

# Case History

## Fluminense Mooring Lines Life Extension



### Project Description

The project was to perform life extension work on an existing FPSO mooring system. Through Maersk Supply Service, Sealand completed work scopes on eight of the nine mooring lines, with a primary focus on remedial work on three mooring lines.

The project included heading control of the FPSO, replacement of mooring lines, as well as installation and hook up of new mooring components.

CSV Maersk Achiever performed the offshore execution, along with two L-class anchor handling tugs used for FPSO heading control.

### Services Provided



Package Management



Business Assurance



Carbon Management



Energy Transition



Engineering Design & Analysis



Marshalling, Transport, Installation & Field Support



Floating systems, Towing, Mooring & Hook-up



Visualisation and Digitalisation

### Key Facts

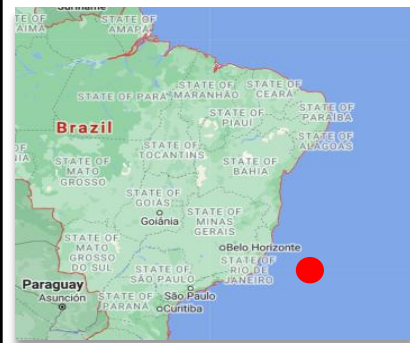
**Client:** MSS/Shell

**Location:** Offshore Brazil

**Water Depth:** 725m

**Dates:** 12/19 – 01/20

**Project Reference:** P0305



### Our Scope

**Floating systems Towing, Mooring & Hook-up** - Remedial work on the mooring system included replacement of old chains and polyester new mooring components.

**Engineering Design & Analysis** - Orcaflex models were created to analyse the mooring lines and determine the requirement for changeout in terms of heading control and FPSO positioning.

**Visualisation and Digitalisation** – A detailed 3D model was created of the mooring line system, identifying each component, its details and certification.

**Marshalling, Transport, Installation & Field Support** – Sealand facilitated operations for mobilisation of the vessel in Brazil and provided Field Engineers to manage the scope through to completion

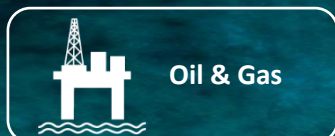


### Deliverables

- HIRA Facilitation
- Field Engineers
- Draughting and Visualisation
- Heading Control Analysis
- Mooring Installation Analysis
- FPSO Pull in support
- Installation Engineering
- Mobilisation Support



Renewables



Oil & Gas



Ocean Systems



Pathway to Net Zero