August 2018
Newsletter

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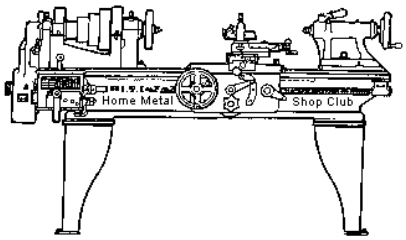


http://www.homemetalshopclub.org/

The Home Metal Shop Club has brought together metal workers from all over the Southeast Texas area since its founding by John Korman in 1996.

Our members' interests include Model Engineering, Casting, Blacksmithing, Gunsmithing, Sheet Metal Fabrication, Robotics, CNC, Welding, Metal Art, and others. Members enjoy getting together and talking about their craft and shops. Shops range from full machine shops to those limited to a bench vise and hacksaw.

If you like to make things, run metal working machines, or just talk about tools, this is your place. Meetings generally consist of ***general announcements***, an ***extended presentation*** with Q&A, a ***safety moment***, ***show and tell*** where attendees share their work and experiences, and ***problems and solutions*** where attendees can get answers to their questions or describe how they approached a problem. The meeting ends with ***free discussion*** and a ***novice group*** activity, where metal working techniques are demonstrated on a small lathe, grinders, and other metal shop equipment.

President	Vice President	Secretary	Treasurer	Librarian
Brian Alley	*Ray Thompson*	*Joe Sybille*	*Emmett Carstens*	*Ray Thompson*
Webmaster/Editor	Photographer	CNC SIG	Casting SIG	Novice SIG
Dick Kostelnicek	*Jan Rowland*	*Martin Kennedy*	*Tom Moore*	*John Cooper*

This newsletter is available as an electronic subscription from the front page of our website. We currently have over 1027 subscribers located all over the world.

About the Upcoming 08 September 2018 Meeting

The next general meeting will be held on 08 September at 12:30 PM. at the South Houston Branch, Harris County Library, 607 Avenue A, South Houston, Texas 77587. Note that this is ½ hour later than usual. The librarian has asked us to park on the north side of the building under the poser high lines. Dick Kostelnicek will give a short presentation on Machining and geodesics.

Visit our website for up-to-the-minute details, date, location maps, and presentation topic for the next meeting

General Announcements

Videos of recent meetings can be viewed on the HMSC website.

The HMSC has a large library of metal shop related books and videos available for members to check out at each meeting. These books can be quite costly and are not usually available at local public libraries. Access to the library is one of the many benefits of club membership. The club has funds to purchase new books for the library. If you have suggestions, contact the Librarian *Ray Thompson*.

We need more articles for the monthly newsletter! If you would like to write an article, or would like to discuss writing an article, please contact the Webmaster Dick Kostelnicek. Think about your last project. Was it a success, with perhaps a few 'uh ohs' along the way? If so, others would like to read about it. And, as a reward for providing an article, you'll receive a free year's membership the next renewal cycle!

Ideas for programs at our monthly meeting are always welcomed. If you have an idea for a meeting topic, or if you know someone that could make a presentation, please contact Vice-President Ray Thompson.

Reminder: Yearly club dues of $15.00 are due at the September meeting. Treasurer Emmett Carstens will accept cash or a check made payable to him.

Recap of the 11 August 2018 General Meeting

By *Joe Sybille*, with photos by *Jan Rowland*

Twenty-two members attended the 12:30 P.M. (Noon) meeting at the Spring Branch Memorial Library, located at 930 Corbindale Road, Houston, TX 77024. Two visitors attended the meeting, Roger Earl Haigh and Nick Gardiner. Nick Gardiner joined the club during the meeting. Welcome to the club Nick. There are thirty-four members in good standing with the club.

President Brian Alley led the meeting (right photo).

Presentation

Club president Brian Alley gave a presentation on 'Upstate New York Industry Museum's Pictorial Tours'. He began with a slide show tour of both a historic lighthouse and remnants of a nearby former blast furnace, both located in Charlotte, New York. Charlotte is a suburb of Rochester, New York and is located along the western bank of the mouth of the Genese River along Lake Ontario. Unique about the lighthouse is the spiral metal staircase that was added after the construction of the original structure in 1822. Before the installation of the iron staircase, ladders were used to enable the lighthouse keeper to reach the top level of the lighthouse to service the lighthouse light.

Nearby, the Rochester Iron Manufacturing Co. began operating a blast furnace in January of 1868. By 1879, the company suffered financial problems and investor Henry C. Roberts bought the company. Several improvements initiated by Roberts returned the plant to profitability. The company became The Charlotte Iron Works and remained in business until it closed in 1927. In its heyday, the company produced 325 tons of iron each day and employed 175 workers. While the buildings of the blast furnace no longer exist, several excavations in the area have uncovered artifacts of interest. Notable of the finds is a huge aggregate of metal, probably slag, and called 'the button' by locals. Excavations of the area were undertaken to reclaim land and to modernize the harbor**.**

Next, Brian showed pictures of his visit to the Glenn H. Curtiss Museum in Hammondsport, New York. Among other exhibits, the museum has a large collection of bicycles, motorcycles, engines, and airplanes dedicated to the accomplishments of Glenn H. Curtiss, a native son of Hammondsport. He became a designer and manufacturer of bicycles, motorcycles, internal combustion engines, and airplanes. For several years, he held the land speed record for a motorcycle. An engine designed by Curtiss powered the first successful dirigible flight in America. As an aviation pioneer during this country's aviation infancy, he designed airplanes for the U. S. Army and U. S. Navy. Not only did he design and build airplanes, Curtiss served as the test pilot for his designs. A determined competitor, Curtiss won several aviation competitions, most notably the Scientific American Trophy and its $2500 prize. This competition was considered the first pre-announced public flight of a heavier-than-air flying machine in America.

Dogged for years by a patent infringement dispute with the Wright brothers, Curtiss continued to create innovative designs during this country's aviation infancy. The Aero Club of America issued in June 1911 its first U. S. Pilot's License to Curtiss.

Safety Moment

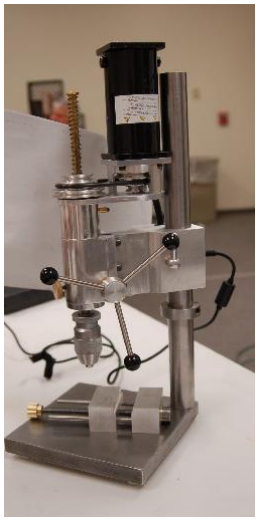
President *Brian Alley* showed a video on workers involved in workplace accidents. The video emphasized how workers knew they were cutting safety corners and taking risks. As a result the workers suffered life altering injuries, some fatal.

Show and Tell

John Elliott showed pictures and videos of projects he has made on his 5 foot by 10 foot plasma table he designed and built. A recent

project involved cutting 1 ½" sleeves from 3" carbon steel pipe. Elliott automated the process of cutting the sleeves (right photo).

Richard Douglas displayed a tool he made to lock down the ram on his shaper (see photo at left). He also showed a reference book on the use of a shaper.



Allan May demonstrated the operation of a table top drill press he made from plans by Jerry Howell (www.model-engine-plans.com). See photo at right.

Gary Toll displayed his metalworking skill by showing a replacement screw he made for his BBQ pit (left photo). He also showed a short rod with threads of different pitches that he made some time ago (photo below).

Joe Scott showed a few metallurgy books he had for sale.

Brian Alley displayed several items purchased at a flea market (left photo).

Problems and Solutions

Even though he is using high speed steel (HSS) cutters, as suggested previously, to make threads on a work piece, a member still has problems with thread chatter when threading on his lathe. He requested additional suggestions to resolve his problem. This member's problem elicited several comments, some of which were offered at the last meeting.

Another member has a problem with determining the diameter of a circle given both the number and length of chords. Suggestions included looking on-line for a formula.

Articles

Wobbly Fan

By *Dick Kostelnicek*

There are ceiling fans throughout our home including in my shop. They all wobble a bit. From time-to-time I've tried to balance the worst of them by sticking a penny on what I thought was the offending blade. This occasionally improved the situation. However, changing the fan speed brought the wobble back, often with a vengeance.

All my fans increased their wobble after the 2017 Texas hurricane Harvey. We were without electricity and hence air conditioning for several weeks. The humidity ranged day to day from intolerable to unbearable. My house had flooded and while mopping up I inadvertently raised the handle of a mop and crashed it into one of the rotating ceiling fans. I didn't think much of that mishap till my wife mentioned that that fan was wobbling much more than it had earlier.

After some thought, a "wobble inspiration" popped into my head. I had bent the fan blade with the mop handle. No amount of static balancing with a penny weight would negate the unbalanced aerodynamic force lifting the bent blade, as those forces are speed dependent! Thinking back on it, I realized that over time wood blades can warp causing aerodynamic forces that lift each blade differently. In other words, the wobble came and went as the blades aged and humidity conditions changed.

Well, Enough analysis! Here's how I fixed the problem. I dismounted opposing blades and bolted then together back to back (see photo at right). Then I bent the metal mounting bracket on one of the blade pairs till the flats of the blades were perfectly parallel. This technique may present a problem if your fan has an odd number of blades. However, use one of the blades as a standard and bend each remaining blade bracket so that each blade's pitch matches that of the standard.

One last thought. Number each blade in turn relative to its original position on the fan. This will ensure that you don't introduce wobble due to static unbalance. Usually opposing blades are selected and marked by the manufacturer as balanced pairs and for good reason.