January 2024
Newsletter

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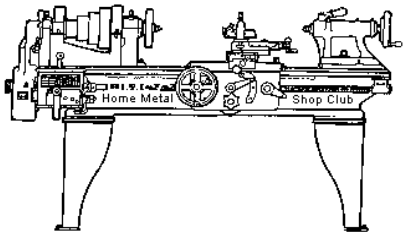


http://www.homemetalshopclub.org/

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

This newsletter is available as an electronic subscription from the front page of our website. There are over 1027 subscribers located around the world.

About the Upcoming 10 February 2024 Meeting

The next general meeting will be held 10 February 2024 at 12:00 P.M. (Noon) on-line at Zoom.us. Log-in credentials are as follows: Meeting ID = 898 6622 1118 Passcode = 518107.

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.

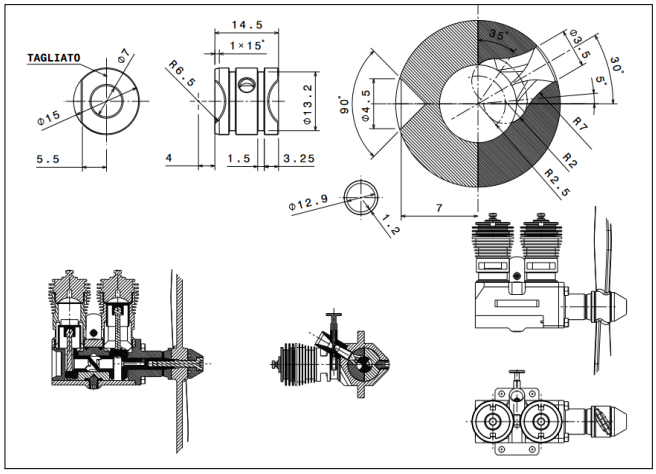
Recap of the 13 January 2024 General Meeting

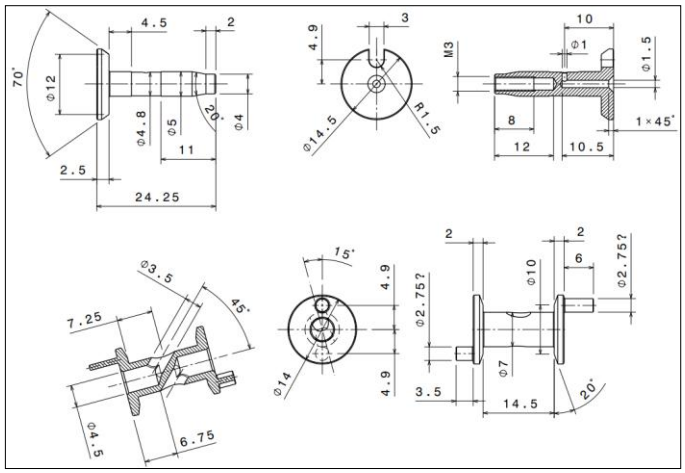
By *Joe Sybille*

There were 12 participants attending the 1:00 P.M. meeting. Nine participants were in person and three attended the meeting via Zoom. Secretary Joe Sybille led the meeting. There were three visitors, Anibar Balderrama, Mark Counterman, and Wayne Strickler.

Presentation

There were two presentations today. Member Phil Lipoma gave a talk on a proposed future project to build a dual cylinder in-line model airplane engine. The size of the cylinders is based on the 0.049 cubic inch engine. The design is offered by forum member Topogigio of Home Model Engine Machinist. Topogigio posted detailed drawings of the engine at homemodelenginemachinist.com. Shown below are two of several available drawings, parts made for the project, and a picture of the built engine prototype.





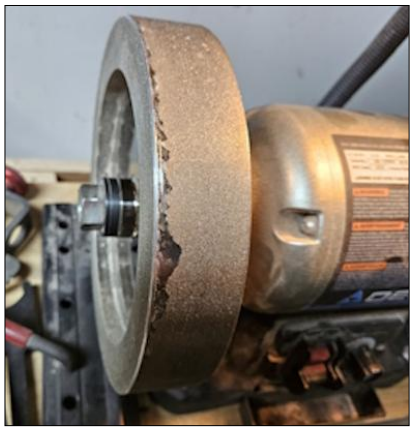
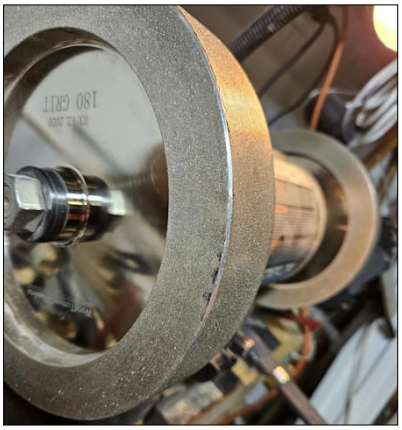
Rich Pichler gave the second presentation on sharpening twist drill bits. Pichler began by showing several types of drill bits.

Afterwards, he showed several tools used to sharpen a twist drill bit. Among the tools shown were Drill Doctor Sharpener, Black & Decker Sharpener, and a drill grinding wheel attachment used to hold the drill bit at a certain angle. Another option offered was to hold the drill bit by hand when using a grinding wheel.

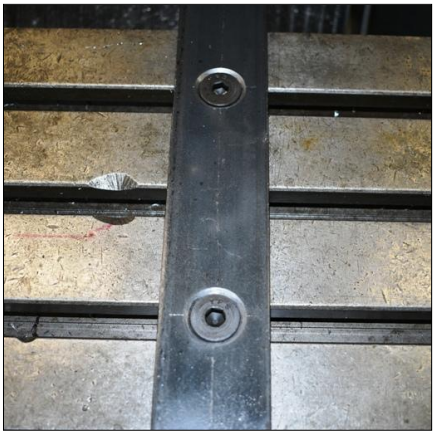
The goal of sharpening the drill bit is to restore the cutting edges or lips by grinding the face of the cutting edges. The cutting edges are formed by a cone shaped end from the dead center to the periphery of the drill bit. The cone shaped included angle is typically 118 degrees or 135 degrees. Drill bits with an included angle of 118 degrees are primarily used to make holes in soft metals. Holes made in hard metals are typically made with drill bits with 135 degree included angles. Practically speaking, for the home shop machinist to get a job done it will likely not matter what the included angle is so long as the hole gets made. Shown below are several photos depicting drill bit sharpening tools.

Show and Tell

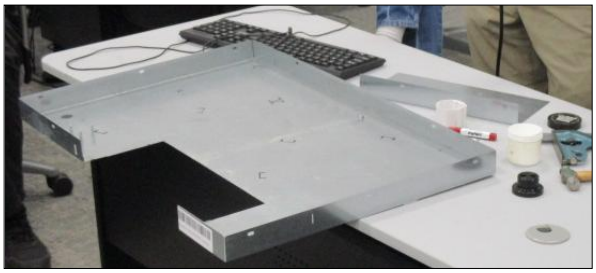
Richard Douglas showed pictures of a damaged cubic boron nitride (CBN) grinding wheel. The wheel is sold with a lifetime warranty. Upon informing the company of the grinding wheel failure, the company honored the warranty and sent a replacement wheel. The CBN wheel is good for sharpening high speed steel (HSS). Shown below are photos of the failed wheel and the replacement.

John Cooper showed the successful mounting of an air tank onto the table of his mill. He needed to mount the tank to mill flat the the top surface of the threaded connection. It is believed a threaded air valve would not seat properly because of the irregular surface of the threaded connection. See photos below.



Rich Pichler exhibited stainless steel Rivet Nuts he used to repair a wheel mount on a utility cart. See photos below.



Dean Eicher showed how he marked and drilled holes in sheet metal supporting a newly purchased cooktop. See photo at left.

Safety Moment

As there was a discussion on using a bench grinder to sharpen drill bits, a participant revealed it would be a good safety practice when doing so to wear two levels of eye protection and a face mask to avoid breathing fine metallic particles.

Problems and Solutions

A participant explained how he used rubber wheels to replace the plastic wheels on a desk chair because the plastic ones damaged the finish on his wooden floor.