

ENGINEERING FOR A SUSTAINABLE FUTURE

SAIPEM SOLUTIONS for
DEEPWATER in NAMIBIA

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WE ARE SAIPEM

MISSION

We work alongside our clients to transform their strategies and projects into competitive, safe, and sustainable infrastructures, plants, and processes, supporting them on their **energy transition** pathway towards Net Zero.

VALUES

- We value human ingenuity, fostering a culture of creativity and problem-solving.
- We prioritize the health and safety of our people, communities, and the environment.
- We build relationships based on trust, rooted in responsibility and transparency.
- We embrace diversity and inclusivity, shaping a workplace where everyone can thrive.

PURPOSE

Always oriented towards technological innovation, the purpose that inspires us is “**Engineering for a sustainable future**”.

For **over 60 years**, engineering has been in Saipem’s DNA, shaping its business, activities, and industrial applications.

We design and develop new approaches to guarantee sustainable and safe access to energy and mobility, thus contributing to the development of a more efficient and responsible energy ecosystem.

Everything we do is based on a clear vision of tomorrow.

ONE SAIPEM: THREE REPORTING DIVISIONS, SIX BUSINESS UNITS

ASSET BASED SERVICES		OFFSHORE DRILLING	ENERGY CARRIERS		
					
Offshore E&C	Offshore Wind	Offshore Drilling	Onshore E&C	Sustainable Infrastructures	Robotics and Industrialized Solutions
<ul style="list-style-type: none"> • Diversified Offshore Construction Fleet • Multiple Shipyards strategically located in Key Industry Hubs • Shallow waters platforms, flowlines, EPCI & T&I • SURF (Subsea, Umbilicals, Risers & Flowlines) • MMO & Decommissioning 	<p>Fixed Wind</p> <ul style="list-style-type: none"> • Foundations • Offshore Substations • Jackets Supply & Fabrication • O&M and Robotics for Life of Field Services • EPCI, T&I schemes <p>Floating Wind</p> <ul style="list-style-type: none"> • Foundation technologies (Hexafloat & STAR-1) • O&M and Robotics for Life of Field Services • EPCI, T&I schemes 	<p>Our drilling fleet is capable of operating at all depths:</p> <ul style="list-style-type: none"> • Ultra deepwater vessels with dual derrick capacity • Semi-submersible vessel for harsh environments • Rejuvenated jack up fleet for shallow waters 	<ul style="list-style-type: none"> • Upstream • Floaters & GBS • LNG & Regas plants • Gas monetization • Biofuels • CCUS Hubs • O&M Services 	<ul style="list-style-type: none"> • HC/HS railways • Subways and tramways • High-end services for infrastructural works monitoring and efficiency improvement 	<ul style="list-style-type: none"> • CO₂ Solutions • Green hydrogen • Green ammonia • Plastic Recycling • Underwater robotics • Subsea Factory

OUR GLOBAL PRESENCE

Spanning Continents, Connecting Markets



ENGINEERING CENTRES
dedicated to research & development, business process management and information technology.

PREFABRICATION YARDS
focused on prefabrication, assembling and erection operations of large and complex manufactures as offshore platforms, plant modules, subsea manifolds and components.

OTHER RELEVANT SITES
headquarters, branches and subsidiaries.

KEY FIGURES

WE OPERATE IN **>50** COUNTRIES

>30,000
EMPLOYEES
WORLDWIDE 

>130 
NATIONALITIES

72%
LOCALLY
EMPLOYED 

6 
BUSINESS
LINES

5 
MAIN
ENGINEERING
HUBS

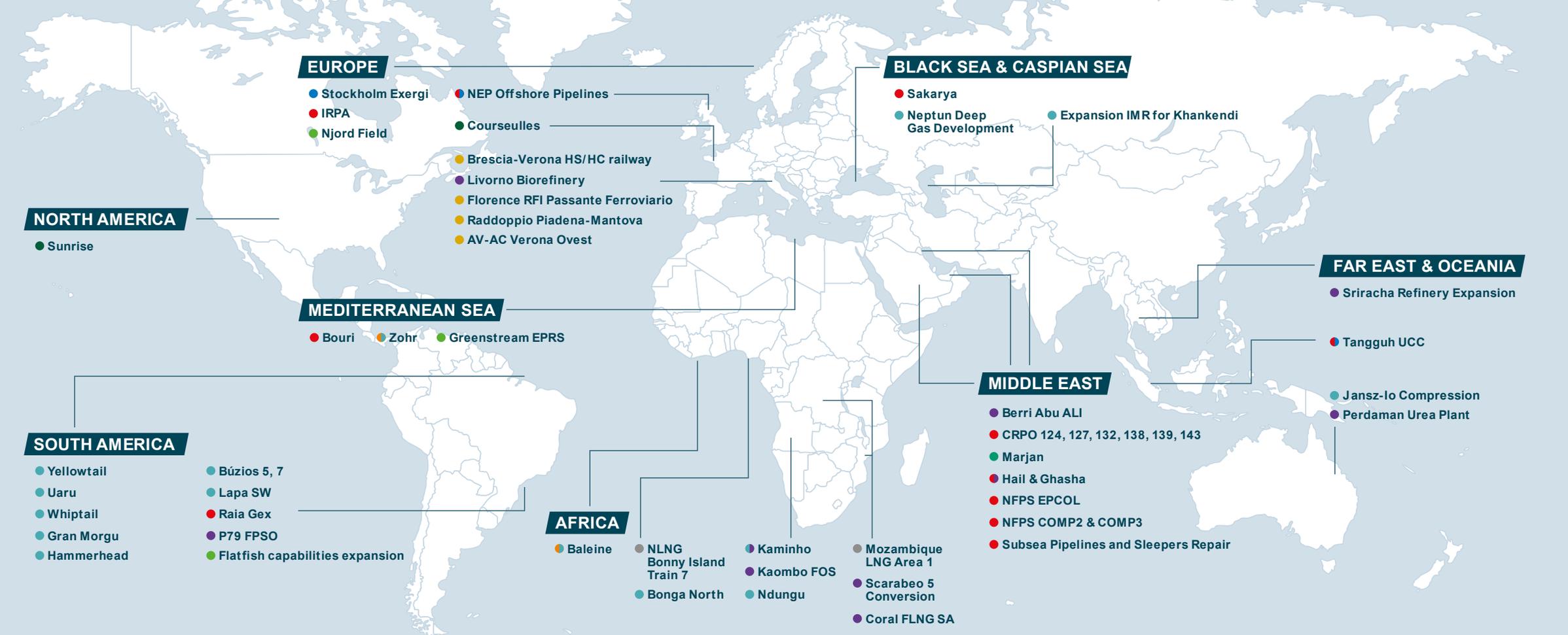
>2,500 
ACTIVE
PATENTS

6 
PREFABRICATION
YARDS

23 
CONSTRUCTION
VESSELS
(17 owned vessels >6 leases)

14 
DRILLING
VESSELS
(9 owned vessels, 5 leases)

SAIPEM: OUR KEY ONGOING PROJECTS

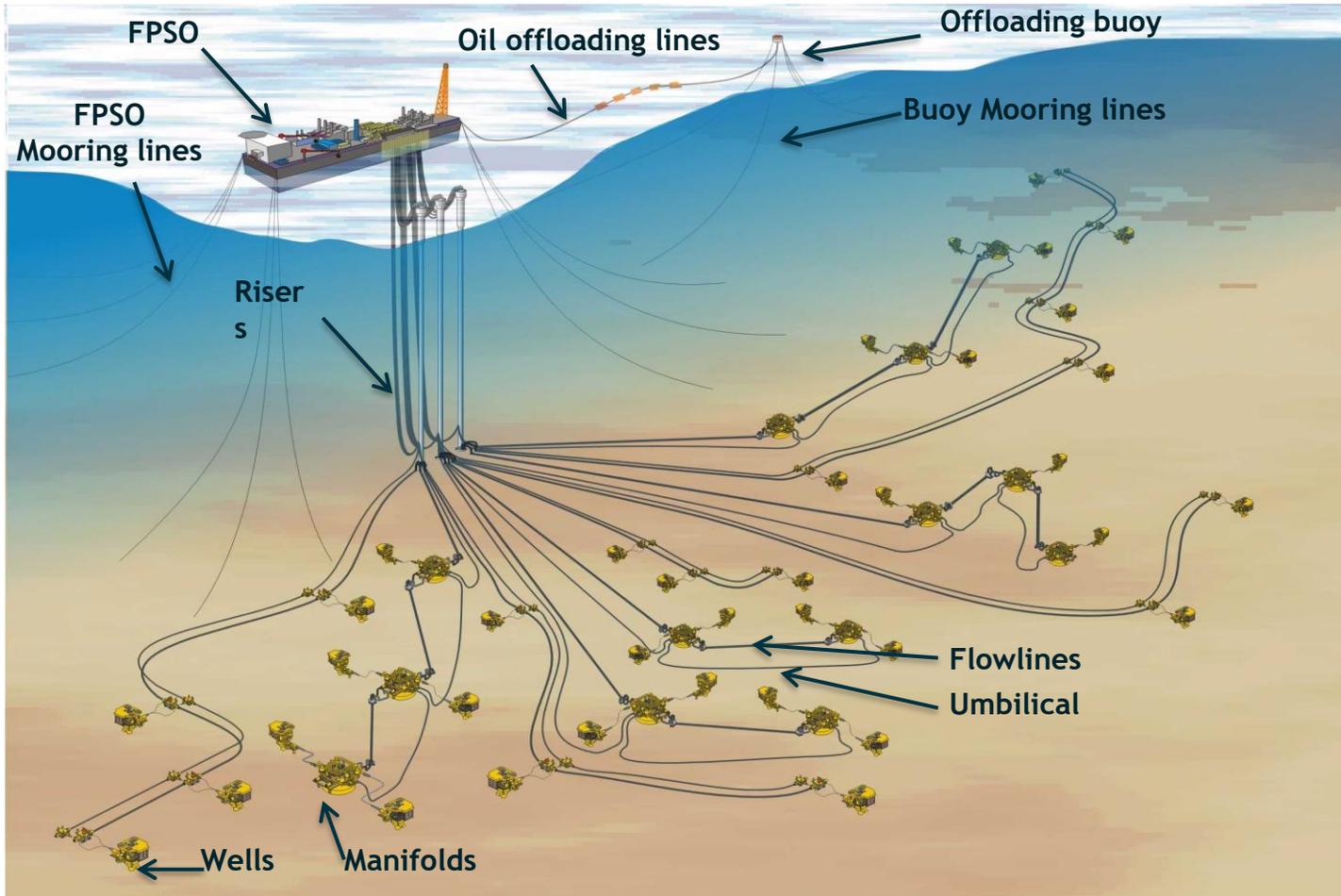


- Offshore Drilling
- Offshore Pipelines and facilities
- Onshore Pipelines
- Onshore Plants (Includes FPSOs)
- Low Carbon Solutions
- SURF
- Energy Carriers
- Subsea Robotics
- LNG
- Wind
- Railways
- Decommissioning

OFFSHORE E&C: DEEPWATER PROJECTS

Subsea Field Development - Concept to Completion

Example of deepwater field architecture with FPSO and offloading buoy



Flowline systems:

- Production flowlines transport the multiphase fluid from subsea production wells to FPSO via production risers.
- Water injection flowlines transport the treated seawater from FPSO to the subsea water injection wells via water injection risers.
- Gas treated on the FPSO can be exported (through offloading buoy or an export pipeline) or reinjected.

Riser systems: rigid or flexible risers connect the seabed to the FPSO. Several configuration possible: steel catenary riser, lazy wave, single hybrid riser, etc.

Umbilical systems: link surface and seafloor equipment, providing electric and fiber-optic signals, electrical power, and hydraulic and chemical injection fluids to the subsea units (manifolds, wells) for controls, power or heat.



1

Ocean Dynamics Offshore Namibia

2

Subsea Construction in harsh weather

3

Saipem's Solution

Ocean Dynamics in South Atlantic

With :

- **Strong winds** dominating the coast, especially from September to March, often intensifying in the afternoons and influencing wave and current patterns.
- **Long-period ocean swells** typically approaching from the southwest, with wave heights regularly **up to 4 meters**, occasionally higher during winter cold fronts (May–August).
- The **northward-flowing Benguela Current**, relatively weak at the surface but driving **coastal upwelling**, and cooling sea temperatures



Namibia is going to be one of the most challenging-ever offshore environment for the subsea construction industry

Ocean Dynamics in South Atlantic

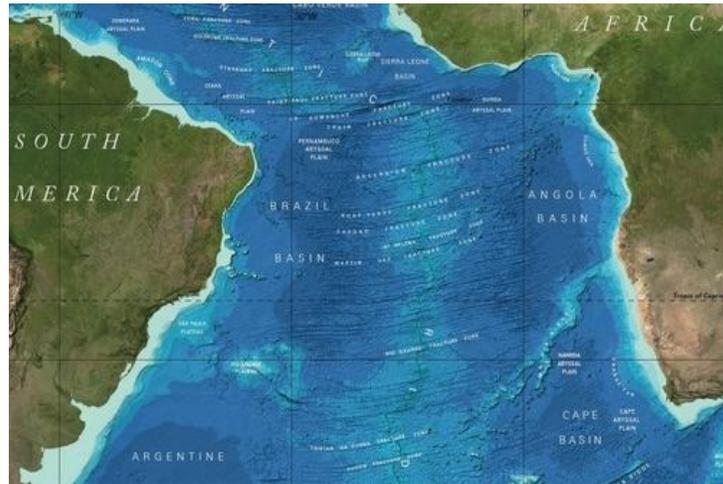


Namibia - High-Energy Environment

- Strong, persistent thermal winds (15-30+ km/h), especially along the coast
- Long-period swells from South-West up to 4 m, especially in winter
- Crossing Wind Sea from South-South-East
- Frequent coastal fog reduces visibility
- **High operational risks:** downtime, logistics

Brazil - Warm, Moderate Energy

- Steady moderate winds (10–25 km/h)
- Wave heights 1–3 m, shorter-period waves
- Tropical storms possible in the North, requiring monitoring
- Correct conditions for offshore operations **with seasonal precautions**

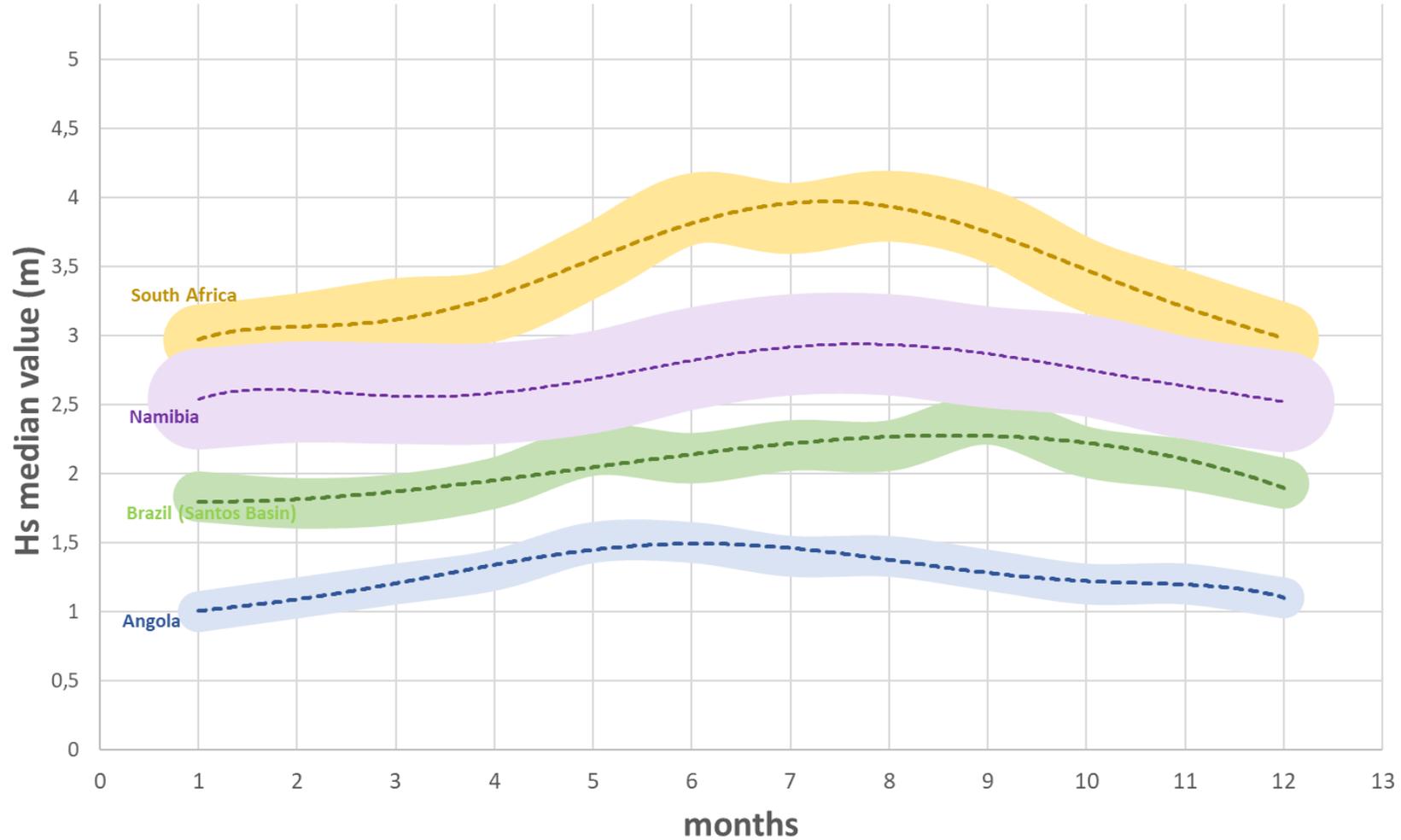


Angola – Low Energy, Steady and long Weather Windows

- Moderate, variable winds (10–20 km/h)
- Swell heights between 0.5 and 1.5 m, calmer and regular seas
- Northern region influenced by tropical weather, occasional convective storms
- **Highly favorable** for offshore works with fewer weather delays

Ocean Dynamics in South Atlantic

Monthly Hs (median value) In SOUTH ATLANTIC



Influence of Antarctica
Median wave height seemingly 2,5 higher than Angola



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Saipem's Solution

Subsea Construction, way more sensitive than drilling

Saipem has been recently operating the Santorini drilling rig offshore Namibia.

From our analysis:

- Offshore drilling rigs are more autonomous and better equipped to operate in higher wind and wave conditions, with **much fewer weather-dependent activities**.
- In contrast, subsea construction and pipelay vessels are more sensitive to sea state and wind, particularly during precision operations like lifting and pipe deployment.

As a result, construction vessels require **tighter metocean windows** and suffer from **more frequent wait-on-weather periods** than drilling rigs.



Why is subsea construction so weather-sensitive?

1. Crane Sheave

- Vessel Roll

9. WIND



2. Pipe loading

- Vessel Roll
- Vessel Heave
- Carrier Heave
- Carrier Roll

4. Pipe Lay

- Vessel Heave
- Vessel Pitch
- Vessel Roll (if un-centered)

6. Splash Zone

- Wave Velocity
- Vessel Roll
- Vessel Heave

3. Slamming

- Vessel Roll
- Vessel Heave
- Supply Heave

5. Firing Line

- Vessel Roll

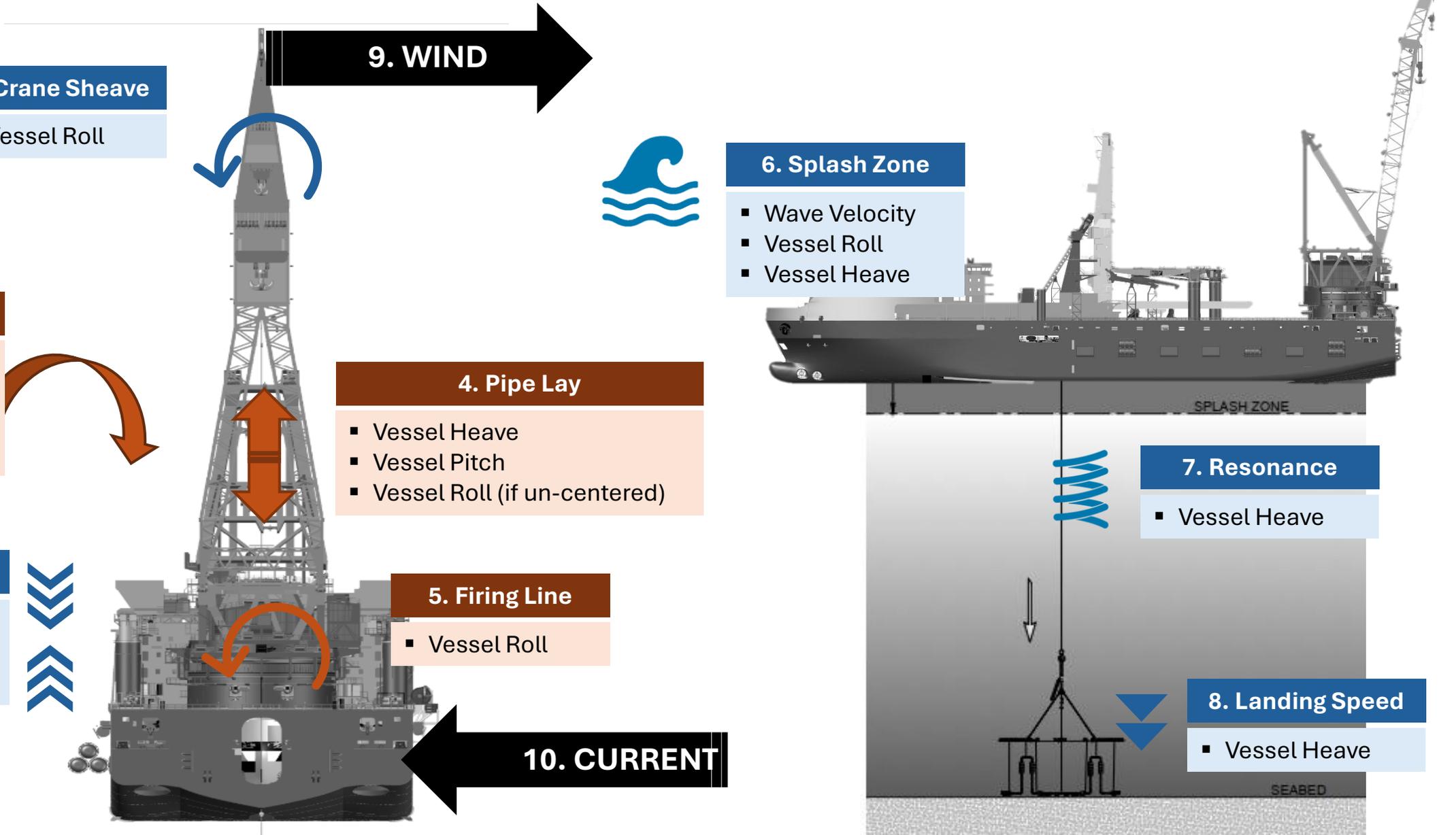
7. Resonance

- Vessel Heave

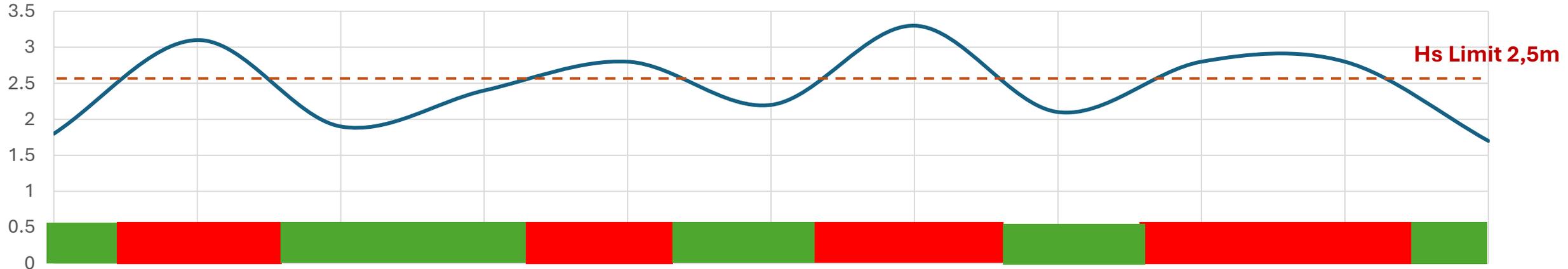
10. CURRENT

8. Landing Speed

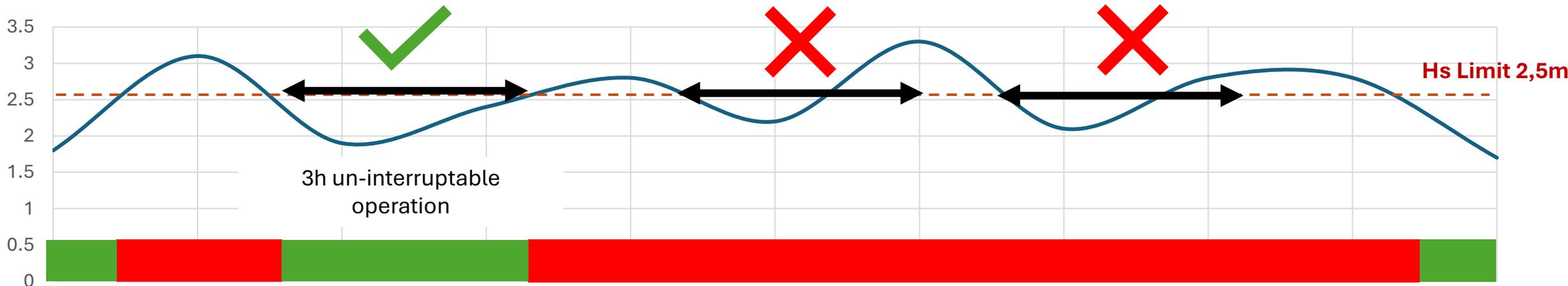
- Vessel Heave



« Wait-on-Weather » (WoW) windows: the Persistence effect



WoW based on wave analysis: 100% (x2)



WoW based on persistence analysis: 200% (x 3)



1

Ocean Dynamics Offshore Namibia

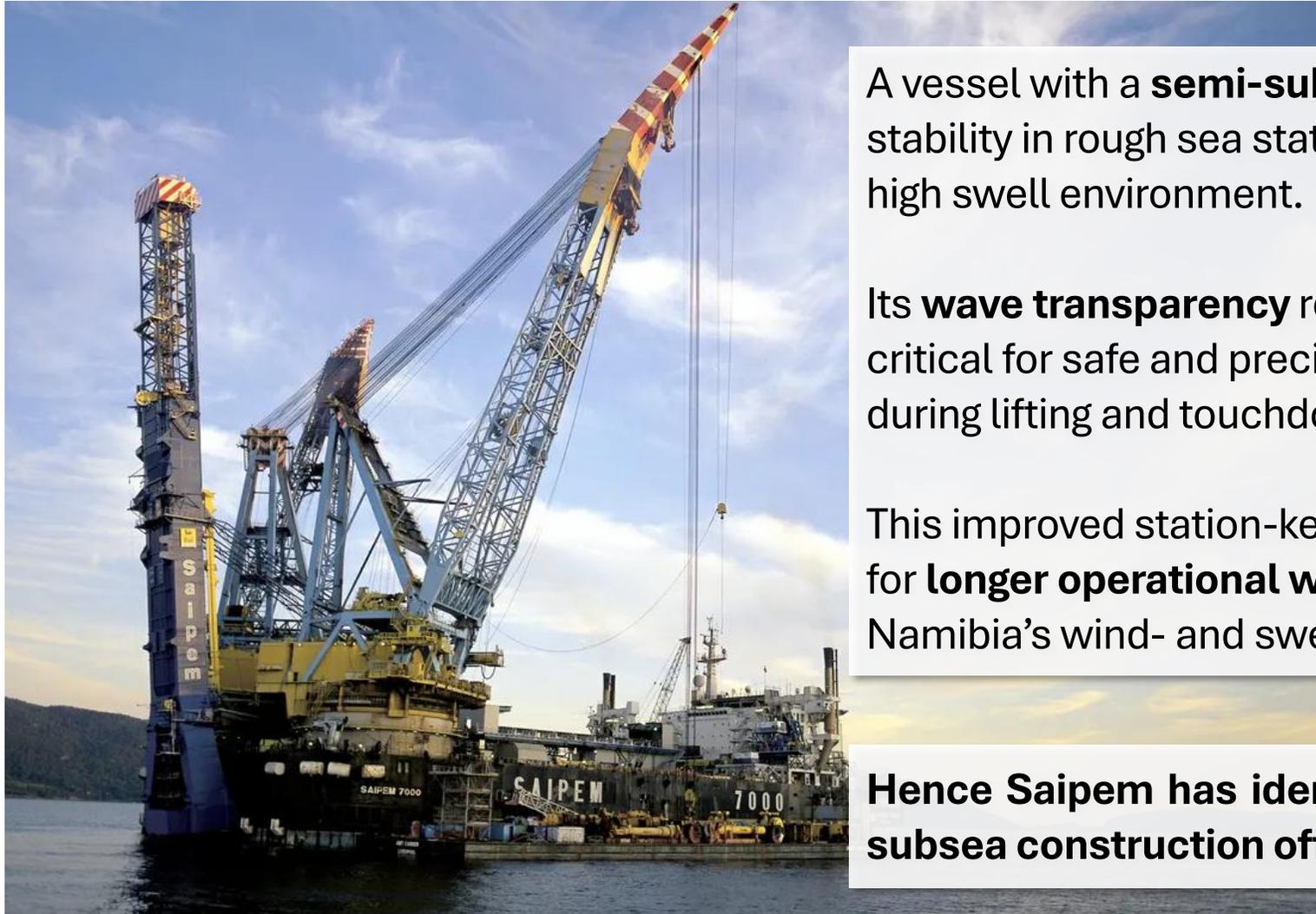
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Subsea Construction in harsh weather

3

Saipem's Solution

Saipem Solution for Namibia: the S7000



A vessel with a **semi-submersible hull** offers superior motion stability in rough sea states, making it well-suited for Namibia's high swell environment.

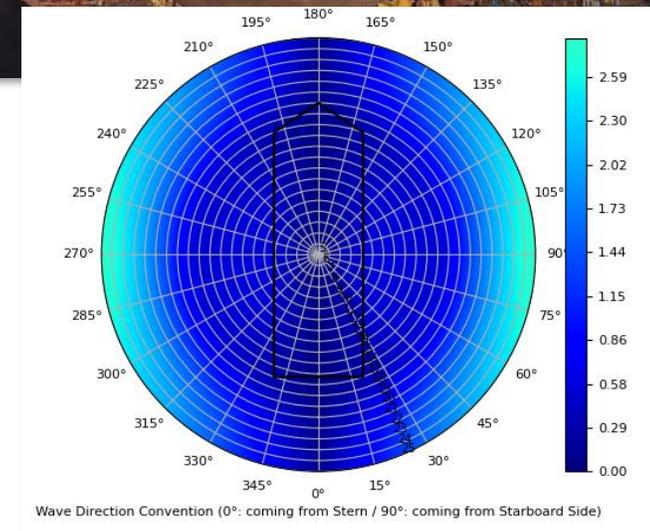
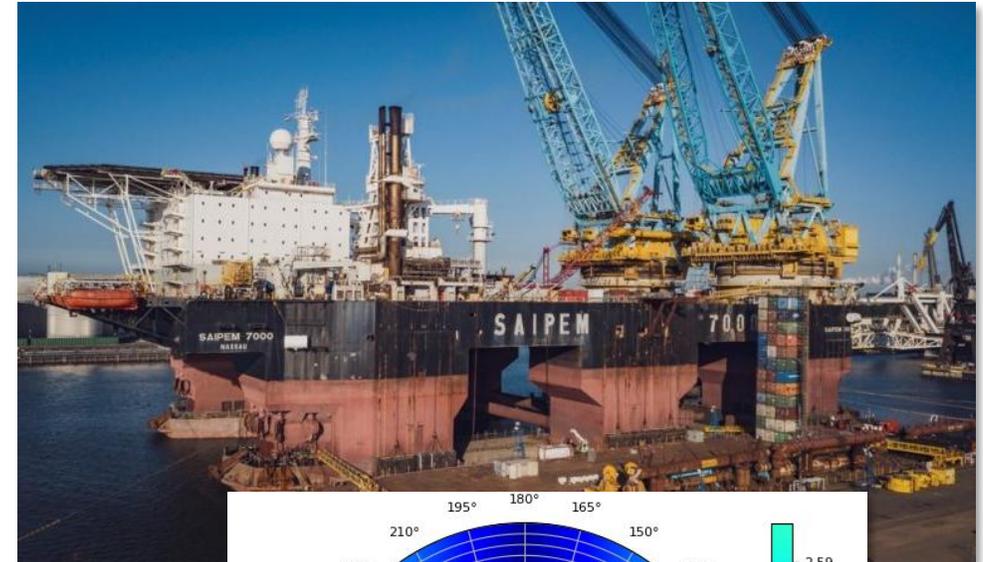
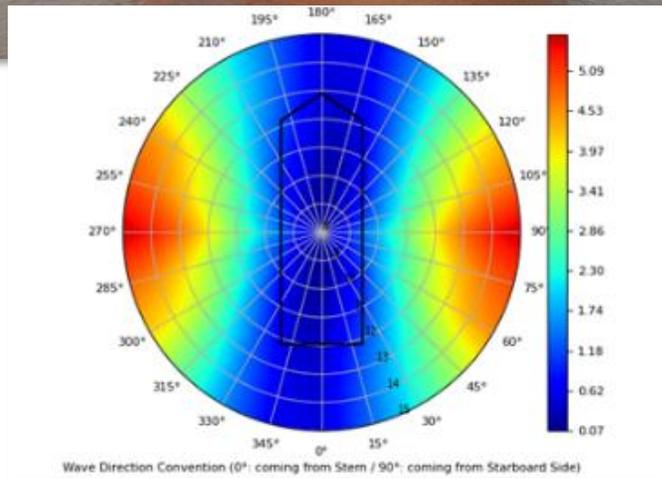
Its **wave transparency** reduces heave, roll, and pitch, which is critical for safe and precise subsea construction, especially during lifting and touchdown operations.

This improved station-keeping and motion performance allows for **longer operational windows**, reducing downtime in Namibia's wind- and swell-dominated conditions.

Hence Saipem has identified the S7000 as best-in-class for subsea construction offshore Namibia

Saipem Solution for Namibia: the S7000

A semi-submersible hull « kills » all roll motions



Saipem Solution for Namibia: the S7000

A semi-submersible hull « kills » all roll motions



Saipem Solution for Namibia: the S7000



PROS

- ❑ Much less sensitive to WoW than mono-hull vessels (low roll motion)
- ❑ Large deck capacity
- ❑ Higher Productivity in Pipelay Mode (2 WS + Pre-heating station) – doubling the beneficial effect on WoW



Enhancing:

- Execution derisking
- Schedule certainty
- Production reliability

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**WE ARE
SAIPEM**

