

RUNWAY OVERRUN REPORT



January 2008

Year in Review -- Looking Back at EMAS Milestones in the Year 2007

ESCO Releases Improved EMAS^{MAX}™ Safety System

(Reprinted from ROR March 2007)

Engineered Arresting Systems Corporation (ESCO) has released the **EMAS^{MAX}™** system, an enhanced version of the collapsible concrete safety system installed on runways that has kept five airplanes from serious accidents in runway overrun situations. The company said the **EMAS^{MAX}™** system, with a Jet Blast Resistant (JBR) 502 coating, is a third generation upgrade of the original EMAS and is designed to reduce the costs of installation and maintenance of the safety system that has performed flawlessly since it was first installed at U.S. airports in 1996.

“The **EMAS^{MAX}™** system maximizes runway safety with the same level of superior overrun protection and offers easier and quicker installation, improved durability and greatly reduced maintenance,” said Kent Thompson, ESCO Vice President, Airport Engineering. Enhancements include:

Plastic Bottom Tray with Integrated Forklift Slots that provides improved moisture protection from below and permits easier handling and quicker installation.

Plastic Top Cover that provides superior moisture and mechanical protection while virtually eliminating the need to paint the bed. The plastic material is flame retardant and chemical/UV resistant.

Butyl Rubber Seam Tape that provides superior, longer lasting sealing of block joints and substantially reduces installation time and effort.

Extruded Silicone Side Sealer that provides a higher quality seal on exposed block sides and is quickly installed with standard equipment.

Engineered Arresting Systems Corporation (ESCO) has been the global leader in the design and production of arresting systems for military and commercial aircraft for more than 50 years. Innovative thinking in the early 1990’s led to the successful development of EMAS with the Federal Aviation Administration (FAA). ESCO’s EMAS systems have worked successfully in every airport that has experienced an overrun accident where EMAS has been installed, from an MD-11 and B-747, down to lighter aircraft such as the Falcon 900 and Saab-340, with no injuries and minimal or no damage to each aircraft. Currently 18 airports in the United States have installed the system that is approved by the FAA and endorsed by the National Transportation Safety Board (NTSB).

EMAS Cited as Important Risk Management Tool For Airports

(Reprinted from ROR March 2007)

EMAS is an important part of managing risk on airports, according to a risk management expert who spoke at the 2007 Airport Council International-North America Insurance and Risk Management Seminar Jan. 11 and 12. Ginga Griffin of ESIS, Inc., Global Risk Control Services, concluded a presentation at the conference with a separate section on EMAS and Runway Safety Areas.

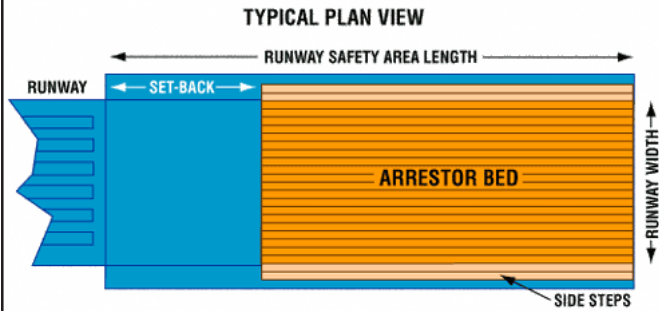
ESIS provides risk management services designed to reduce the costs of losses to its customers. EMAS was cited as a runway safety system designed to mitigate injury and damage to aircraft in runway over run accidents.

Madrid Installations Increase EMAS Systems Worldwide to 23 Airports

(Reprinted from ROR December 2007)

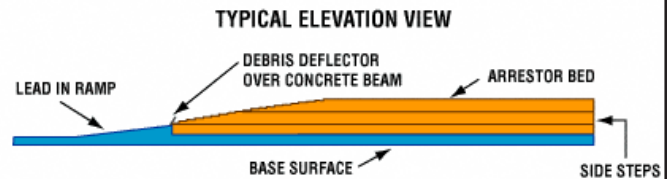
Two Engineered Material Arresting Systems (EMAS) installed in 2007 at Madrid’s main airport, Barajas International, were the first EMAS installations within the European Union, and raised to 34 the number of EMAS systems installed at 23 airports worldwide. An additional 12 installations are programmed for completion by the end of 2008.

How EMAS is Designed

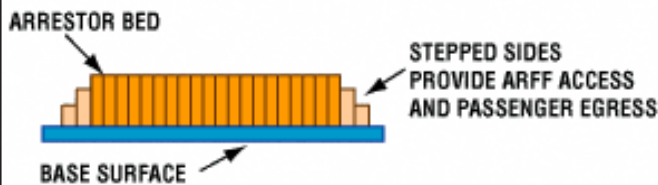


The EMAS is typically the full width of the runway and the arrestor bed is set-back from the end of the runway.

The front of an EMAS includes a lead-in ramp to transition the aircraft into the material.



TYPICAL SECTION



Beyond the runway width the sides of an EMAS are stepped to provide emergency vehicle access and passenger egress. On short runway safety areas an EMAS typically extends the length of the space available. On long runway safety areas the arrestor bed set-back is increased and the system is sized for 70-knot performance.

Development of EMAS Recognized by Six Professional Societies With The Presentation of the 2007 Elmer A Sperry Award

(Reprinted from ROR December 2007)

Peter T. Mahal, President of the EMAS division of ESCO and three other individuals who helped develop the Engineered Material Arresting System that has prevented serious aircraft accidents in five overrun landing accidents have been awarded the prestigious Elmer A. Sperry Award for 2007.

The award was presented Aug. 20 to Mahal and to Robert F. Cook, formerly of the University of Ohio-Dayton; Pam L. Phillips, of the Port Authority of New York and New Jersey; and James White of the FAA's William J. Hughes Technical Center. Along with Mahal and his company, the three others and their organizations were instrumental in the development of EMAS that has been installed at 23 airports around the country and overseas.

The Sperry award is unique in that it is the only honor presented jointly by six professional engineering societies – The



Runway Overrun Report is the latest in a series of information letters from **JDA Aviation Technology Solutions** focusing on EMAS and its significance in improving the stopping capability of non-standard runway safety areas for aircraft overruns. **Engineered Arresting Systems Corporation (ESCO)** has developed an engineered material arresting system approved by the FAA for use at civil airports. JDA provides assistance to ESCO on safety issues and FAA policy. For additional information, contact JDA by phone at 202-244-5990, by Fax at 202-244-5542 or visit our website at www.4jda.aero.

American Society of Civil Engineers, the Institute of Electrical and Electronic Engineers, the Society of Naval Architects and Marine Engineers, SAE International, the American Institute of Aeronautics and astronautics, and the American Society of Mechanical Engineers. The 2007 presentation was made at the 29th Annual International Air Transport Conference organized by the American Society of Civil Engineers, August 19-22 in Irvine, Texas.

The Sperry Award was established in 1955 and is awarded in “recognition of a distinguished engineering contribution which, through application, proved in actual service has advanced the art of transportation, whether by land, sea, air, or space.”