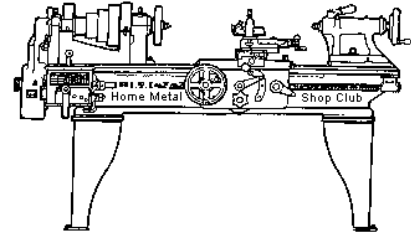




**April 2019**  
Newsletter

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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>Brian Alley</i>	Vice President <i>Ray Thompson</i>	Secretary <i>Joe Sybille</i>	Treasurer <i>Emmett Carstens</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>Tom Moore</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 1165 subscribers located all over the world.

## About the Upcoming 11 May 2019 Meeting

The next general meeting will be held on 11 May at 1:00 P. M. at the Bayland Community Center, 6400 Bissonnet Street, Houston, Texas 77074. 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.

## Recap of the 06 April 2019 General Meeting

By Joe Sybille, with photos by Jan Rowland



Nineteen members attended the 1:00 P.M. meeting at the Bayland Community Center, 6400 Bissonnet Street, Houston, Texas 77074. There were three guests in attendance, Barbara Kostelnicek, wife of club member Dick Kostelnicek, Bruce Ferguson, and Piper Malick. There are thirty-one members in good standing with the club.



President Brian Alley led the meeting (right photo).

## Presentation

Club member Tom Moore gave a presentation on tools that he uses in his shop to shape and sharpen tool bits. Of several available tool posts, namely, rocker tool post, open side tool block, turret tool block, and Aloris quick-change tool system, Tom uses the open side tool block. This type tool post offers excellent rigidity and can be used for heavy cuts when using carbide cutting tools. The cutting tool of choice for Tom is carbide steel. Depending on the work to be done the cutting tool must provide suitable clearances to prevent the work from rubbing against the tool bit. Clearances are determined by top or side rakes. For this discussion, cutting tool and tool bit are used interchangeably. Tool bits are shaped to suit the removal of metal to accomplish the finished shape of the work piece. Among others, tool bits are shaped for left-hand turning, threading, and round nose turning.



How does one shape and sharpen the tool bit? Tom uses an assortment of machine tools, namely, grinder and belt sander. Generally, tool bits are made from square stock typically from two inches to three inches long. While removing metal from the tool bit to shape it if the bit gets too hot and turns blue the bit is ruined. Internal granular rearrangement has occurred and weakened the bit. To obtain quickly the correct angle for surfaces on the tool bit, Tom made several fixed angle guides. Once the tool bit shape is obtained, the cutting surfaces are sharpened. Tom uses a band sander to sharpen his tool bits. He recommends sharpening the tool bit with the sander turning direction away from the tool bit.

Tool bits placed in a tool holder must be set at a certain height, and Tom has been successful using shims to adjust the height. As a check, Tom made a clever height adjustment tool for this purpose. Since Tom has two lathes, Myford and Clausing, he uses the same tool holders on both lathes. He has over eighty tool bit holders. Each holder contains a tool bit which enables him to mount a bit and holder on either lathe as required for the job at hand.

Several photos of Tom's shaping and sharpening equipment, as well as tool bit holders, angle guides, and other assorted implements are shown below.







## Safety Moment

The safety video emphasized the importance of eye and face protection when working in the shop. Safety glasses and face shields should meet the standards of ANSI-Z87.1.

## Show and Tell

*Dick Kostelnicek* showed a Veritas dividing tool used to delineate equal segments of a length of something. See photo at right.



*Richard Douglas* showed assorted tools inherited from the estate of his uncle. See photo at left. Richard then passed out brochures of Sloss Furnaces Museum in Birmingham, Alabama. At one time, Sloss Furnaces was the largest manufacturer of pig iron in the world. It operated from 1882 to 1970. For more information, visit [www.slossfurnaces.com](http://www.slossfurnaces.com).

*John Cooper* exhibited a cylindrical square used to check, among other things, machinist's squares and the tram of a mill. He displayed a couple of carriers he made to haul house siding. Also, he showed a

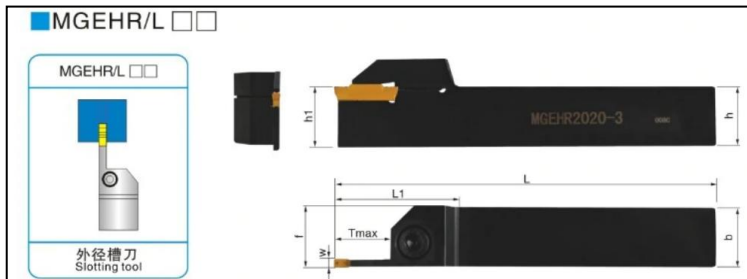
trenching tool made from a discarded axe blade. See pictures below. Lastly, John mentioned the existence of a government agency (DPPA.gov) organized to identify the remains of unknown service personnel killed during wartime.



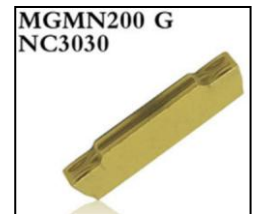
## Articles

### Grooving-a-Round

By Dick Kostelnicek

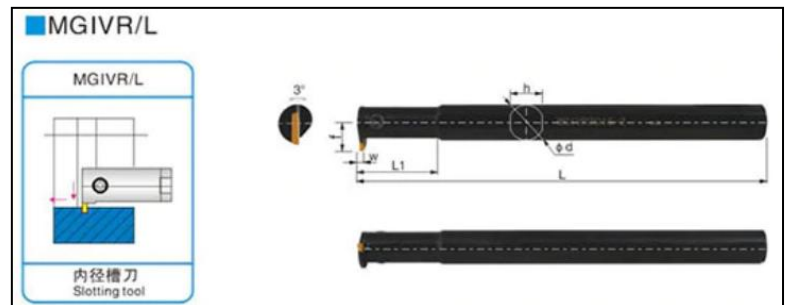


Machining a circular groove in a part held in a lathe has become a 'snap' using carbide insert tool holders. Recently, I obtained a MGEHR left hand external grooving tool holder (left illustration). It uses a



MGMN 2mm wide double ended carbide insert (right illustration). It will cut a groove up to 1/2-inch deep. That means it can also be used as a cutoff-tool on bar stock up to 1-inch in diameter. My tool holder's shank is 12x12 mm, close to 1/2 inch square. This style holder is also available with 10x10, 16x16, 20x20 and 25x25 mm shanks. Also available are similar holders fitting 1.5, and 3 mm wide MGMN inserts.

I also obtained MGIVR internal 2mm wide grooving tool holder (below illustration) that uses the same MGMN insert mentioned above. It comes in round shank diameters of 16, 20 and 25 mm with a flat on the bottom and top of the shank, thereby, allowing it to be held in an Aloris AX-style tool post.



The cost for either tool holder along with 10 inserts was under \$20 and they are available on Ebay and from Eastern internet suppliers.