



64 ACERGY MS LIMITED (PETROBRAS PROJECT)

MEXILHAO PROJECT CARAGUATATUBA-BACIA DE SANTOS– BRAZIL

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64 PETROBRAS/ACERGY MS LIMITED – MEXILHAO PROJECT CARAGUATATUBA-BACIA DE SANTOS– BRAZIL

1 General project Overview and Reference

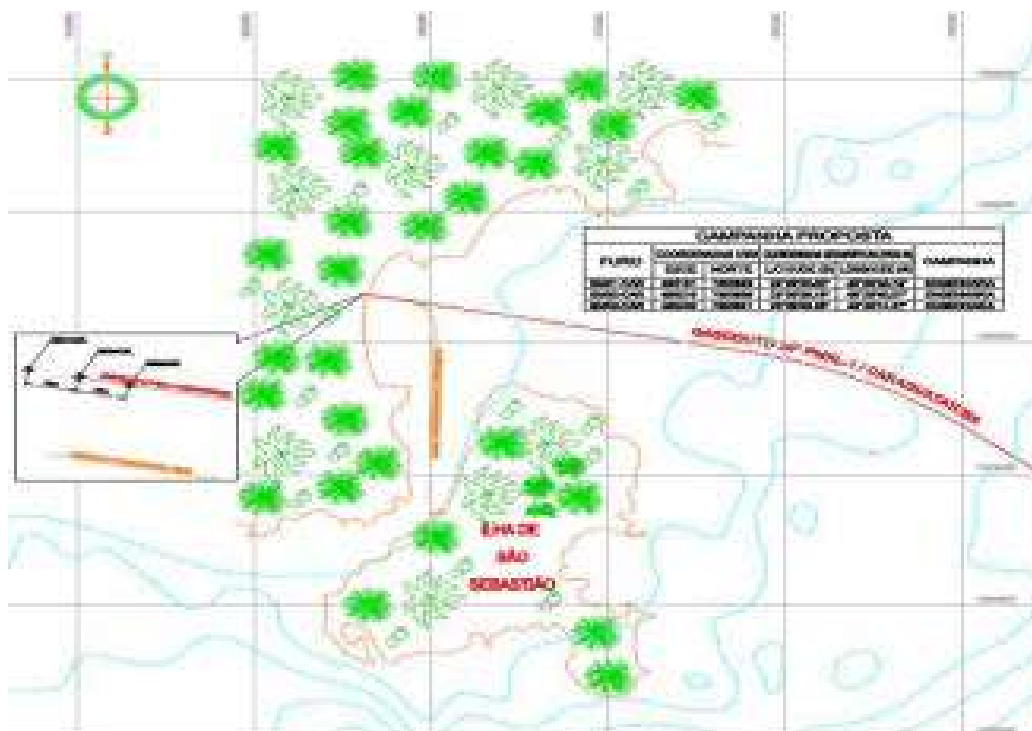
The Mexilhão export gas pipeline has been designed to transport the gas collected and/or produced on the Mexilhão platform to the Continent.

The Mexilhão platform is located at 172 m of water, approximately 130 km from the Port of São Sebastião (SP).

The 34" nominal diameter steel pipeline connects the platform to Praia de Palmeiras, in the Caraguatatuba beach (SP), approximately 200 km from Rio de Janeiro

Petrobras chose Acergy to execute the Mexilhão project. The scope of service included:

- Installation of 135 km of 34" pipeline;
- Installation of two interconnections (spools) and EDSV valve.
- Burying the pipeline between 20 m of water depth and the beach and stabilization of the pipeline from 20 m to 85 m of water depth.
- Flooding, cleaning, dimensional verification and hydrostatic testing of the line and other related activities.



Praia de Caraguatatuba (Bacia de Santos-SP) – Pipeline Route

2 Scope of work

SEA S.r.l. was contracted by Acergy to post-trench the following route sections:

- **ORIGINAL SCOPE** –

between **KP 135.121** (1.7 m of water depth, low tide) and **KP 113.956** (20 m of water depth, low tide) = 21.165 meters.

- **EXTRA SCOPE** –

between **KP 113.956** (20 m water depth, low tide) and **KP 113.866** (21 m water depth, low tide) = 90 meters.

between **KP 113.754** (21 m water depth, low tide) and the **KP 113.485** (20 m water depth, low tide) = 269 meters.

The water depths of the seabed ranged between 1.7m and 26m.

Pipeline	Trench Cover (T.O.P.)	Length	Water Depth	
			Min LAT	Max LAT
34" GNL	1,0	Approx.23.645 Meters	1,7 m	26 m

The burial of the 34" Mexilhão pipeline was carried out in several phase. Another additional section was requested by Contractor, and some sections required a second pass with a different PTM.

PHASE		Trench Depth (m) TOP	Length (m)	KP Start	KP End	Water depth LAT (m)	Water depth LAT (m)	Post trenching machine	NAVAL MEANS
FIRST PHASE	1 st pass	1,0	9.021	135.121	126.100	1.7	20	COMBO PTM	Trimaran Rosanna
SECOND PHASE	1 st pass	1,0	2.009	137.130	135.121	20	26	LEO PTM	DP2 Iskatel-2
	2 nd pass	1,0		135.121	126.100	20	26	LEO PTM	DP2 Iskatel-2
	1 st pass	1,0	12.615	126.100	113.485	20	26	LEO PTM	DP2 Iskatel-2
THIRD PHASE		1,3		Several corrections				COMBO PTM	DP2 Iskatel-2

3 Encountered Soil condition

The predominant soil is clay

4 Photos at worksite



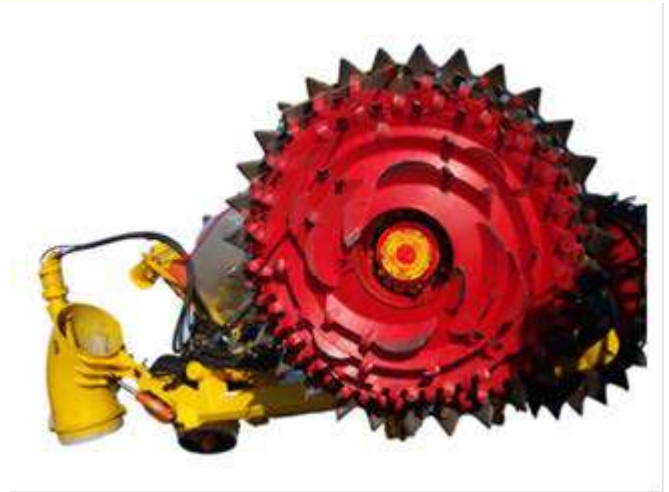
TSV DP2 Iskatel-2 in Caju port



Trimaran Rossana Modular Pontoon



PTM Leo



PTM Combo



PTM Leo in Caju area