26" underwater outfall in the Municipality of Maricá – RJ to discharge effluent generated at the Petrochemical Complex of the State of Rio de Janeiro (COMPERJ).

The effluent generated in this complex in compliance with the parameters required by the environmental agency had to pump through an outfall to the disposal point in the sea, located 4 km away from Praia de Itaipuaçu, Municipality of Maricá – RJ.

PETROBRAS chose AZEVEDO & TRAVASSOS ENGENHARIA LTDA for executing the directional hole, the pull-back, the submarine tie-in and the lowering of the submarine section of the 26" submarine outfall.



Area Map

### 2 Scope of work

AZEVEDO & TRAVASSOS ENGENHARIA LTDA contracted SEA BRASIL Serviços SUBMARINOS LTDA to carry out the following activities: project engineering, supply of vessels necessary for operations, execution of lifting operations (during and after lowering operations), execution of lowering (including all necessary tasks) of the concreted subsea outfall piping (2,860 m), the tie-in components (bends, spool and flanges) and the end of the HDD piping without concrete (approx. 126 m).

During the lowering operations the pipe was filled with water.



Effluent outfall pipeline location

Product	Section	Meters	TOP (1)	Water depth	
				Min	Max
26" COMPERJ	Emissário	2860	1	20	29
	Tie-In	75,47			
	HDD exit	126,47			
	<b>TOTAL meters</b>	<b>3062</b>			

SOW table

### 3 Encountered soil condition.

Quartzous sand and soft silty organic clay.

#### 4 Photos at worksite



HDD onshore location



Leo PTM





Leo PTM onboard of DP2 Iskatel-2 (supplied by SEA BRASIL)

## 5 Reference

## ATESTADO DE CAPACIDADE TÉCNICA

**AZEVEDO & TRAVASSOS ENGENHARIA LTDA.**, inscrita no CNPJ/MF sob nº 57.259.392/0001-25, estabelecida em São Paulo, à Rua Vicente Antonio de Oliveira, 1050-A, Vila Mirante, CEP-02955-080, atesta para os devidos fins, que a empresa **SEA BRASIL SERVIÇOS SUBMARINOS LTDA.**, com sede na Avenida Praia do Flamengo nº 66, Bloco B, Salas 1715 a 1718, Flamengo, Rio de Janeiro – RJ, CNPJ nº 06.181.439/0001-44, através do contrato firmado em 01/06/2015, executou dentro dos padrões de boa técnica, qualidade e prazos estipulados, os serviços a seguir descritos, tendo cumprido integralmente as condições estabelecidas no contrato assinado entre as partes para este fim.

**Valor Contratual:** R\$ 7.129.612,56 (Sete milhões, cento e vinte e nove mil, seiscentos e doze reais e cinquenta e seis centavos).

**Prazo Contratual:** 01/06/2015 a 28/11/2015

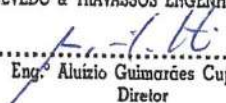
**Período de execução dos serviços:** 09/11/2015 a 28/11/2015

### Serviços Executados:

Enterramento de 3.062m de duto Ø=26" do TRECHO SUBMARINO DO EMISSARIO DE EFLUENTES DO COMPERJ, situado na praia de Itaipuaçu – Maricá/RJ, com cobertura média de 1,25m acima da geratriz superior do duto.

São Paulo, 18 de Janeiro de 2016.

AZEVEDO & TRAVASSOS ENGENHARIA LTDA.

  
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Eng. Aluizio Guimarães Cupertino  
Diretor