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Technical Domain / Task Number 2 …………………………………

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Screw anchors

# Summary

Screw anchors provide a solution for mooring buoys at sites with environmentally sensitive sea beds or at stations requiring very accurate positioning.

## Purpose of the document

This is a Rapporteur report.

# Background

The tidal energy market is developing new mooring techniques which may be used as alternatives to sinkers that may have advantages for taut moorings.

# Discussion

SAMED (Screw Anchors for Marine Energy Devices) is a novel low cost screw-in subsea anchor technology which offers significant cost/performance advantages over conventional anchoring solutions. This technology has been used to secure the PLAT-O tidal energy platform in the Western Solent.

SAMED was conceived by as a means of reducing significantly the high cost of installing offshore and marine renewable energy devices. Screw piles have for many years been deployed into dry and wet soils, and small piles have also been deployed in coastal waters. In principle, the technology should be useable for seabed anchoring to replace gravity anchors and impact piling of foundations.

The SAMED project was developed to prototype an installation rig in order to create proof of concept for the technology.

Applications for SAMED include the offshore wind, marine energy and offshore aquaculture sectors.

Cost analysis has shown that the SAMED anchor technology could be highly competitive with traditional gravity anchor approaches. At realistic pricing and market penetration levels, a payback of less than 1 year should be achievable.

The SAMED consortium are exploring options to provide the additional engineering resources for moving from proof of concept to full commercial demonstration.



# Action requested of the Committee

The Committee is requested to note the report.

1. Input document number, to be assigned by the Committee Secretary [↑](#footnote-ref-1)
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