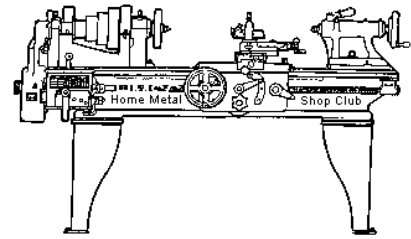




January 2022
Newsletter

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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 <i>Vance Burns</i>	Vice President <i>Ray Thompson</i>	Secretary <i>Joe Sybille</i>	Treasurer <i>Gary Toll</i>	Librarian <i>Ray Thompson</i>
Webmaster/Editor <i>Dick Kostelnicek</i>	Photographer <i>Jan Rowland</i>	CNC SIG <i>Martin Kennedy</i>	Casting SIG <i>Vacant</i>	Novice SIG <i>John Cooper</i>

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 12 February 2022 Meeting

The next general meeting will be held on 12 February 2022 at 1:00 P. M. on-line at Zoom.us. Use the meeting ID = 828 7373 7692 and passcode = 247147 to join the on-line 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 who could make a presentation, please contact Vice-President Ray Thompson.

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.

Recap of the 08 January 2022 General Meeting

By Joe Sybille



Eleven participants attended the virtual meeting. There was one visitor, Wilfried Nijs, of Brussels, Belgium. President Vance Burns led the meeting (right photo).



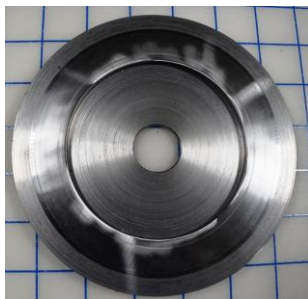
Safety Moment

The video shown today emphasized the importance of safe work practices in the vicinity of a lathe in operation. A lathe operator, wearing a thick jacket for warmth, leaned over a rotating workpiece and became entangled when the workpiece snagged the jacket. Unfortunately, the operator could not free himself and sustained fatal injuries.

Photos were shown of a welder cutting steel tubing. Several safety issues were noted in the photos and included no safety glasses, no hearing protection, and no blade guard on the angle grinder.

Show and Tell

Richard Douglas exhibited an aluminum handle he made for wood turning chisels. On his metal working lathe, he made the handle from 1 inch diameter aluminum stock. See photo at right.



John Cooper showed a flange he made for a 24 inch diameter rock saw blade. The flange is made from 3/8" thick steel plate (left photo). Also, he showed a Cleco rivet fastener. Cleco rivets can be installed where there is no access to the opposite side of a workpiece (right photo).



Dick Kostelnicek displayed a custom made tool holder for a Dremel rotary tool. See photo at right.

Rich Pichler showed another custom made tool holder for a Dremel rotary tool. The tool is mounted on the cross slide and is used for grinding imperfections from a workpiece held in the chuck. See photo at right.



Problems and Solutions

A member told of how he replaced successfully the power supply in his DRO and restored it to proper operation.

Another member spoke of issues he had with the burner assembly in a small foundry he built recently. A club member referred him to a club article on foundry burner design. See link below.
<http://www.homemetalsclub.org/news/nov01/nov01.html#freon%20part%201>

Articles

About Collet Run-Out

by Joe Sybille

Some inexpensively made collets are not manufactured to the tolerance that we expect. Inserting such a collet in a lathe's collet chuck may yield run-out. This can be measured when a perfectly round metal bar, such as a gage pin, is held in the collet and wobbles about the lathe's center of rotation. This off-centeredness can be for two reasons. First: the chuck may not have been centered when mounted on the lathe's spindle. Fix this by adjusting the screws on the chuck's back plate. Second: the collet was imperfectly ground during manufacture. I assume you placed a perfectly round bar in the collet.

Typically, collets are precision devices made to exacting tolerances. Collets improperly hardened and ground have internal cylindrical surfaces that may be off-center or out-of-roundness. Unfortunately, we may not discover this until after we make a cut in the lathe.

With the collet secured in the chuck, the out of roundness can be measured with a dial indicator. Secure the indicator in a tool holder similar to that shown in the photo at right. Mount the tool holder on the cross slide and place the indicator's arm against the perfect cylindrical surface (gage pin) held in the collet. The difference between the minimum and maximum readings as the chuck is turned full circle is called the run-out.

Once excessive run-out is observed (greater than 0.001") remove the cylinder (gage pin) and place appropriately sized shims in the three slots along the length of the collet. Tighten the collet in the chuck to normal tension.



A grinder similar to the one shown below can now be used to remove any high spot(s) along the internal cylindrical surface of the collet. With the grinder spinning, as one rotates the chuck, the high surface will make a noticeable noise and spark as it contacts the grinding wheel. Ensure to travel the full extent of the internal facets of the collet. Continue rotating the chuck by hand until the grinding wheel “sparks out”. Then, recheck the concentricity of the collet.

