

Braking News

ZODIAC
AEROSPACE 

Emergency Arresting Systems Division

Fall 2009



*Photo By Lance Cpl. Chris Kutlesa,
U.S. Marine Corps*

FEATURES

**Aerazur Textile Brake
Marines Take To Field
Royal Test at Mildenhall
Return to UAV Market
Thinking Green.. Recycling**



Dear Arresting Systems Users and Representatives Worldwide,

Let me thank you for the excellent communications we have received from you, including suggested changes and new ideas to better serve the field users of our arresting systems. At the Emergency Arresting Systems Division (EASD) of Zodiac Aerospace, we strive to make your jobs easier, and to get to you the items you need quickly, and correctly the first time. Our recent global financial crisis has indirectly helped all of us by reducing the upward cost pressure we saw on basic commodities of steel and aluminum, which our suppliers had passed down to us. This previous period made it quite challenging to provide a “budget quote” to be valid for much beyond a very short window of time. We are working with our suppliers to provide forecasts so that together we can suppress such cost excursions to our best ability. We still do see some cost growth, but we are grateful that this pressure has subsided as compared to 18 months ago.

2009 has seen ESCO very active in developing and testing product improvements the Servo Control for our BAK 12 product line has had a technology refresh which is currently undergoing a final assessment before release for sale. The new configuration has the additional benefit of more commercial off-the-shelf (COTS) components which will assist us all to keep costs growth over time minimized. We are continuing to see much global demand for computer controlled braking systems, and ESCO’s design and development benefits from a 11 year experience record, with many satisfactory actual arrestments in addition to the extensive testing performed prior to deploying our initial design. These new computer controlled upgrades will be suitable for any BAK 12 currently operational, but we will require your assistance to assure we have the total configuration of your proposed upgrade systems exactly correct, so we can ensure all needed components for a successful upgrade can be identified and included.

Our newest arresting system, the Low Profile Arresting Gear, or LPAG, is currently under some modification resulting from recent USAF requests to establish a set of defined parameters not originally included in ESCO’s design. We hope to be complete with these modifications and subsequent arrestment tests later in the 2010 time-frame with a lesser work-load on Field Operators. The result is a Total Life Cycle Cost reduction, suitable for select locations. Your Regional Sales Director can provide you more details to determine if the LPAG is a suitable choice for your needs.

As a reminder, the LPAG is designed to be a secondary arresting system to be placed in over run areas or at occasional use airfields, at which high cycle operations are not conducted. The total energy capacity is designed to be lower than our principal friction brake products (BAK 12 and 500S), but this system should provide reliable emergency braking while requiring far less civil works for installations, and far less maintenance activities, thereby placing a new Computer Control Upgrade for Friction Brakes and the LPAG into the product portfolio. We remind all that the Textile Brake, a range of net stanchion systems, friction brakes and ESCO’s trademarked Water Twisters systems are all available for your selection. We look forward to discussing your requirement set with you so we can suggest the most suitable products for your needs and budgets.

ESCO continues its partnership with Aerazur’s Barrier Team in Cognac, France. Together, we are working hard to provide arresting systems, spare parts, overhauls, field service and troubleshooting services globally. With Aerazur’s European location, many customers can be reached faster than by a dispatch from the USA. We are striving to balance our ability to offer parts and services quickly with a desire not to duplicate efforts and therefore add costs, so we ask each Rep. to continue to make local requirements known to us, so we can develop the most cost-effective strategies to meet them, quickly and at economical costs.

T Lad Webb

Vice President, Compliance, Zodiac U.S. Corporation

MWSS-171 Marines Take to Field

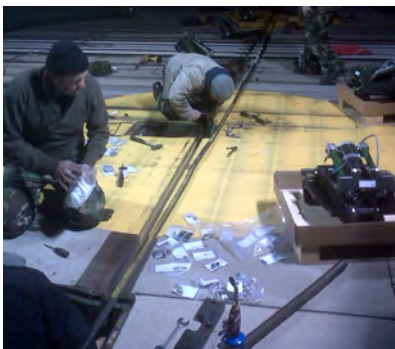
8/5/2009 By Lance Cpl. Chris Kutlesa, Marine Corps Air Station Iwakuni



MARINE CORPS AIR STATION IWAKUNI, Japan — Expeditionary aircraft technicians from Marine Wing Support Squadron 171 conducted a field exercise at Penny Lake during the last week of June. “Most people don’t know the full extent of our (military occupational specialty) once we are out in a field environment,” said Lance Cpl. Troy R. Oliver, an expeditionary airfield technician. “In the field it is our job to basically set up an airfield for everything from jets to helicopters. The main reason we have conducted this exercise is to better ourselves and our ability to get the job done in a timely manner.” During the exercise, Marines were tested on their knowledge and had to learn new skills. On a typical workday, airfield technicians do not work with the equipment used on deployments. Master Sgt. Michael T. Westcott said the field exercise is the first time most of the Marines used the equipment. Westcott pointed out the exercise was not only an opportunity for the Marines to get acquainted with the gear,

but a chance to work as a team in a field environment. “Going through procedures while at the station is good practice and it helps things run smoother in a deployed environment,” said Westcott. Marines attended eight classes designed and taught by other Marines in their shop. Classes covered a variety of topics from installing a medical evacuation pad to assembling shelters. “I really liked that all the classes were very hands-on,” said Lance Cpl. Jessica Garcia, an expeditionary aircraft technician. “I really appreciated how all the instructors really broke everything down step-by-step.” Over the course of the week the Marines had a chance to put what they learned in the classroom into action through various training scenarios. Garcia said in one of the scenarios they had to set up a refueling station but at the last moment found out they had to reverse the refueling station to better accommodate the aircraft. “The scenarios were realistic and definitely something we should always prepare for,” said Garcia. One scenario scheduled at night gave Marines the opportunity to assemble a lit-up airstrip. The scenarios at night were scheduled, but the spurts of rain the Marines encountered were not. “The rain won’t stop us, lightning will, but rain won’t,” said Garcia with a smirk on her face.

Around the World



BAK-14 Retrofit for the Air National Guard

Madison, Wisconsin -- Air National Guard (ANG) Technicians at Truax Field ANG Base (Dane County Municipal Airport) work along side ESCO representatives work late into the night to retrofit a BAK-14M for trials scheduled to take place in May of 2010. (Photo by John Lamb)

Iowa ANG F-16 makes tailhook landing at Des Moines Airport

August 2, 2009 (by Lieven Dewitte) - Mechanics at Des Moines' 132nd Fighter Wing Unit are trying to figure out what forced the F-16 pilot to make a barrier engagement. The pilot informed air traffic control that he was experiencing problems during take-off. The pilot was escorted over a rural area by three additional F-16 jets as he checked the controls on the jet. The problem eventually pointed to the brakes of the F-16 so as a precaution, the pilot dropped his arrestor hook, which latched onto a steel cable stretched across the runway at Des Moines Airport. (Source: www.f-16.net)

Fire at Kielce Exhibition

September 25, 2009 (by Iwona Moraczweski) - This year MSPO 2009 Kielce Exhibition (31 August – 3 September) started unfavorably with a fire that occurred on the premises of Targi Kielce on the 30th of August. Though there was a lot of turmoil (some companies incurred losses; exhibitors had to be relocated), the fire did not affect the schedule of events. The fire did not affect the MMC CONSULTING PARTNERSHIP Booth where ZODIAC AEROSPACE was a sub-exhibitor. Fortunately enough, we managed to get organized quite well.

The Kielce Exhibition maintained its position as the Central Europe's biggest defense industry show. There were 288 exhibitors, including 98 foreign ones from 25 countries.



RAF Mildenhall Put to Royal Test



by Staff Sgt. Austin M. May
100th Air Refueling Wing Public Affairs

9/22/2009 - RAF MILDENHALL, England -- At each end of the airfield here, two unassuming orange and white shacks sit facing each other across the black-streaked tarmac of the runway. Housed within each one is a giant hydraulic reel that could mean the difference between life and death for a fighter pilot in an emergency.

The reels control the base's aircraft arresting gear, a thick cable similar to those found on aircraft carriers used to stop airplanes quickly over a very short distance. RAF Mildenhall serves as a divert base for the fighters of the 48th Fighter Wing, RAF Lakenheath, in case their airfield is deemed inoperable. Because of that, the airfield is equipped with the arresting gear in the event a fighter has to land here and cannot stop on its own.

The barriers are rarely used, but must be tested annually, said Tech. Sgt. Craig Houchins, 100th Civil Engineer Squadron power production shop noncommissioned officer in charge. Usually, the annual test is the only time the arresting gear sees any action, he added. To test the gear, two F-15s from the 48th FW flew here to actively engage the barriers and help train the teams who maintain them. Each fighter taxied toward the cable at about 100 miles per hour, snagged it with their tailhook and let the system work its magic. Each reel has about 1,200 feet of thick strap rolled around it, and as the aircraft pulls the strap out of the shack and down the runway massive brakes slow the reel and, in turn, the runaway jet. Once the airplane has stopped, emergency crews can tend to the pilot and aircraft as necessary.

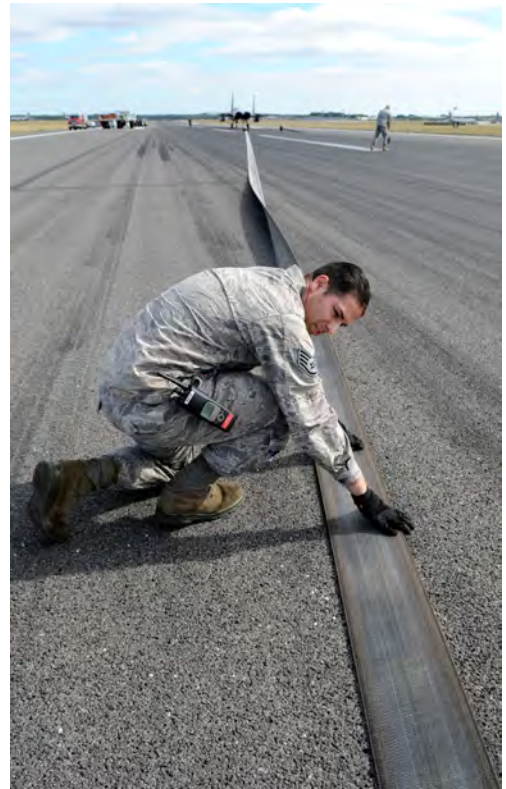
For the purpose of the Sept. 22 test, firefighters worked alongside 100th CE barrier maintenance team members to familiarize themselves with the equipment. Sergeant Houchins said the fire department is trained to set the barrier up in the event an emergency happens when no barrier maintainers are present. According to Master Sgt. Joseph Lamberti, 100th CES, bases with permanently stationed fighters usually have high-tech systems that can be employed at a moment's notice. However, since RAF Mildenhall is only a divert base for fighters, the current system does the job. If needed, the system could catch up to five airplanes in a single hour, he said.

While the barrier only requires an actual test once a year, the equipment is checked daily by barrier maintainers who ensure it's ready in an emergency, Sergeant Houchins said. Fighters from RAF Lakenheath can be seen in the air over RAF Mildenhall almost daily. If the time ever comes when one needs a quick stop and can't land at home, the 100th CES barrier maintenance team is ready and equipped to put the brakes on a potentially deadly situation.

RAF MILDENHALL, England – An F-15 from the 48th Fighter Wing, RAF Lakenheath, stops with the assistance of arresting gear during an annual test of the system Sept. 22. The gear is used to stop aircraft that cannot stop under their own control and must be tested once a year to ensure it will function properly in the event of a real emergency. (U.S. Air Force photo/Staff Sgt. Austin M. May)



RAF MILDENHALL, England – Staff Sgt. Vincent Rizzo, 100th Civil Engineer Squadron barrier maintenance team, works with firefighters to reset the spacing between rubber “donuts” on one of two aircraft arresting cables here after an exercise Sept. 22. The donuts hold the arresting cable two inches off the runway so it can be easily grabbed by an aircraft’s tailhook in an emergency. The gear was engaged by an F-15 in a required annual test of the aircraft arresting system. (U.S. Air Force photo/Staff Sgt. Austin M. May)



RAF MILDENHALL, England – Staff Sgt. Vincent Rizzo, 100th Civil Engineer Squadron barrier maintenance team, checks one of two 1,200-foot straps used to stop aircraft in an emergency on the RAF Mildenhall flight line. The arresting gear must be checked after each use, and was used to stop an F-15 Sept. 22 during an annual maintenance test. (U.S. Air Force photo/Staff Sgt. Austin M. May)

RAF MILDENHALL, England – Emergency crews tend to an F-15 from the 48th Fighter Wing, RAF Lakenheath, after it was stopped by arresting gear during an exercise Sept. 22. The gear must be checked annually, so the fighter engaged it while taxiing at about 90 knots. (U.S. Air Force photo/Staff Sgt. Austin M. May)



IMRO



Installation, Maintenance, Repair, and Overhaul

2009 has been a busy one for the IMRO Team and we remain fully engaged as the fall season approaches. We continue to be scattered about the globe working jobs for both Arresting Gear and EMAS. On the gears side of the business we are working on system installations and training in Oman, Bulgaria, Estonia, Germany, and Singapore. The EMAS team is hitting their stride overseeing installations in Worcester, MA, Winston-Salem, NC, Wilmington, DE, and Reading, PA as well as conducting the first retrofit of an EMAS arrestor bed in Binghamton, NY. This summer we began rolling out plans to offer comprehensive training and long-term maintenance offerings for our customers.

For arresting gear our plan includes coupling training visits and site inspections followed by recommendations for repairs and overhauls. For EMAS we have developed long-term maintenance packages for our customers and are looking forward to providing full services to our customers in Chicago as well as the Port Authority of New York and New Jersey.

Stay tuned as we continue to branch out and make ESCO the place our customers turn to for both installation and after-market services worldwide!



Green at EMAS

EASD is a strong advocate for a green initiative and considers recycling/re-use along with other environmentally-friendly practices a top priority and strategic goal of the division. During 2008, The ESCO Engineered Materials Arresting Systems (EMAS) facility initiated a new recycling program that includes contaminated water filtration, materials re-utilization, block disposal and cement dust collection that may prevent airborne emissions from landfills.

A team was assembled to study the characteristics of usage materials and identify opportunities in the plant for recycling. Among the top initiatives: to design a way to filter out the cement from the contaminated waste-water that is used in the EMASMAX block manufacturing process. In the past, the cement contaminated water would be collected and hauled away by a waste treatment facility. The team implemented a water recovery system that now filters the water and removes the contaminated cement.

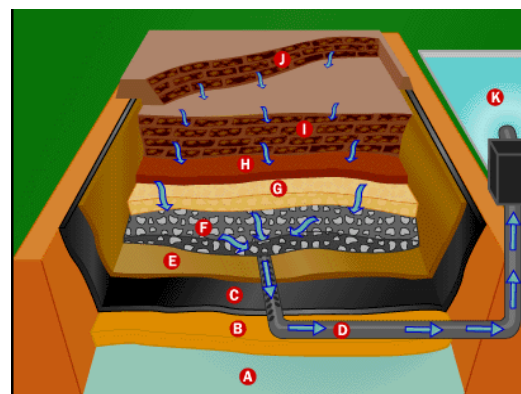
The team also identified materials in the manufacturing process that could potentially be re-used or recycled, to include; the bottom plastic tray (used to facilitate the handling of the blocks), rejected cement block, sample cement coupons (quality control test block) and the cement dust collected at the block-slicing center.

As a result of the team effort, a new process was implemented for the disposal of discarded blocks. The blocks are lifted up on a pallet and tipped over into a small holding container. The plastic bottom tray is removed, leaving just the cement block in the container. The plastic tray is cleaned, inspected and re-used by the form-build manufacturing area for new blocks. If it is damaged, the tray is returned to vendor where it is ground-up and recycled into new trays. The discarded cement blocks are distributed to a building material recycler, which saves the company about 50 percent of the waste hauling fees if placed in dump.

The cement dust is collected and stored into a separate holding container. This dust is an excellent base-material and has proven beneficial in the landfill layering process. The refuse that goes to a landfill is typically very acidic. The cement dust is layered within the soil layer. Because of its low alkalinity, the cement dust helps neutralize the PH of the acidic waste and to stabilize airborne emissions. This material is also used in making road beds.

To date, EMAS has recovered over 100 bottom trays to be reused in the block manufacturing process and have sent 222 tons of cement dust to the landfill reclamation site in Bellmawr, New Jersey.

Landfill Stabilization - EMAS cement dust material helps prevent airborne emissions during waste retrieval and changing the physical, chemical, or toxicological properties of contaminants in-to reduce the risk to human health or the environment.



This cross-section drawing shows the structure of a municipal solid waste landfill.

- | | |
|-----------------------------------|-------------------------|
| A Ground Water | G Drainage Layer |
| B Compacted Clay | H Soil Layer |
| C Plastic Liner | I Old Cells |
| D Leachate Collection Pipe | J New Cells |
| E Geotextile Mat | K Leachate Pond |
| F Gravel | |

Innovation

At the December 2007 EASD Strategic Planning Session, Innovation was identified as a target for improvement. The goal: Establish a sustainable innovation process that drives and rewards innovation throughout the company that includes a documented procedure for the capture, evaluation, and storage of new ideas. In 2009, the focus has been in three main areas: promoting creativity among all employees, capturing and implementing employee ideas beneficial to ESCO & refining the R&D/Product development planning process.

Promoting Creativity- This has been accomplished through the formation of a cross-functional Innovation Team (The PIT Crew). The main focus of the team is regular communication and solicitation of employee ideas along with leading Brainstorming teams to innovate around specific topics within the company.

Capturing Ideas- The team created an internal email address for company employees to submit new ideas for everything from cost reductions to process and product improvements to new products. The team is working towards an intranet website to increase visibility of the ideas along with creating a electronic means to process and store the ideas. To date, there have been 141 ideas submitted by 74 employees.

Refining the R&D Process- An Investment Council (I-Council) has been formed at ESCO to review candidate Product Development projects, review idea submissions as well as reviewing Cap-Ex proposals.

We welcome all ideas both, internally and externally. If you have an innovative idea to share, send it to:

Innovation@zodiac aerospace.com

What's Hot?

Computer Controlled Arresting System

The new Computer Controlled Arresting System is scheduled for validation testing in December 2009.

This new arresting system is still on schedule for sale in early 2010.

Continue reading the ESCO Braking News for periodic updates!



The members of the team are Spencer Hoos, CEO, Nick Gallogly, CFO, Peter Mahal, representing EMAS and T Lad Webb, representing Gears. The I-Council is also tasked with managing the company's investment portfolio, taking into consideration the different categories of company investment.

NEW SALES TEAM MEMBER



In our continuous effort to improve customer support, the Aerazur sales team has recently strengthened its commitment with the addition of Mr. Vincent Denis as a Regional Director. Vincent has a degree from the University of Technology of Compiègne in Engineering. After 6 years of experience in a car seat manufacturer

as a project manager, he joined Aerazur in 2005. During his 4 years with Aerazur, he has managed several important projects such as; overhaul and support program of French Air Force 500S, overhaul and support program of Belgian Air Forces systems and technical support to the Spanish Air Force.

Due to his previous position of project manager, he has been frequently in contact with customers and thus has a good understanding of his new job. In his daily activities, Vincent reports to Sandrine Accolas-Tournié, Sales Manager, Aératur Emergency Arresting Systems.

Welcome to the team, Vincent and have great success!

AERAZUR TEXTILE BRAKE

Among the wide range of arresting systems offered by the Emergency Arresting System Division (EASD), the Textile Brake developed by Aerazur is a unique concept.

Developed and qualified by the French Air Force in the 1980s, it has been since sold to a large range of customers worldwide. It has been installed in quite different environments, from deep cold and snow to humidity or extreme heat without any negative feedback and a series of successful arrestment reports has proven its efficiency.

Tested and qualified at Lakehurst Naval Air Engineering Test Center, the Textile Brake has since been largely purchased and installed on several USAF Air Bases.

Indeed where the rate of engagement is low, the textile brake is a solution of choice. It is perfectly adaptable to Net Stanchion systems but can also be used with a pendant. As it can be installed on unprepared ground, the Aerazur Textile Brake is also an ideal solution for rapid deployment forces

Based on the principle of tearing straps, it offers a simple and cost effective solution both at acquisition and during operation. It's a low weight and low profile system which is of a great interest when operated on a joint civil/military runway where International Civil Aviation Organization (ICAO) regulation is a constraint.

Due to its modular design, engineering can tailor a Textile Brake System to fit any customers need. The configuration of one system is based on the run-out available and on the characteristics of the range of aircraft (speed, weight, hook load, etc.).



Do you have comments, suggestions or a story to contribute? Send it to us! Your input and feedback is valuable to us. Please send all comments, suggestions, story contributions and ideas to Roxanne.Lockwood@zodiacaerospace.com.



AERAZUR is the OEM of BEFAB Brand Parts

When Engineered Arresting Systems Corporation joined Zodiac Group six years ago, the decision was made to transfer the BEFAB operations plant located in Shannon, Ireland to the Aerazur plant in Cognac / Merpins, France. At that time, the parts inventory, tools and jigs, the technical data (engineering drawings, technical manuals, supplier's data, etc.) were also transferred to facilitate the transition.

During the last five years, Aerazur has acquired the knowledge and the associated skills to keep a satisfactory level of customer support. Aerazur continues to work closely with Jackie Ryan, Martin Hanley and Pat Collins.

The transition period has now concluded successfully with the process fully operational. Aerazur has assumed the role of OEM for Befab brand products and is committed to sustaining these products through their entire life cycle.

As a reminder, the use of non OEM parts should be prohibited for safety reasons. The original parts were qualified and have a proven reliability. Obsolete parts have been replaced after intensive testing and checks that the new parts have the same fit, form and function. Consequences of use of Non-OEM approved parts on safety, reliability and durability are unknown and the OEM warranty does not apply.

Return to the Unmanned Aerial Vehicle Market

ESCO is focusing on the UAV Launcher market in the 100-1200 pound (45-550 kg) UAV range. The fielded designs of the HP 2002, HP 3003, HP 3502, HP 3402 and HP 3407 cover the range.

While new designs are not anticipated, modifications to existing systems may be required. Recent launcher deliveries have penetrated the national marketplace. Successful launcher operations have built a confidence level in UAV prime contractor integrators. MobileNet 2000 sale to an international customer has established credibility of recent system design and activity. Land based recovery systems are a relatively simple design if it meets customer requirements. Shipboard recovery has a high degree of difficulty due to constraints/restraints driven by customer operational requirements for shipboard integration.

Globally, the UAV market is rapidly expanding. Analysis by ESCO shows that 45 countries have a total of 200 companies that have UAV systems under development, completed or deployed. Of those, 60 companies have 107 types of UAVs in the 100-1200 pound range and are potential customers for ESCO launcher and recovery systems. Nationally, the UAV market is very active. ESCO is currently working with six leading UAV systems integrators. Our product line of launchers is attractive to them because they are fielded designs and built to standards suitable for combat and extreme environmental conditions.



UAV Launch & Recovery Systems

ESCO has attained initial success in the re-entry into the UAV L&R market. This plan is to leverage success into other similar National & International Markets. Forecast for large UAV sector growth remains strong. ESCO Investment over last 3 years filled launcher performance gap. Capture plan focuses on a specific segment of the UAV market. Analysis shows large International UAV market.

ESCO Strategy: A systematic and synchronized approach to engage the UAV industry through advertising and a contact plan of action.

BUILT COMBAT TOUGH

UAV LAUNCHER SOLUTIONS

WWW.UAVLAUNCHER.COM

ZODIAC AEROSPACE 
Engineered Arresting Systems Corporation

Dr. Lytle Adams (Cont.)

The Dentist/Inventor

ESCOLUTION

Doc Adams invented the Air Mail Pick-up system in 1927 and gave up his dental practice again in 1928 to devote full time to developing this latest invention. It was 1933, and though the Great Depression had begun, the “Century of Progress” was in full swing in Chicago. This was once again an opportunity for Adams to demonstrate his pick-up system. He acquired two sponsors, NY Central Railroad and Braniff Airways. They managed to have the Post Office Dept extend the mail route to the fairgrounds. On September 20, 1934, pilot Trow Sebree and Eddie Gerber carried 4000 pieces of mail. They made the trip in six minutes, 10% of time it took by mail truck. Though the Chicago pick-ups were thrilling and successful, and though Adams had begun making plans for feeder routes around Chicago, enthusiasm waned and died along with any plans when the fair ended.

Though disappointed once again, something did happen in Chicago that would significantly change Adams and his pick-up system forever. A man named Richard Archbald whom was making expeditions into the forests of New Guinea for bird and animal specimens for the NY Museum of Natural History. He became interested in the air pick-up system. However the current design of the trap system was too big and bulky for the New Guineans to carry and assemble the system in the jungle. Adams hit upon the idea of using two bamboo poles set apart like goal posts with a loop between, replacing the trap. That way only the pole and rigging would have to be carried. A grapple suspended from the plane would make the pick up. At that moment, Adams retired his cumbersome trap forever. In less than five years, his “goal post” air mail system would be servicing 121 communities in the Mid-Atlantic Region.

Adams moved to Irwin PA and established Tri-State Aviation Corporation in early 1937. Home offices were at Wheeling, West Virginia. “Doc” Adams had proven experiments on land and on sea with the pick-up. He had demonstrated it all over the East. The only apparent problem was that the Post Office had to be sold on the idea; special legislation would have to be enacted for pick-up air mail service and capital had to be acquired. This support came from West Virginia’s Representative Jennings Randolph. The capital was located when “Doc” interviewed Felix and Richard DuPont of the Delaware family. The DuPonts had formed the Elton Investment Corporation to aid budding new business projects. The DuPonts were very strongly in favor of any aviation projects.



Richard Chichester DuPont was a shy and quiet young man, but a champion of aviation in his own right. He held many glider distance records. Richard saw the potential immediately for the experimental mail pick-up system. He envisioned it as a proving ground for flying equipment as well as air service to towns not fortunate enough to have airports. On October 1, 1938, Richard paid all of the debts held against Tri-State Aviation and its All American Aviation division.

Doc Adams was an Inventor and Dentist, not a savvy businessman. His association with Richard DuPont would result his losing control not only of his company, but of his invention as well.

(Source: “A Place in The Sky” by Richard Wissolik)



Richard du Pont (circa 1937)



IATA Added to List of International Aviation Industry Groups Supporting EMAS

- David Heald, Regional Director, ESCO-ZA Airport Sales

The International Air Transport Association (IATA) has added their voice to an ever-growing list of aviation industry groups endorsing the use of "EMAS-type arrestor systems. IATA's position is included in the recently released Runway Excursion Risk Reduction (RERR) Toolkit, developed jointly with Flight Safety Foundation (FSF) in order to address runway excursions, which continue to be the cause of more than 25% of all commercial aircraft accidents annually. Along with IATA and the FSF, experts from airlines, regulators, aircraft manufacturers, airports, air traffic control and safety organizations around the globe helped develop this important tool. The IATA position specifically states that "the installation of a Runway Safe Area (RESA) or EMAS systems can substantially reduce the effects of a runway excursion."

IATA cites overrun statistics for air transport category aircraft: 43 per month in 2005, 22 in 2006 and 26 in 2007 and concludes that "empirical evidence confirms that in overrun situations, an EMAS arresting system is successful in preventing injuries to passengers and limiting damage to aircraft." IATA references both the FAA's requirement for 1000ft at each runway end or an EMAS as well as The ICAO Global Aviation Safety Roadmap which recommends an EMAS be installed where runway configuration does not allow for the provision of a RESA as recommended by ICAO (Annex 14). Their support for larger RESA or EMAS is clearly reflected in IATA's Position Statement:

- IATA recommends a minimum 240m RESA for all runways 1800m or greater. If this is impractical, then IATA recommends a runway arrestor system that is designed to protect aircraft and passengers, such as EMAS, that is engineered to stop an overrunning aircraft at 70 knots or less.
- Supports installation of EMAS type arrestor systems at commercial airports that do not provide 240m RESA for runways 1800m or longer, as recommended by ICAO Annex 14.

IATA's stand, along with those taken by other leading Aviation groups reflects a sense of global support for ESCO-ZA's EMAS/EMASMAX systems as the solution for aircraft overrun safety and the protection of aircraft and passengers.

**Extracts taken from IATA Runway Excursion Risk reduction (RERR) Toolkit, First Edition, 2009*

Links:

IATA: <http://www.iata.org/index.htm>

Runway Excursion Risk Reduction (RERR) Tool Kit: <http://www.iata.org/ps/publications/runway-toolkit.htm>



Courtesy of Airport Magazine

50th EMAS Installation On-track by End of 2009

Engineered Arresting Systems Corporation (ESCO-Zodiac Aerospace) completed recent EMASMAX installations at Worcester (MA) Regional Airport (Departure Runway End No. 29) and Reading (PA) Regional Airport (Departure Runway End No. 29), raising the total number of systems worldwide to forty-seven. Additional projects currently underway will ensure that the company reaches a milestone of fifty global installations by the end of calendar year 2009.

The following is snapshot of additional airports that have chosen EMAS as their solution for aircraft overrun safety and the protection of aircraft and passengers.

EMASMAX Projects under contract:

- (1) Winston- Salem, NC (install Nov 09)
- (1) New Castle County, DE (install Oct 09)
- (1) Kansas City Downtown Airport (install Nov 2009)
- (1) Key West, FL (install Jan 2010)
- (1) Arcata, CA (install Spring 2010)
- (2) Martin County Airport, Stuart, FL*
- (2) Groton-New London, CT *
- (2) Lafayette, LA *
- (2) Augusta State, ME *
- (2) Telluride, CO *
- (1) Kansas City Downtown Airport *

**Under contract for design, with construction planned in the near future.*



Installation at Reading (PA) Regional Airport



The Emergency Arresting Systems Division (EASD)

The EASD is the world's leading supplier of emergency land-based arresting systems for military and commercial aircraft.

Members of the division include ESCO headquarters (Engineered Arresting Systems Corporation), Aston, PA, USA and ESCO's EMAS (Engineered Material Arresting System) Division, Logan Township, NJ, USA, along with Aerazur, located in France.

The EASD's versatile product line for military aircraft is built around friction, rotary hydraulic and textile energy absorbers that are available as part of permanent, semi-permanent and mobile installations. The aircraft's energy is harnessed via cross-runway net stanchion or hook cable equipment configurations and is then transferred to the energy absorbers, safely slowing and stopping the aircraft.

Safety is provided in commercial airports with EMASMAX®, ESCO's latest EMAS (Engineered Material Arresting System) which was developed in partnership with the US FAA (Federal Aviation Administration) and is accepted by the FAA as an equivalent to a Standard Runway End Safety Area (RESA).

With over 50 years of controlled energy absorption experience, the ISO 9001: 2000-certified EASD companies provide a full range of engineering, manufacturing and installation services that are supplemented by continued OEM product and integrated logistics support. A robust research and development program ensures that technically innovative solutions continue to be part of The Division and the customers' future.

Contact Information



Engineered Arresting Systems Corporation Headquarters

2550 Market Street
Aston, PA 19014 USA
Tel.: +1 610 494 8000 Fax: +1 610 494 8989
Email: sales_aston@zodiac aerospace.com
<http://www.aircraftarresting.com>

Aerazur

2 rue Maurice Mallet
92137 Issy-les-Moulineaux Cedex, France
Tel.: +33 1 41 23 23 23 Fax: +33 1 46 48 83 87
<http://www.aerazur.com>

Engineered Arresting Systems Corporation EMAS Division

2239 High Hill Road
Logan Township, NJ 08085 USA
Tel.: +1 856 241 8620 Fax: +1 856 241 8621
Email: sales_logan@zodiac aerospace.com
<http://www.emasmax.com>