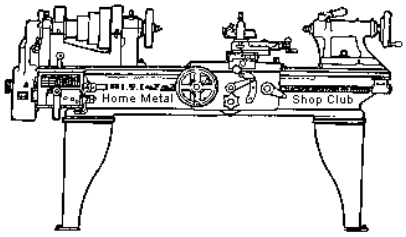
April 2024
Newsletter

Volume 29 - Number 04



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
Vacant	*Ray Thompson*	*Joe Sybille*	*Joe Sybille*	*Ray Thompson*
Webmaster/Editor	**Photographer**	**CNC SIG**	**Casting SIG**	**Novice SIG**
Dick Kostelnicek	*Vacant*	*Martin Kennedy*	*Vacant*	*John Cooper*

About the Upcoming 11 May 2024 Meeting

The next general meeting will be held 11 May 2024 at 12:00 P.M. (Noon) at TxRxLabs, 6501 Navigation Blvd., Houston, Texas 77011 **AND** on-line at Zoom.us. Log-in credentials are as follows: Meeting ID = 881 8678 9923 Passcode = 702576.

General Announcements

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 Secretary Joe Sybille.

Members are requested to submit to the club secretary the name, address, telephone number, and website address, if any, of any metal or other material stock supplier with whom the member has had any favorable dealings. A listing of the suppliers will appear on the homepage of the club website. Suppliers will be added from time to time as appropriate.

The club is looking for a member to serve as webmaster. After over ten years of service, our current webmaster would like to pass the webmaster torch to a successor. Also, the club is looking for a volunteer to serve as president.

Recap of the 13 April 2024 General Meeting

By *Joe Sybille*

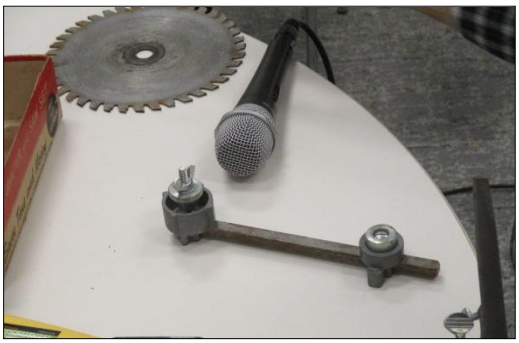
Ten participants attended the 12:00 P.M. meeting at TxRxLabs. Eight participants were in person and two participants attended virtually. There was one visitor: Eric Britt. Vice-President Ray Thompson led the meeting (right photo).

Presentation

Rich Pichler (left photo) continued his series on tool sharpening. Several tool sharpening jigs and individual tool sharpeners were shown and their uses demonstrated. Many of his sharpening tools were acquired from purchases made at garage sales. One thing he emphasized was to retain the instructions to the sharpening jig or tool, for improper use of the tool could result in dulling the item one wishes to sharpen.

Pichler gave a set of sharpening tools to those present at the meeting.

Below are several pictures depicting tools demonstrated during his presentation.



Show and Tell

John Cooper showed several ER40 collets, chucks, and end mill holders purchased recently at auction. See photos below.

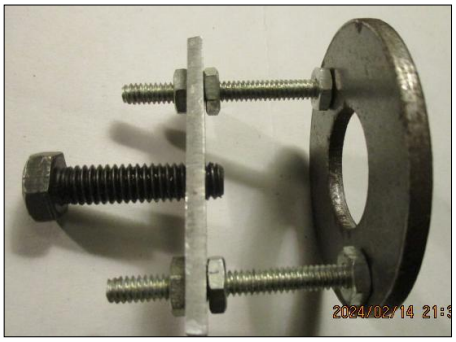
Richard Douglas showed a grinder he purchased recently. He replaced the wheels with new CBN ones. In doing so, he had to remove the wheel guards because the guards were too narrow. Since there is no likelihood of the CBN wheels disintegrating during use, no replacement guards are pending. See photos below.

Safety Moment

The safety video depicted a factory worker using his mouth as a retainer to hold nails while upholstering seats on an automobile assembly line. Fortunately, using one's mouth as a retainer is no longer considered an acceptable work practice.

Problems and Solutions

A participant gave an update on the difficulty experienced during the removal of a rusted in place handwheel in the laundry room. A shop made wheel puller came to the rescue to remove the hub of the broken handwheel. See photos below.



Another participant described the problems experienced with a malfunctioning control board on a grinder. Replacing the failed starter capacitor did not resolve the problem. Several suggestions were offered including replacing the control board.

Interesting Lathe Setup

by *Martin Kennedy*

I have two pin wrenches that I made several years ago to install and remove the grinding wheel on my surface grinder. The one for the front nut worked fine, but the inner circumference of the one used on the back of the grinder wheel was a little small, so I could never get both pins in. I decided that it was time to fix the pin wrenches so that they worked as designed.

What I needed to do was take off about 0.050" from the inner circumference. I was going to write a CNC program and do it on my mill, but in the back of my mind I knew it would be easier and faster on the lathe. I decided to give that a shot.

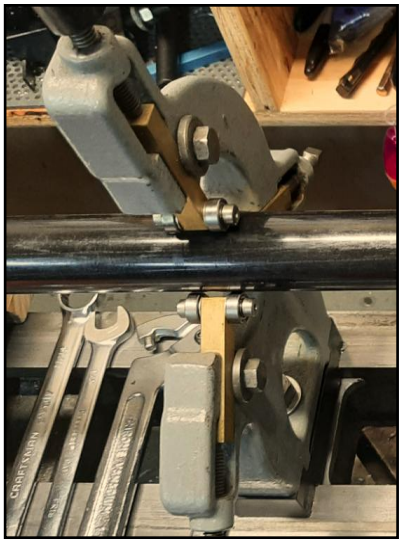
I used a four jaw chuck. The photo shows the setup. There's a sacrificial aluminum bar holding the pin wrench in position. Centering the inner circumference of the pin wrench was done with a test indicator, and turned out to be fairly easy. What gave me pause was the clearance of the pin wrench handle and the lathe ways. The lathe has about a 13" swing. Once I got the pin wrench centered, I measured just a 0.005" clearance between the ways and the handle! This was a concern, because if the handle hit the ways, it would be – in a word - bad.

I rotated the chuck by hand, and it seemed OK. Before powering the spindle, I put on a face shield, just in case. I also didn't stand in the plane of rotation. I ran the lathe at 80 RPM, and it was still OK. I increased the speed to about 180 RPM and used a boring bar to first slowly machine out a half circle in the aluminum bar. A series of light cuts on the pin wrench followed until I reached the desired size. No problem. I mounted the second pin wrench and again machined it with no problems.

Improved steady rest

Ken Johnson (Bellefonte, Pennsylvania)
mv.amature@yahoo.com

I needed to thread a 24-inch length of a Lexan rod and try to not leave them marked by a steady rest. The thread had to be metric (12 X 1.72) so I used a die. I have a 12-inch Craftsman, Atlas Lathe. The rod diameter was too large to fit through the headstock.



I added small diameter ball bearings to both sides of the adjustable fingers (left photo) on the steady rest used on my 12-inch Craftsman, Atlas lathe.

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In the above right photo I'm showing a spring die holder that was featured in the Home Metal Shop Club Newsletter - V24 No 09 page 4.

The thread had to be 1.5 inches long, so I used the deep socket shown in left photo.

Shown in the right photo is my Craftsman commercial lathe that was in fair shape but needed reconditiomimg. The main issue was with the gear train connecting the spindle with the quick-change gearbox. Please see the Home Metal Shop Club Newsletter - V23 No 04 page 3 for the fix.