PRESS RELEASE

London, 9 October 2018

Leonardo and Thales aircraft protection system successfully defends against multiple heat-seeking missiles in international live fire trials

- A new protection system to defeat MANPADS fired against aircraft, which sees a Leonardo Miysis DIRCM defeat threats following their detection by a Thales Elix-IR multi-function threat warning system, was demonstrated successfully against a number of MANPADS missiles types at a recent live fire trial sponsored by the UK MOD

- The system proved in live exercises that it can defeat Infra-Red (IR) missiles. In a representative combat situation, this capability would provide critical protection for helicopters and large aircraft that fly at low speeds and low altitudes, which would otherwise be vulnerable to IR-guided missiles

- The UK Ministry of Defence's Defence Science and Technology Laboratory (Dstl) supported the trials and evaluated the potential of the integrated system against current and future UK air platform protection needs

Leonardo and Thales have announced that their end-to-end missile warning and protection system has been proven highly effective in live-fire scenarios, demonstrating the system's ability to very quickly defend against incoming missiles. The integrated system was demonstrated as part of the SALT (Surface-to-Air Launch Trial) hosted by the Swedish Defence Materiel Administration (FMV) in Sweden. The UK Ministry of Defence (MoD)'s Defence Science and Technology Laboratory (Dstl) sponsored Leonardo and Thales to take part in the trial, while both companies invested in the integration of the system.

The latest-generation protective system consisted of a Leonardo Miysis Directed Infra-Red Counter-Measure (DIRCM) system and Thales Elix-IR multi-function Threat Warning System (TWS), integrated through Leonardo's Defensive Aids Suite (DAS) Controller, an advanced electronic warfare computer. Together, the system offers end-to-end protection from heat-seeking man-portable air-defence missiles (known as MANPADS) which are being widely employed by armed forces and terrorist groups. For SALT, the integrated system was hosted aboard a Terma Universal DIRCM pod.

During the live-fire exercises, when an Infra-Red (IR) missile was fired at a ground target protected by the Leonardo-Thales system, the Elix-IR system detected, tracked, classified and declared the missile as a threat and rapidly passed an alert over to the Miysis system. Miysis then tracked the incoming threat and accurately directed a jamming laser onto the missile's seeker. Miysis used a DSTL developed jamming waveform to confuse the missile's guidance system, steering the missile away from the target. As well as proving the system's basic capability, the Leonardo and Thales team demonstrated how they have optimised the threat-warning/threat-defeat chain to thwart incoming missiles as quickly as possible.

The integrated protection system is able to protect both military and civil platforms, ranging from small helicopters to large tactical transports/VIP platforms. While Thales and Leonardo will continue to market their systems individually, they will also work closely together to offer the integrated protection capability around the world when it is considered the best solution for customer requirements. This successful trial against live MANPADS missiles follows earlier individually-effective demos of both Miysis and Elix-IR. At a previous SALT event the Miysis DIRCM successfully acquired and accurately tracked 100% of all live Man-Portable Air Defence Systems (MANPADS) missiles fired. Thales's Elix-IR was successfully demonstrated in flight trials at the UK Pendine Ranges and on static trials, detecting all threats presented, including some that had challenged previous hostile fire indicator systems. Leonardo's DAS controller technology is also well-proven and is already at the heart of defensive aids suites on-board multiple UK platforms including the British Army's new Apache AH Mk2 helicopters.

About Leonardo

Leonardo is among the top ten global players in Aerospace, Defence and Security and Italy's main industrial company. As a single entity from January 2016, organised into seven business divisions (Helicopters; Aircraft; Aero-structures; Airborne & Space Systems; Land & Naval Defence Electronics; Defence Systems; Security & Information Systems), Leonardo operates in the most competitive international markets by leveraging its areas of technology and product leadership. Listed on the Milan Stock Exchange (LDO), at 31 December 2017 Leonardo recorded consolidated revenues of 11.7 billion Euros and has a significant industrial presence in Italy, the UK, the U.S. and Poland. http://www.leonardocompany.com

> While being smaller, lighter and drawing less power than other DIRCM systems on the market, the **Miysis DIRCM** still offers the full spherical coverage required to counter advanced threats. Its Laser Pointer Tracker offers sophisticated tracking to counter long range threats and exceptional response speed to counter short range threats. A multi-band IRCM can defeat even advanced threats.

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About Thales

Thales is a global technology leader for the Aerospace, Transport, Defence and Security markets. With 62,000 employees in 56 countries, Thales reported sales of €14 billion in 2016. With over 22,000 engineers and researchers, Thales has a unique capability to design and deploy equipment, systems and services to meet the most complex security requirements. Its exceptional international footprint allows it to work closely with its customers all over the world. https://www.thalesgroup.com

> Elix-IR™ is a passive multi-function Threat Warning System that uses single colour Infra Red sensing technology to deliver simultaneous and unimpeded Missile Approach Warning, Hostile Fire Indication and Situational Awareness from a single sensor system to increase overall platform survivability and help to mitigate the 'Risk to Life'. Elix-IR™ is an ITAR free UK sovereign capability, developed in collaboration with the UK MOD that ensures Freedom of Action that assures a rapid and timely response to countering evolving threats and supporting new theatres of operation. Designed from the outset to provide the capabilities required to support a DIRCM and output data in support of off-board countermeasures, such as Smart Stores, it enables greater exploitation and utilisation of platform capabilities that support broader operational employment and increased mission success rates.

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About Dstl

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The Defence Science and Technology Laboratory (Dstl) delivers high-impact science and technology (S & T) for the UK's defence, security and prosperity. Our role is to deliver S&T for defence and security and to steward defence and security S&T capabilities

Dstl is an Executive Agency of the MOD, run along commercial lines. It is one of the principal government organisations dedicated to S&T in the defence and security field, with six sites; Porton Down, near Salisbury, Portsdown West, near Portsmouth, Fort Halstead, near Sevenoaks, Sandridge, near St Albans, Langhurst, near Horsham and Alverstoke, near Gosport.

Dstl works with a wide range of partners and suppliers in industry, in academia and overseas.