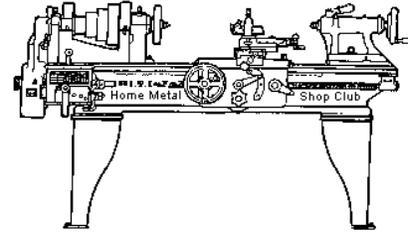




July 2018 Newsletter

Volume 23 - Number 07



<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 1027 subscribers located all over the world.

About the Upcoming August 2018 Meeting

The next general meeting will be held on 11 August at 12:30 P. M. (**note: this is ½ hour later than usual**) at Spring Branch Memorial Library, located at 930 Corbindale Road, Houston, TX 77024. Bryan Alley will give a presentation on "Upstate NY industry museums pictorial tours".

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 14 July 2018 General Meeting

By Joe Sybille, with photos by Jan Rowland



Fourteen members attended the 12:00 P.M. (Noon) meeting at the South Houston Branch, Harris County Library, 607 Avenue A, South Houston, Texas 77587. No visitors attended the meeting. There are thirty-two members in good standing with the club.

Vice-President Ray Thompson led the meeting (right photo).



Presentation



Club member, Richard Pichler, gave a presentation on 'Precision Weighing'. He showed several types of scales and balances. The difference between the two is that scales measure the gravitational attraction to earth of an object. This attraction is commonly called the weight of an object and is influenced by the local gravitational force. Balances, on the other hand, compare the masses of two different objects.

Richard showed two postal scales, an electronic scale that he salvaged from a waste pile, and a vintage torsion balance made in 1891 that relies on a torsion pivot rather than a knife edge for rotation of the mechanism. The operation of several balances was explained and exhibited, namely; OHAUS triple beam balance, and an ammunition reloading beam balance. Capacity and accuracy of the scales were discussed and compared. The postal scales were limited to about a pound capacity and the accuracy was limited to tenths of an ounce. Scales in general rely on the spring's force to measure the weight of an object. The greater the spring constant or k factor the higher the capacity of the scale.

Balances rely on comparisons of known masses to determine the mass of an object. Capacities of balances are limited by the size of the known mass and the configuration of the balance itself. The ammunition reloading balance is useful for repetitive volumetric measurement.

The electronic scale uses a load cell which converts the force exerted by an object under measurement into an electrical signal. In turn the signal is calibrated to indicate a weight shown on a LCD or LED screen. Typically, the more expensive the electronic scale the greater the accuracy.

Examples of scales and reference masses are shown below.



Safety Moment

Vice-President *Ray Thompson* showed a picture depicting the improper and dangerous way to start a chain saw.

Show and Tell

John Cooper showed a nylon bearing he made for the shaft of an electric saw (right photo).

William Robinson displayed a picture of and discussed the merits of owning a recently purchased air compressor by California Air Tools.



Richard Douglas exhibited assorted tools from the estate of his late uncle (left photo).

Problems and Solutions

A member asked for the best method to change the angle of two bends of a handle used to raise and to lower the height of his riding lawn mower. This member also wanted to modify the oil drain arrangement because changing the oil was such a messy operation. He felt there had to be a better way to do so. Suggestions offered included fixing the handle in a vice and using a torch to heat the handle to facilitate making the new bend angles. Other suggestions to resolve the messy oil change dilemma included adding small pipe nipples to redirect the oil flow from the drain plug.

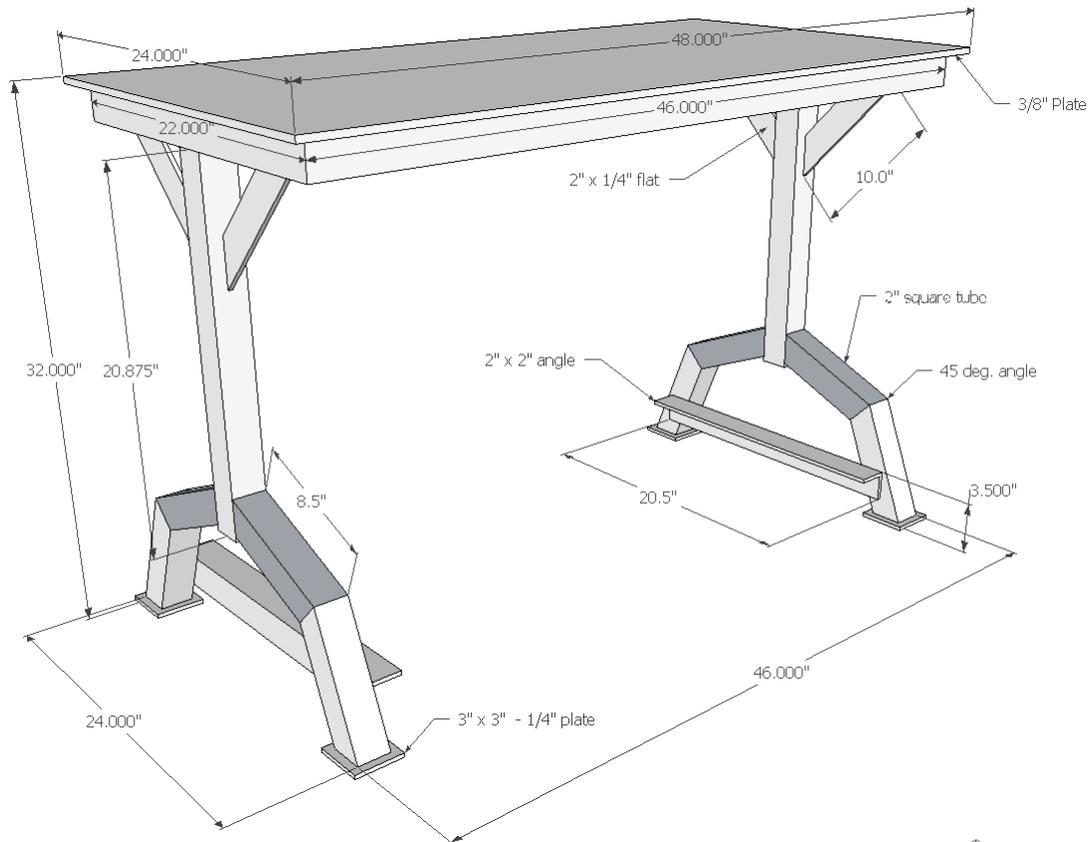
Another member asked for information on how to eliminate thread chatter when threading on a lathe. Suggestions included using high speed steel (HSS) cutters to make the threads. After the threads are made a triangular file could be used to remove chatter marks. Also, running a nut with valve lapping compound along the thread could be used to remove the chatter marks.

Another member has a No.4 Hammond Cutter Grinder with excessive wear on a moveable slide. He requested suggestions on the best way to build up the worn surfaces. Several suggestions were offered.

Articles

Metal-Working Table

By Dick Kostelnicek



Here is my all welded metal-working table. The legs and top frame are made from 2X2X1/4" square iron tube. A 3/8" thick metal top sits on a rectangular tubular frame with a 1" overhang in order to provide space for clamping. Two 2X2x3/16" angles are fastened to the bottom feet near the floor and

provide supports for a 1/4" thick lower shelf (not shown).

The eight components of the lower legs are all identical and have ends cut at 22.5-deg. All dimensions are for reference only and you should choose them to meet your needs. The working height is 32", as I find this is an ideal height for me, a 5'10" tall individual.

The drawings were made with Sketchup

