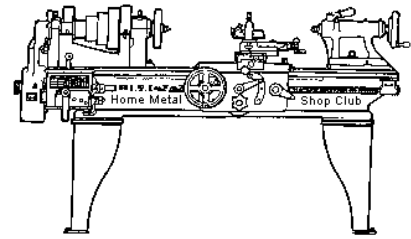




April 2022
Newsletter

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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 14 May 2022 Meeting

The next general meeting will be held on 14 May 2022 at 1:00 P. M. on-line at Zoom.us. Log-in credentials are as follows: Meeting ID 899 2750 6943. Pass code 066745. Officer elections will be held during the June meeting. Consider volunteering to serve as an officer for the club. New ideas to promote the club and to increase club membership will likely come from new viewpoints offered by new officers. Think about it!

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 09 April 2022 General Meeting

By Joe Sybille



Eight participants attended the in-person meeting. There were no visitors. President Vance Burns led the meeting (right photo).



Presentation



Club member William 'Bill' Swann gave a presentation on adding a solar array of six panels to a shipping container. The goal is to build a self contained unit that can be used in the back-woods far from any electrical grid.

Swann began by describing the concept. He explained how the panels will be mounted in such a manner to facilitate lowering of the panels that extend beyond the perimeter of the container. Lowering of the panels will be required to enable loading of the container onto a flatbed trailer for transporting the container to the on-site location where it will be used.

Shown below are several pictures of the container undergoing conversion. In one photo, Swann demonstrates the electrical charge available from a solar panel. In another photo, the Growatt 'Inverter-Charger' is depicted mounted above a battery bank resting on a utility cart.



For the intended off-grid operation, in addition to the solar panels, a battery bank, charge controller and an inverter are required equipment. Swann chose the Growatt model SPF 3000 TL LVM inverter charger to manage the power generated by the solar panels. In general, the operation of the system is as follows. The solar panels, as arranged, generate 120 volts DC at 15 amperes. This DC voltage is sent to the battery bank through the Growatt charge controller and in the process is transformed to 48 volts. The charge controller keeps the batteries from overcharging. The power is then retrieved from the battery bank to the inverter. The inverter converts the direct current (DC) into alternating current

(AC) for use as needed in apparatus requiring AC. The 'Inverter' part of the 'Inverter-Charger' can supply 120 VAC at 25 amperes through an internal 3000 watt inverter from the battery. The 'Charger' part of the 'Inverter-Charger' can also take power from a generator or the grid to charge the battery bank.

The six roof panels are configured 3S2P. This means 3 panels are wired in series and two sets of 3 panels are wired in parallel. The panels are approximately 39 inches wide by 60 inches long. Swann has provided his container concept plans for others to use without limitations. Click on the link in the Articles section below to view a pdf file.

Show and Tell

John Cooper showed a part he made for a pool leaf vacuum. He made the part out of metal because the original plastic part would crack and fail after about 6 months of use. See photos at right.



Dean Eicher exhibited a lathe tool accessory he made to drill a 14" deep hole in a workpiece. The accessory is used as follows. The small end (on underside and not shown in picture) of the adapter fits in the lathe steady rest. The large end clamps onto one end of the material (square or round) using the adjustment bolts shown in the picture. The other end of the material is clamped in the lathe 4 jaw chuck. The tailstock drill chuck is used with an appropriate drill bit to make the deep hole. See photo at left.

Safety Moment

Three safety videos were shown today. All videos emphasized the importance of situational awareness. The first depicted a bicyclist run over by what appears to be a school bus. As the front of the bus passes close to the bicyclist, he loses his balance and falls toward the bus whereupon the rear bus wheels roll over the bicyclist causing a fatal injury.

The next video depicted a subway passenger falling into the gap between the platform and the subway car exit door. It appears the train conductor failed to see if the doors were clear before moving forward. As a result the train dragged the passenger to an untimely death.

The last video depicted a bicyclist struck and injured while crossing an intersection. The driver of a truck making a right turn fails to see the bicyclist crossing within the crosswalk. The bicyclist and a passenger sitting behind the bicyclist are struck and injured by the truck.

Articles

Club member William 'Bill' Swann's [plans and specifications](#) for the solar array with six panels on a shipping container.