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Royal Navy Introduces First Autonomous Minesweeping System Since 2005

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The Royal Navy has officially brought into service its first autonomous minesweeping systems in nearly two decades, restoring a vital operational capability to counter modern naval mine threats. The new system, known as Surface Waterborne Enhanced Effect Protection (SWEEP), is part of the United Kingdom's (UK) broader effort to modernise maritime defences and reduce risk to personnel through automation.

Developed under a £25 million contract by ThyssenKrupp Marine Systems (TKMS), Atlas UK Ltd, based in Dorset, SWEEP marks the Royal Navy's first operational minesweeping capability since 2005. The system forms a key element in the UK's Strategic Defence Review plan to build a hybrid fleet, blending traditional warships with advanced autonomous systems.

SWEEP utilizes unmanned surface vessels (USVs) equipped with remotely operated payloads to detect and neutralize underwater threats, including digital sea mines that can recognize the acoustic and magnetic signatures of ships and submarines. The system can simulate the presence of a real vessel, safely triggering mines without endangering personnel.

According to Jonathan Reed-Beviere, Programme Director for Mine Hunting Capability at the Royal Navy, SWEEP represents a major leap forward. "This is a truly transformational system. It provides a portable and flexible solution to protect our ships from modern mine threats and brings back a capability the Royal Navy has lacked since 2005," he said.

Three SWEEP systems have already been delivered. The Ministry of Defence (MoD) says the contract supported 55 skilled jobs across Dorset and other parts of the UK. The system is designed to work in conjunction with other mine countermeasure assets, including the Maritime Mine Counter Measures (MMCM) programme and SeaCat unmanned underwater vehicles.

Defence Minister Maria Eagle welcomed the introduction of SWEEP, stating it aligns with the Royal Navy's move toward increased automation. "This is the first time the Royal Navy has access to autonomous

minesweeping. It's a key step toward delivering the vision set out in the Strategic Defence Review. It protects lives and supports UK industry," she said.

Andy Lapsley, Team Leader for Mine Hunting Capability at Defence Equipment and Support (DE&S), noted that the system will help ensure freedom of movement for naval forces in contested waters. Antoni Mazur, Managing Director at TKMS Atlas UK, described the moment as a milestone, calling it the culmination of years of partnership with the UK Government.

The entry of SWEEP into service highlights the Royal Navy's commitment to modernisation, combining new technologies with operational needs to face emerging maritime threats more effectively.