

EAA 252 OSHKOSH Steve Wittman Chapter

Issue
April 2010
4/5/2010

Oshkosh – Sport Aviation Capitol of the World Oshkosh – Sport Aviation Capitol of the World Oshkosh – Sport Aviation Capitol of the World Oshkosh – Sport Aviation Capitol of the World

Next Chapter 252 Meeting

Because of the Steve Wittman Birthday Fly-In Breakfast there will be **NO** regular Thursday meeting for the month of April.

The next regular meeting will be May 15th.

S. J. (Steve) Wittman Birthday Fly-In Breakfast THE Event for April.

Our annual Wittman Birthday Fly-In is only a couple of days away. We have gotten the word spread out to EAA Chapters and many FBO's around Wisconsin. If the weather holds out (keep your fingers crossed) we may even see a few Tailwinds from the Baraboo area show up! Plus – we should be able to get in a few Young Eagle rides.

All of this activity is to help promote recreational aviation, and a bit of local history, at the grass roots level.

So, on April 10th from 7:30 to 11:00 A.M. we will host our annual pancake breakfast fly-in to commemorate legendary pilot and aircraft designer S.J. “Steve” Wittman’s 106th birthday. This event is open to the public – so tell your friends and neighbors. Pass the word!

Held at the Wittman Regional Airport Terminal building on 20th St., the event will feature a breakfast of sausage, eggs, beverages, and all you can eat pancakes. Those attending can fly-in or drive-in. The cost is \$6.00 for adults and \$3.00 for children under the age of 10. Pilots of homebuilt aircraft that are flown in will get free breakfast.



Chapter May Meeting & International Learn to Fly Day, May 15th, 2010

Our May meeting will also help promote INTERNATIONAL LEARN TO FLY DAY (www.learntoflyday.org) by having a special celebration get together and cook out on Saturday May 15th. Interested Chapter pilots and their planes should meet at the EAA’s Weeks Hanger at 10:30 AM. There they will be available to give Chapter members and their friends’ information about how to obtain their pilot licenses and the process and costs of owning an airplane (or as Janet would say, “an aeroplane”).

For lunch there will be a brat fry with all the fixin’s at the Weeks Hanger. EAA Staff member John Hopkins and his group of volunteers will be available to show Chapter members and guests

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For Membership in Chapter 252

Send \$20.00 to:
Janet Davidson
3218 Bellfield Rd
Oshkosh, WI 54904

Wittman Birthday Fly-In Volunteer Schedule

4/9/10, Friday night, if you are available, check with John to see if help is needed setting up equipment.

4/10/10, Saturday Morning 6:30 A.M. for volunteers for final set up and start cooking. We will serve from 7:30 A.M. until 11:00.

With enough help, clean up should not take long we should be able to finish up by noon or soon after.

If you have any questions, please contact John Egan at johnegan99@yahoo.com, or 920-419-5631.

Young Eagle Volunteer Pilots

As part of the Wittman Birthday fly-in, from 9:00 to approx.10:30 A.M. Chapter 252 will host a Young Eagles Flight Rally.

PILOTS – contact our Young Eagles flight coordinator Eric Von if you are able to participate.

Young Eagles – Eric Von
983 Cozy Ln
Oshkosh, WI 54901
(920) 230-6403
egvon@earthlink.net

2010 Chapter Calendar and Wittman Airport Events

April 10th

Wittman Birthday Fly-in Breakfast
Wittman Airport Terminal

April 24th

Fox Valley Tech Fly-In Breakfast
Airport Campus

May 15th

Chapter meeting & cookout & "Learn
To Fly Day" at the EAA Weeks
maintenance hangar on 20th st., Osh.

June 17th

Chapter meeting & cookout at
Pioneer Airport Wittman Hangar.

July 26th – August 1

Aeromart at Airventure 2010

August 25th

Chapter meeting & post Aeromart
cookout at the Weeks Hangar

September 9th

Chapter meeting & Corn roast at
Munsil Williams farm

October 9th

Chapter meeting & Chili bust cook
out at Wayne Daniels hangar

November 11th

Chapter meeting at Sonex

December 9th

Chapter meeting & tour of the
Founders Wing, EAA Museum

January 20th

Chapter meeting, with discussion on
aviation fuels, at Wittman Airport
Terminal

For Wisconsin aviation events check out
the calendars at:

<http://www.eaa.org/calendar/>
and

[http://www.dot.wisconsin.gov/travel/air/
fly-ins.htm](http://www.dot.wisconsin.gov/travel/air/fly-ins.htm)

May 15th Chapter Meeting

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the various projects they are working on. Festivities should wrap up by 2:00 PM. This is a great opportunity for our Chapter to help promote aviation to our non-flying Chapter members and their aviation interested friends. Please contact Doug Milius at; phone 920-205-3349, or e-mail at drmilius@sbcglobal.net, if you are available to bring your plane to this event. If you are able to attend with or without a plane, be sure to bring along a friend that is interested in aviation. We hope to see you there!

EAA CHAPTER 1177

Presents the Story of:
THOMAS SCOTT BALDWIN
"Grandfather of American Aeronautics"
A Biography by JoAnne Seekman



First U.S. Parachute Jump — Inventor of the Modern Propeller Design
First Military Aviation School — Built the First Hydroplane, The H10
First to Use Metal Aircraft Framing — First to Deliver Airmail Messages

Mentor to Such Aviation Notables as:
Lincoln Beachey, Glenn Curtis, and The Wright Brothers

Wednesday, April 21 at 7:00PM
Palmyra Municipal Airport (88C), Palmyra WI

About the Speaker: JoAnne Seekman is a former Elementary School Principal and
Community College Teacher. She is also a cousin to famous Aviatress, Amelia
Earhart, and a member of John Denver's Windstar Foundation.

Chapter 1177 of Palmyra has extended to us an invitation to attend a special program presented by JoAnne Seekman. Seekman is a former Elementary School Principal and Community College Teacher, cousin to Amelia Earhart, and a member of John Denver's Windstar Foundation.

ROAD TRIP

By Doug Milius

What does driving have to do with flying? A lot in this instance. "God", I asked myself, "why am I doing this again for the umpteenth time?" Every time we go to Maui I get stuck driving the dreaded "Road to Hana". We're staying on the Southwest side of the island and Hana is on the Northeast side. Maui is relatively small and it's a short 67 mile drive from our condo. The problem is, unlike driving I-80 through Iowa and Nebraska, the road has 600 turns and 54 one lane bridges and the terrain is up and down and there is a lot of traffic. Did I mention the locals that are always in a hurry and don't necessarily stop and yield at the bridges? Oh well, here we go again.

Everyone was up bright and early. The sun was just starting to show its early morning glow over Haleakala volcano. We loaded up the rental car with our essentials, food and drinks, and off we went. Now, I'm not complaining because every time I drive this route I am amazed at the beauty of the area along the coast. First it's the sugar cane fields, then the pineapple fields and then the more rugged coast of the northern part of the island. Eventually you are in a rain forest environment with lush valleys, rivers and waterfalls. This trip was a little different in that Maui was experiencing a draught and most of the water was being diverted to the sugar cane canals which left little water for the downside streams and waterfalls. Enough water was being left for us tourists to view some spectacular waterfalls along the way, just not quite as many as other times before.

Winding, twisting, up and down, slow traffic, another one lane bridge, stop for photos, take a hike in the rain forest to a waterfall, another bathroom stop, wait...go, watch for falling lava rocks, just another day in paradise. Finally we reach the outskirts of Hana and stop at a county park for lunch. Did I mention the car bottomed out on the road to the park? I hope the oil pan is still in one piece. We find a picnic table and have our lunch while a Mongoose plays along the lava rock wall. After lunch we walk down a

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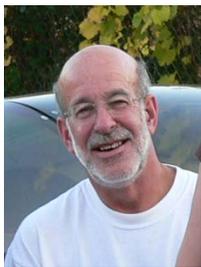
FVTC Airport Campus Fly-In Breakfast April 24th, 7 to Noon



The students and instructors from the airport campus at Fox Valley Tech will again be holding their annual fly-in breakfast. In the past this has provided visitors with a good opportunity to see the facility and talk with the students. These students have taken the next step beyond introductory programs like EAA's Young Eagles. These individuals, many still new to aviation, are our next generation of aviation professionals. They appreciate your support.

See last months Pylon for more information.

President's Message



By Wayne Daniels

Many thanks to Greg Rasske for the great presentation at our March chapter meeting on his Hot Air Balloon company, "Wisconsin's Majestic Balloons". It was refreshing to see another aspect of aviation that most of us "fixed wingers" don't see a lot of. Clearly although most of us keep a keen eye on weather conditions when we fly, Greg's aviating requires far more respect for Mother Nature. If you have never experienced "lighter than air" flight, maybe give Greg a chance to introduce you sometime! Thanks again Greg!

We are now just days from our Steve Wittman birthday celebration and Young Eagle rally on April 10. If you haven't already contacted John Egan to help out with the breakfast, or Eric Von to help out with the YE flying, I hope you will do so today! If nothing else, please come and enjoy a great breakfast with Chapter 252 on Saturday!

Saturday May 15 is International Learn to Fly day. This first ever event is a relative of the Young Eagle's effort, but is aimed at introducing anyone to the fantasy of flight. The chapter is planning a cook-out and intro flights at the Kermit Weeks hangar. If you can't be there, at least introduce a friend or neighbor to aviation with a flight, or just a "bull session" about aviation. Hopefully we can help grow our passion, and get aviation's numbers back to where they were several years ago.

It is not too early to begin working on Chapter 252's largest event of the year. AirVenture and Aeromart will be here very soon and we want to make it even better than last year. This will require contributions from as many members as possible. If everyone could participate in at least one five hour shift it would surely be a successful event. Please contact Jim Kress to volunteer some of your time for working the tent or Al Folendorf to assist in the "feeding" of all our great volunteers. THANKS!

2010 Chapter 252 renewals should have already been made. If you haven't

Road Trip

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path to the ocean and a black sand beach. The waves are crashing in on the lava with a thunderous roar. We walk inside a lava cave and watch the waves come and go. Back up on top we load up the car, I stoop down in front of the front bumper to make sure we didn't do any damage and off we go.

We drive around Hana and head south to the 'Ohe'o gulch that used to be named the seven sacred pools until they found out there was nothing sacred about them. Because of the draught there is no water in any of the pools so we don't stop. I drive on trying to find the Palapapa Ho'omau Church and even though I've been there four other times I miss the road and drive on. I eventually realize I've gone too far and turn around. I spot a little lane with a sign to a riding stable and then remember that this is the turn. About 50 yards in is a little sign for the church nailed to a tree and then I really know this is the spot. We park the car in a little parking lot and walk through a lava fence that surrounds the church's cemetery. At the far end of the little resting place is a grave lined with lava rocks and a stone marker. The marker's inscription reads, "If I take the wings of the morning and dwell in the uttermost parts of the sea CAL". Charles A Lindbergh, aviator, adventurer. I stand at the base of the grave and say a prayer hoping to gain some knowledge, some strength, and some fortitude from a great man.

If Wilber and Orville had not taken that first flight would we still be land bound? Of course not. Someone else would have flown first and gotten the credit. If Charles Lindbergh had not flown across the Atlantic would we still be bound to flying in North America? Of course not, another would have made it eventually and gotten the credit and the notoriety that came with it. But he was the first and the flight he made was amazing. It is sometimes hard to imagine back to those times and really realize exactly what he accomplished. No satellite navigation, no Pratt and Whitneys or GE's turning carrying thousands across vast expanses as they do today.

Do we have Charles Lindbergh's among us today? Of course we do. We see them every year at Air Venture, the aviation explorers with fearless attitudes. And we have them in our own chapter. The builders who construct their own planes, the professionals who fly commercially and corporately who make every flight with safety their number one priority, and the teachers that give back to our chapter their experience and knowledge.

Yes, Charles Lindbergh was a great pilot and spokesman but we don't have to look too far to see the same types of women and men with that "can do" spirit. I may groan again the next time I have to make this drive but this stop at this little church overlooking a vast ocean makes it all worthwhile.



The gravesite of Charles Lindbergh.

renewed, please see Janet Davidson! We have a busy year ahead, and the more of us involved will ensure another successful chapter year.

The Start To A Good Technical Library (and it's free!)

In past issues of this newsletter I have promoted the practice of good research for any aircraft builder or restorer.

In the March 2010 issue of *Sport Aviation* I was reading through Bud Davisson's story about Doug Palmer and the Spencer Air Car that he had built. What a story! What a project! In an era of quick build kits and buying your project in a box, to read about a scratch built airplane (and one that's as big as a house) project like this was a nice change.

I enjoyed a particular paragraph in the story, when Palmer was acknowledging the help he had received from different people. He also commented about his library – "... the project would have died if it weren't for the internet, Tony Bingelis's books, and (FAA) Advisory Circular 43.13 "They became my bibles, and this clearly proves that you don't need to be an expert to build an airplane, but you'd better know where to find the information when you need it." I like it.

I want to tell you about a program that the FAA has been working on for a while now. For decades there have been volumes of books that A&P schools, mechanics, etc. have used as their standard technical reference library. Over the years they've been revised, and personally, I've felt that some revisions seemed to have had too much good material left out of them (and a few errors). Apparently, some folks in the FAA felt the same way, and so by using a combination of traditional references combined with a good dose of solid engineering input and experience – they are rewriting the standard aircraft technician Handbooks to create volumes that can be used as real reference books. The first one is finished and is now available. Called the *General Handbook* (FAA 8083-30) it covers the basics of the science and general knowledge that should be employed when working on aircraft. Coming out soon will be the new *Airframe Handbook* with expanded sections on welding and other fabrication techniques.

Thanks to the internet, these books can be downloaded off the FAA website as PDF files at no cost. You can keep them on your computer and view them whenever you wish, or you can buy a couple cases of paper for your printer and print off your own hardcopies. Of course, you can still do it the old fashioned and buy a copy

A Bit More on Steel Aircraft Welding

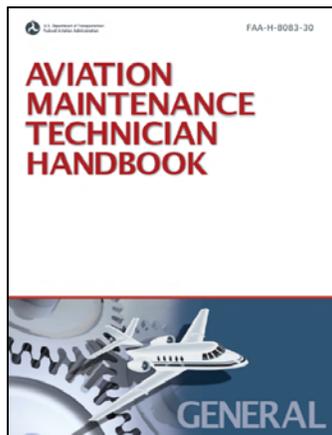
Courtesy of Aaron Novak

Oxyacetylene Welding of Ferrous Metals Steel (including SAE4130) -

SAE 4130 is an alloy steel that is an ideal material for constructing fuselages and framework on small aircraft. The tubing has high tensile strength, malleability and is easy to weld.

In order to make a good weld, the carbon content of the steel must not be altered, nor can other chemical constituents be added to or subtracted from the base metal without seriously altering the properties of the metal. Molten steel has a great affinity for carbon, oxygen, and nitrogen combining with the molten puddle to form oxides and nitrates, both of which lower the strength of steel. When welding with an oxyacetylene flame, the inclusion of impurities can be minimized by observing the following precautions:

- Maintain an exact neutral flame for most steels, and a slight excess of acetylene when welding alloys with a high nickel or chromium content, such as stainless steel.
- Maintain a soft flame and control the puddle.



from the government printing office, or many aviation supply houses.

I challenge you to check it out. Go to http://www.faa.gov/library/manuals/aircraft/amt_handbook/ where you will find all 13 Chapters. You might be surprised at how much information is in there.

As long as you're on the FAA site, check out the Advisory Circulars and save a copy of AC 43.13-1B & 43.13-2B (Acceptable Methods Techniques and Practices). It's all good stuff.

• Maintain a flame sufficient to penetrate the metal and manipulate it so that the molten metal is protected from the air by the outer envelope of flame.

• Keep the hot end of the welding rod in the weld pool or within the flame envelope.

• When the weld is complete and still in the "red" heat, circle the outer envelope of the torch around the entire weldment to bring it evenly to a dull red. Slowly back the torch away from the weldment to ensure a slow cooling rate.

The welding technique for chrome molybdenum (chrome-moly) is practically the same as that for carbon steels, except that for sections over 3/16" thick, the surrounding area must be preheated to a temperature between 300° and 400° F. before beginning to weld. If this is not done, the sudden quenching of the weld area after the weld is complete may cause a brittle grain structure of un-tempered martensite that must be eliminated with post weld heat treatments. Untempered martensite is a glass like structure that takes the place of the normally ductile steel structure, and makes the steel prone to cracking, usually near the edge of the weld.

A soft neutral flame should be used for welding and must be maintained during the process. The volume of the flame must be sufficient to melt the base metal, but not so hot as overheat the base metal and cause a loss of metal thickness or oxide inclusions. The filler rod should be compatible with the base metal when referencing the filler metal selection chart (see December Pylon). If the weld requires high strength, special low-alloy filler is used and the piece is heat treated after welding.

It may be of advantage to TIG weld 4130 chrome-moly sections over .093" thickness followed by a proper post weld heat treatment as this can result in less overall distortion.

Gas Metal Arc Welding (TIG Welding)

The TIG (tungsten inert gas) process as we know it today is a combination of the work done by General Electric in the 1920's to develop the basic process, and the work done by Northrop in the 1940's to develop the torch itself and the use of helium shielding gas and a tungsten electrode. The process was developed for welding Magnesium in the Northrop XP-56 flying wing to eliminate the corrosion

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March Chapter Meeting Notes

Welding Steel, *continued from page 4*

and porosity issues with the atomic hydrogen process they had been using with a boron flux. It was not readily used on other materials until the late 1950's where it found merit in welding the "space-age" super alloys. It was also later used on other for other metals such as aluminum and steel to an exceedingly greater degree.

The shape of the electrode used in the TIG welding torch is an important factor in the quality and penetration of the weld. The tip of the electrode should be shaped on a dedicated grinding stone, or a special purpose tungsten grinder so as not to contaminate the electrode. The grinding should be done longitudinally, not radially, with the direction of stone travel away from the tip. The following comparison shows the effects of a sharp vs. blunt electrode with transformer based machines. Consult the machine manufacturer for the latest up-to-date suggestions on tungsten preparation or tungsten alloys.

Sharper Electrodes - Easy arc starting, Will handle less amperage, Wider arc shape, Good arc stability, Less weld penetration, Shorter electrode life.

Blunter Electrodes - Usually harder to start the arc, Will handle more amperage, Narrower arc shape, Potential for arc wander, Better weld penetration, Longer electrode life.

Welding 4130 with TIG is not much different than welding other steels as far as technique is concerned.

- Clean the steel of any oil or grease and use a stainless steel wire brush to clean the work piece prior to welding. This is to prevent porosity and hydrogen embrittlement during the welding process. The Tig process is highly susceptible to these problems, much more so than OA welding, so care must be taken to ensure all oils and paint are removed from all surfaces of the parts to be welded.

- Do not weld where there is any breeze or drafts; the welds should be allowed to cool slowly.

- After the welding is complete, allow the weldment to cool to room temperature. Using an OA torch set to a neutral flame, heat the entire weldment evenly to 1100-1200 deg F, hold this temperature for about 45 minutes per inch of metal thickness. You will note that for most tubing sections that the temperature only needs to be held for a minute or 2. This process is found in most materials engineering handbooks written by the ASM and other engineering sources. When working on a critical component, if there is any doubt, seek engineering help.

The Chapter's March Meeting was held at Sonex on 3/11/2010. The meeting started at approx. 7:00PM, called to order by President Wayne Daniels.

Guests present that evening were: Rob Maddox, Geneva, IL (past Monnett employee), Tony Spicer (sp?), Wilmington, NC – Sonex builder, Bernardo Christiano, Neenah, WI.

Wayne started off self-introductions of all members present, name, and aircraft or project identified.

Jim Casper asked for volunteers to work at Pioneer Airport.

On behalf of Janet Davidson, Randy Novak asked for dues to be submitted.

Cindy Boelke commented on Wittman museum project. No activity to date, but she did request that members having Wittman memorabilia available to contribute for the project to contact her.

John Egan provided an update on the April Birthday fly-in breakfast. Passed around a sign up sheet for volunteer commitment. Eric Von discussed Young Eagle flight needs. Pre-flight briefing at 8:30 AM and start flights at around 9:00 AM. Interested YE pilots need to let Eric know. He commended that last year the Chapter earned \$390.00 in YE credits.

Warren Baier is taking a job in Colorado, and will not be able to be as involved in Aeromart as intended.

Guest speaker Gregg Raske provided a presentation on his ballooning background, and his commercial balloon operation based out of Ripon. He has a large 150,000 cubic foot balloon that is capable of carrying 6 passengers. and provides a scenic ride that is typically about one hour in length. His presentation included showing a DVD about his business.

John Monnett spoke briefly about the latest Sonex project, and taxi tests with the jet powered airplane.



Greg Raske answer's questions about his ballooning operation, Majestic Balloon Ltd.



Young Eagles Coordinator Eric Von updates the group about operations for the Wittman Birthday Fly-In.



Flight Advisor Own Russell addresses the members.

641 Bowen St.
 Oshkosh, WI 54901



**Newsletters Are Available
 On-Line at www.eaa252.org**

Items for submission are welcome and must be received by the newsletter editor no later than 3 weeks prior to the monthly meeting date.

About Us

Our chapter is named after famed aircraft designer, airplane racer and Oshkosh resident Steve Wittman.

EAA Chapter 252 offers the opportunity to share the spirit of aviation with a group of local EAA members.

Our members are mostly people who enjoy the company of others who love aircraft, are fascinated by flight, and appreciate the history of aviation in America. They include r/c enthusiasts, pilots, aircraft builders, and aircraft owners.

Join Us!

Regularly meetings are held on the second Thursday of the month at 7:00 PM. Dates are subject to change, call to confirm, visit us at www.eaa252.org. Annual dues are \$20 for all current members of the Experimental Aircraft Association (EAA).

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