



# Montauk to Manhattan



## Long Island & Metro NY Chapter 86 - eNewsletter

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### March Meeting Announcement

**Topic: Tour of Cox and Company**

**Host:** Steve Landry, President/COO

**Date:** Monday, March 22nd, 2010

**Time:** 6pm -Networking/Refreshments, 6:30pm –Presentation, 7pm - Tour

**Place:** Plainview, NY (Directions will be provided once your reservation is received.)

**Fee:** Complementary Lite buffet/dinner/refreshments will be provided by the host

#### Reservations: Required - Space for this events is limited

RSVP by Friday, March 19, 2010, 12pm to Tom Fiorella 516-214-5588 or email at [tfior9651@msn.com](mailto:tfior9651@msn.com). Please indicate: Name, Organization/Company, Title, Day Time Phone and/or email address, Member Affiliation (IIE / SME)

Cox & Company is a 100% employee-owned company in operation for over 50 years and staffed with the finest technical experts in the fields of thermal, mechanical and electrical engineering. They are the industry leader in the design, development, test and manufacture of high quality custom systems to meet the demanding specifications of aerospace, industrial and transit applications. Cox heating systems were on the NASA Lunar Landing Module when man walked on the moon and continue to meet the extreme environmental operating requirements of space on the US Space Shuttle Fleet and new International Space Station. They also specialize in difficult and demanding customer requirements through their unique combination of multi-discipline engineering capabilities, diverse product technologies and extensive in-house facilities.

Cox & Company recently moved into their new modern 110,000 square foot facility in Plainview, NY. This environmentally controlled facility houses the company's Executive/administrative offices, engineering/manufacturing operations, engineering laboratories and test facilities.

This completely integrated engineering and manufacturing facility allows Cox the in-house capability to provide their customers with the highest level of product quality and support. The highlights of the tour include:

- Completely integrated engineering laboratories, manufacturing operations and test facilities
- Advanced Heater Fabrication Facility dedicated to high-quality, aerospace-grade, temperature control and ice protection products
- Environmental Testing and Research Laboratories including engineering prototype design and fabrication capabilities, temperature and humidity chambers; Cox-designed Thermal Test Management System; high airflow rate test and measurement equipment; EMI test facilities and CTIA® modeling
- Manufacturing Clean Room for electronic assemblies
- Transit Product Facility dedicated to high volume production runs
- Customer Support Facility includes product stocking, distribution and repair center



Long Island Metro NY  
Chapter 86  
*Events Calendar*

Monday, March 22, 2010

*Topic:* Tour of Cox and Co. - See details on this page

Monday April 19, 2010

*Topic:* Tour of LIRR Maintenance Facility (tentative)  
*Time:* 5:30 PM

2010 IIE Northeast  
Regional Conference

March 26 – 28, 2010  
The Pennsylvania State University  
Details: [www.ie.psu.edu](http://www.ie.psu.edu)

Professional  
Events Calendar

#### APICS

**Tuesday, March 9, 2010**

*Topic:* Green Sourcing Can Yield Big Savings

5:30 PM Networking, 6:15 PM Dinner  
7:15 PM President's Welcome & Announcements, 7:30 PM Presentation at Panama Hatties - 872 Jericho Turnpike, Huntington Station, NY

*Details:* [www.apicsnyc-li.org](http://www.apicsnyc-li.org) or 631-266-2621

#### AIAA SECTION MEETING

**Thursday, March 11, 2010**

*Topic:* Aging Aircraft  
Speaker: Anthony Gallo  
Mgr., Airframe & Mechanical Sys. Branch  
FAA New York Aircraft Certification Office  
6PM Social Time, 6:30PM Pizza  
7PM Presentation

*See Details:* at [www.iienet.org/long\\_island](http://www.iienet.org/long_island)

## President's Message



This month we have a rare opportunity to tour the facility of Cox and Company, which had recently relocated to Plainview, NY. Cox has been providing design solution to the transportation and aerospace industries for more than 50 years. What I found interesting is that the company on January 1, 2004, became 100% employee owned. Please sign-up early for this tour since space will be limited.

For next month plans are underway to tour the maintenance facility of the LIRR. This will not be the first time that we have been invited to see this state of the art operation. This tour was far from boring. Many of the members that attended back in April, 2004 are still talking about what they saw. Check the Chapter's website for the date and details of the event, which should be posted after March 22.

Last month we were invited back to AIAA Long Island Section's monthly meeting. The meeting, which was on Friday February, 19, was rescheduled from the previous week due to the record snowstorm. We did not know what to expect for attendance, since the only day available that week was Friday. The 20 plus who did attend were captivated by the wealth of information that Dave Paris provided on the life of Glenn Curtiss and his contributions to the aviation industry. Please see the review of the meeting below for the details.

If you have not yet joined the professional networking group LinkedIn please consider doing so. I have personally reconnected with many college school mates and other professional past colleague. Also please take note that IIE and IIE Northeast Region both have groups which I urge you to join. On the IIE group there is an ongoing discussion addressing that long debated topic of what is IE. Some of the comments have also been posted in the current issue of IE magazine.

Chapter 86 President

*Tom Fiorella*

## Review of the February Meeting

At the February meeting, which was a joint event with AIAA, David Paris, Chairman of AIAA Long Island Section presented a history lesson on the life of Glenn Hammond Curtiss - American Aviation Pioneer. Dave started by outlining the main points of the presentation which was to include the early life of Glenn Curtiss, what he was involved with before aviation, aviation milestones, the feud between the Wright Brothers and Curtiss, and what would become Curtiss's legacy.

Glenn Curtiss was born May 21, 1878 in Hammondsport, NY to Frank Richmond Curtiss and Lua Andrews. His Grand-father died in 1882 and his father in 1883. He was then raised by both his mother and grand-mother. In 1889 his mother moved to Rochester. Glenn left school after finishing 8<sup>th</sup> grade in 1892. In 1892-3, at a young age, he worked for Eastman Dry Plate and Film Co. where he showed interest in mechanics and inventions. His next job in 1893-5 was at Western Union as a bicycle messenger and led to him becoming more involved with bicycles and bicycle racing. He was a champion bicycle racer which led him designing and building his own machines.

Glenn moved back to Hammondsport where he worked as a photographer and married a local girl, Lena Pearl Neff, daughter of Guy L. Neff, in Hammondsport, NY on March 7, 1898. In 1900 he worked Smellie's drug store and opened his own bicycle shop. In 1901 he built a motorcycle engine. By 1902, Curtiss, with three employees, was manufacturing his own motorcycles under the trade name, "Hercules". In a measured-mile run at Ormond Beach, Florida, on Jan. 23, 1907, Curtiss's V8 powered motorcycle was officially clocked at 136.3 mph. On that day, and for years afterward, Glenn Curtiss carried the title, "Fastest Man on Earth". His speed record would last until 1911 when a race car reached 141.7 MPH.

Glenn Curtiss first experience with aviation did not come until 1904 when famed balloonist, Thomas Scott Baldwin, ordered a V-twin motorcycle engine to power a lighter-than-air ship (dirigible). On June 28, 1907, in Hammondsport Curtiss flew for the first time in a Baldwin dirigible. That year Curtiss continued to pursue aviation in earnest and joined the Aerial Experiment Association (AEA), which was formed on October 1, 1907. Among its members were famous inventor, Alexander Graham Bell, F.W. "Casey" Baldwin, J.A.D. McCurdy and U.S. Army Lieutenant Thomas Selfridge. (Continued on next page)

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In 1908 the AEA developed its first aircraft, which was called the Red Wing. By this time the Wright Brothers had already made the first successful controlled flight of a manned aircraft. Because of their distrust of the press the Wright Brothers, did not allow public viewing of the flight, and received little public notice of the event. On March 12, 1908 the Red Wing made the first public flight in America of a heavier-than-air machine with Casey Baldwin at the controls. The flight took place on frozen Lake Keuka ice. The Red Wing achieved an altitude of 319 feet and went a distance of 200 feet for 20 seconds. On March 17 the Red Wing made its last flight after going just 120 feet and crashing onto the lake resulting in a wreck.

The AEA second aircraft, designed by Casey Baldwin, was called the White Wing. The White Wing resembled the Red Wing but with some important changes. The aircraft had wheels and balloon tires (tricycle gear), small ailerons at the upper wingtips for lateral control (designed by Bell), a shoulder yolk, steerable front wheel (designed by Curtiss), laminated wood prop, and streamlined struts. On May 18, 1908, with Baldwin behind the controls, the White Wing became the first American wheeled takeoff. The next day, on May 19, Selfridge became the first soldier to fly in the USA with two flights of 100 feet and 240 feet. On or about May 21 Curtiss flew for the first time. He flew the White Wing for a distance of 1,017 feet. On May 23 it was John McCurdy turn, who flew for 720 feet and then wrecked the plane on landing.

The third AEA airplane was named the June Bug, which was designed and piloted by Curtiss. The plane which took only 3-weeks to build, incorporated improved ailerons, engine controls on wheel, and detachable wings. The plane achieved improved range and stability. On June 21, 1908 Curtiss flew the plane for the first time a distance of 1,266 feet and on June 26 a distance of over 3,000 feet was achieved. The plane flew so well the AEA decided to try for the Scientific American Trophy, which consisted of three legs. Leg 1 – flight of 1 kilometer (\$2,500 prize), Leg 2 – flight of 25 kilometers (\$10,000) prize, and Leg 3 – you get to keep the trophy. On July 4, 1908 Curtiss won the first leg by flying the June Bug a distance of 5,090 feet - 1,810 feet farther than required. It was noted that the Wright Brothers were also asked to compete but had declined.

The Silver Dart, became the AEA fourth aircraft and considered their most successful, completed in December, 1908. On February 23, 1909 J. McCurdy piloted the plane in Nova Scotia, which was the first flight in Canada. McCurdy took the plane up to an altitude of about thirty feet and flew for a distance of about three-quarters of a mile at an estimated speed of forty miles per hour. *(Editor's note: The Silver Dart Replica built in Welland, Ontario by the AEA 2005 Inc. group was transported to Baddeck, Nova Scotia for an historic 100th anniversary flight. On February 22, 2009, the eve of the 100th anniversary of the original Silver Dart's flight, the replica took to the air bringing history back to life. The flight can be viewed on YouTube at [http://www.youtube.com/watch?v=ELep6jK61Xk&eurl=http%3A%2F%2Fwww.capa-acca.com%](http://www.youtube.com/watch?v=ELep6jK61Xk&eurl=http%3A%2F%2Fwww.capa-acca.com%2F))*

On March 31, 1909 the AEA disbanded and Curtiss went on to form his own company the Herring-Curtiss Company in association with Augustus Herring, another aviation pioneer. The company's first plane was the Gold Bug (AKA – the Golden Flyer). The Gold Bug had the ailerons located between the wings, a 4-cylinder, water cooled, 24HP engine, and a laminated wood prop. On May 30, 1909 the Gold Bug was flown for the first time by Curtiss at the Morris Park Race Track in the Bronx. On July 17 Curtiss flies at Mineola for the second leg of the Scientific American Trophy where he wins the \$10,000 prize. That same month Curtiss established the first flying school in the US on Long Island.

Other aviation milestones in 1909 include:

- July 25 – Louis Bleriot flew across the English Channel
- August – First International Air Meet
- Sept. 5 – On the 300<sup>th</sup> Anniversary of Henry Hudson's Voyage Curtiss flies up the Hudson while Wilbur Wright flew around the Statue of Liberty.
- October 7 – Curtiss becomes the first American to hold an FAI airplane certificate

Dave Paris pointed out that the feud between the Wright Brothers and Glenn Curtiss went on for years. Dave indicated that it is his opinion that the feud and patent infringement suits resulted in curtailing the advancement of aviation in the US and lag behind Europe. The Wright brothers won their initial case against Curtiss in February 1913, but the decision was appealed. In January 1914, a U.S. Circuit Court of Appeals upheld the verdict against the Curtiss Company, which continued to avoid penalties through legal tactics. In 1917, with World War I underway, the U.S. government pressured the industry to form a cross-licensing organization, the Manufacturers Aircraft Association, to which member companies paid a blanket fee for the use of aviation patents, including the original and subsequent Wright patents. The "patent war" ended, although side issues lingered in the courts until the 1920s. In a twist of irony, the Wright Aeronautical Corporation (another successor) and the Curtiss Aeroplane Company merged in 1929 to form the Curtiss-Wright Corporation, which remains in business today producing high-tech components for the aerospace industry.

(Continued on next page)

## **Chapter 86 Membership Information**

Long Island & Metro NY Chapter  
Current Active Membership = 134

About IIE Founded in 1948, IIE is the premier society dedicated to serving the professional needs of industrial engineers and all individuals involved with improving quality and productivity. IIE has over 15,000 members and more than 280 chapters worldwide.

Who benefits from membership? There are hundreds of job titles given to people, who manage, design, install, or maintain integrated systems of people, machinery, and information. No matter what your job title, if you are the person called upon for solutions when there is an issue that requires your attention, you belong in IIE.

To become a member of IIE call  
1 800 494 0460  
or log onto to  
[www.iienet.org](http://www.iienet.org) & click on Join IIE



June 5-9  
Fiesta Americana Grand  
Coral Beach Hotel  
Cancún, Mexico

### **Connect with IIE**

Expand your network by connecting to IIE on these social media sites:

- ✚ LinkedIn
- ✚ Facebook
- ✚ Twitter
- ✚ IIE blogs

The effects of the patent laws suits resulted in bankrupting the Herring-Curtiss Company, the Wrights sought 20% royalty on aeroplanes and 20% of exhibition gates, and the press had turned against Curtiss. Judge Wheeler advised him that he could still fly for prizes, so Curtiss decided to try for the \$10,000 NY World prize for a flight from Albany to NYC (150 miles). In 1910 Curtiss successfully flew an aircraft he called the "Hudson Flyer" and won the prize money, nationwide recognition, and in the process, won the third leg of the Scientific American Competition and permanent possession of the coveted trophy. Other events that year included:

- Curtiss ceased motorcycle production, formed the Curtiss Aeroplane Company as founder and president.
- Flying Exhibitions, where he headed the team, took place in Los Angeles in January, Memphis and San Antonio in March. The Los Angeles Air Meet was the first large-scale air show in the US.
- On June 30 an aerial bombing was demonstrated to Navy Officers from a Curtiss aircraft at Lake Keuka.
- First firearm used from an aircraft piloted by Curtiss while Army Lt. Jacob Fickel fires a rifle at ground targets at Sheepshead Bay Speedway in Brooklyn, NY.
- Curtiss took his wife Lena for a ride, which would be his last time as an exhibition flyer.
- In August McCurdy sends and receives the first wireless messages from an aeroplane in flight at Sheepshead Bay.
- September 3 -13, Harvard Boston Aero Meet was the second air meet held in the country with 67,241 spectators, including President Taft.
- October 22-31 the first International Air Meet took place at Belmont Park. There were 100,000 spectators each day, 40 aviators took part, new altitude, endurance, and speed records were achieved.
- In November Eugene Ely flew his Curtiss airplane off the cruiser, USS Birmingham

From 1911 through the war years (WWI) Curtiss became more and more involved with the military including the Navy. Some of the milestones that took place during that time include:

- Jan. 18, 1911 Eugene Ely landed on the Cruiser USS Pennsylvania
- Jan. 26, 1911 first hydroplane to take off from water and on Feb. 17 first seaplane flight to a ship was achieved in the San Diego Harbor
- In 1912 the first flying boat was demonstrated at Lake Keuka
- In 1913 Lawrence Sperry went to Hammondsport to work on an autopilot and on Aug.30 Sperry flies a Curtiss C-2 flying boat with a gyroscopic stabilizer.
- In February of 1914 Sperry demonstrated auto pilot in a solo flight over Paris and on June 18 Sperry and a French mechanic fly a Curtiss C-2 flying boat at the Airplane Safety Competition again demonstrating the gyrostabilizer.
- On Jan. 13, 1916 – Curtiss Aeroplane and Motor Company absorb the Curtiss Aeroplane Co. and Curtiss Motor Co. Curtiss received \$4.5 million and 50% stock. The company was the largest aircraft manufacturer in the world during WWI producing over 10,000 aircraft during the war with 21,000 employees.
- In 1917 a new aircraft factory in Garden City was to become the first R & D aircraft factory in the world.
- In 1918 Sperry builds world's first aerial torpedo unpowered plane which was tested near Amityville, but was never used.

In 1920 Glenn Curtiss left the aviation business and moved to Florida, where he became a successful land developer. With friends, he developed the Florida cities of Hialeah, Miami Springs, and Opa-Locka. In the spring of 1930, he was awarded an honorary Doctor of Science degree from the University of Miami for his many contributions to the development of the Miami area.

Curtiss's amazing career was tragically cut short on July 23, 1930. At age 52, while undergoing surgery for appendicitis in Buffalo, NY, he developed a blood clot that ended his life. Glenn Hammond Curtiss was returned to his home town where he rests today in a quiet spot in the Pleasant Valley Cemetery, not far from the site of his historic flight in the "June Bug".

Curtiss is remembered today as the Father of Naval Aviation and the founder of the American Aircraft Industry. A Glenn H. Curtiss Museum has been established in Hammondsport, NY. You can learn more about the life of Glenn Curtiss by visiting the Museum's website at [www.glennhcurtissmuseum.org](http://www.glennhcurtissmuseum.org).

**Local job positions that may be of interest to IIE members are posted on the Chapter's website at [www.iienet.org/long\\_island](http://www.iienet.org/long_island)**  
 (See the Chapter's Careers Page for details)  
 Current Job Posting includes:

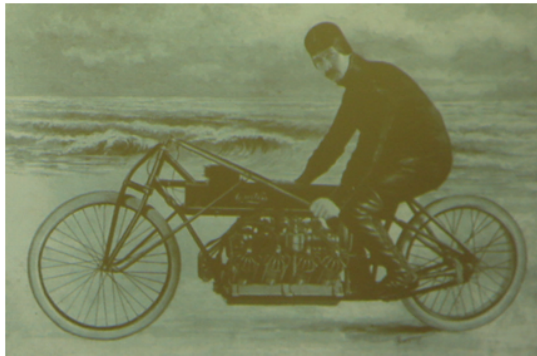
**INDUSTRIAL ENGINEER**  
**JOB DESCRIPTION**  
 A dental/medical manufacturing company located in Melville NY is current seeking an Industrial Engineer to support the company's electro-mechanical assembly, electronic and metal working departments. Strong organizational skills and the ability to communicate effectively are a must. An ideal candidate would have experience in process flow, logistics, Lean manufacturing, work cells, and 5S.

- RESPONSIBILITIES INCLUDE:**
- Time study
  - Production line layout
  - Process improvement
  - Labor routings
  - Maintenance of the manufacturing software data base
  - Facilities layout
  - Plant engineering
  - Building systems

Company: **Air Techniques, Inc.**  
 Send resume to Susan Bauerlein  
 Address: 1295 Walt Whitman Road  
 Melville, NY 11747  
 Email: [sbauerlein@airtechniques.com](mailto:sbauerlein@airtechniques.com)  
 Fax: 516-740-4607



Dave Paris Chairman of AIAA Long Island Section



Glenn Curtiss on his large custom-made motorcycle



Members of the AEA from l to r – Glenn Curtiss, "Casey" Baldwin, Alexander Graham Bell, Thomas Selfridge, and J.A.Douglas McCurdy