



# SCHSM

Southern California Home Shop Machinists

April 7, 2018

## OFFICERS

President Charlie Angelis  
Vice President Michael Vulpilat  
Secretary Fred Bertsche

## COMING EVENTS

### May Meeting

Sat, May 5, 2018, 2:00 p.m.

El Camino College

### June Meeting

Sat, June 2, 2018, 2:00 p.m.

El Camino College

### Club Picnic

Saturday, June 9, 2018

Alondra Park

Torrance

**Preface** - The April meeting of the Southern California Home Shop Machinists was called to order at 2:00 p.m. on Saturday, April 7, 2018. We met in classroom AJ115 on the first floor of the Industry and Technology Building at El Camino College in Torrance, California. There were approximately 32 members in attendance, and we welcomed a new visitor, Frank Arenas. Unfortunately, Frank left before he could be recognized by Charlie.

## Club Business

**Club Apparel** - Jim Endsley: The order for the club apparel has been placed. A delivery date was not yet known at the time of the order.

**Vista** - Jim Endsley: Jim has been in contact with the administration of the Vista Show. They have extended an invitation for our club to exhibit our projects for the June 2018 show on either Saturday, June 16th or Saturday, June 23rd. Jim will poll members via the Yahoo Group to determine which day we will attend. We will have the same building as last year.

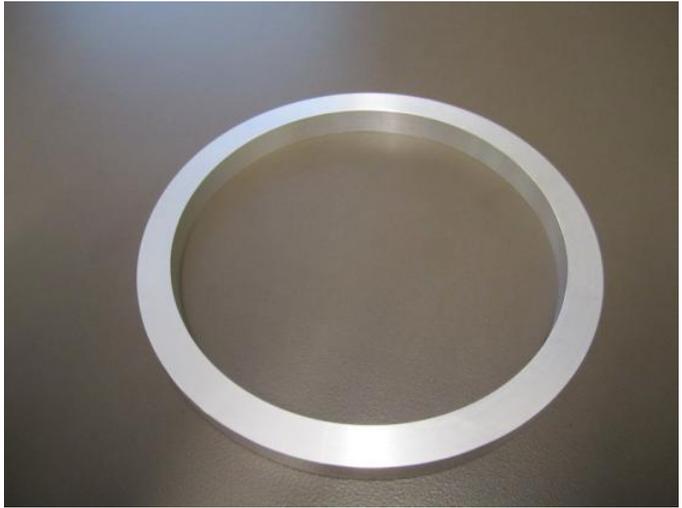
**SCHSM Yahoo Group and Website:** Charlie Angelis (el Presedente) advised everyone about the ongoing discussion regarding whether or not to maintain the Club's Yahoo Group and/or website. He raised a motion to keep everything in-tact and as-is. The motion was seconded and passed.

## Presentations: Trepanning

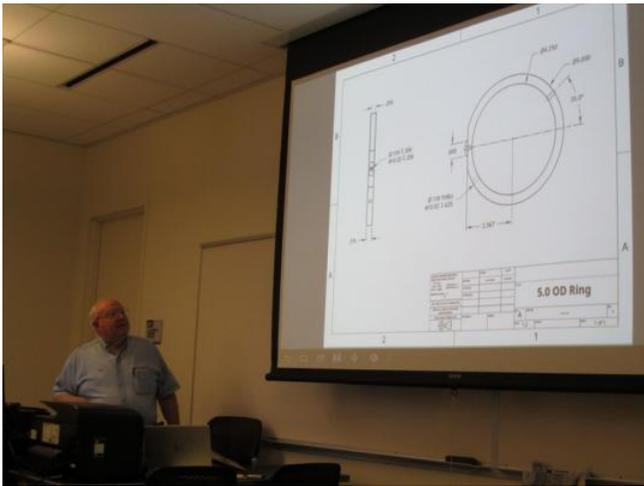


Trepanning - Dan Snyder - Dan purchased a nicely made turner's cube on eBay and made a gimbal-like display stand for it. The cube is suspended inside a large aluminum ring which Dan had to cut from a 5" diameter piece of round stock. Not wanting to waste material, Dan decided to free the ring from its parent stock by way of trepanning using his 9" South Bend lathe. Dan described how he went about doing this and described some of the considerations involved in the process.

Dan mounted the 5" diameter stock in the 4-jaw chuck then, using automatic feed, plunged axially into the face of the stock with a HSS tool bit specially ground for the purpose. This established

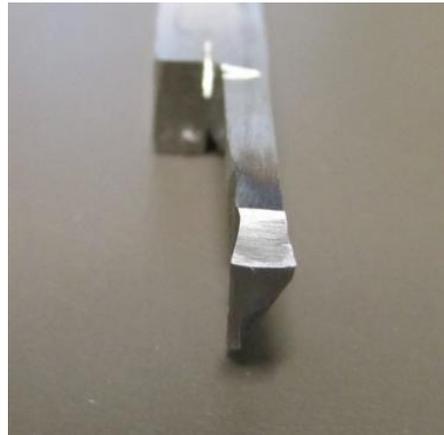


Completed Ring.



the inside diameter of the ring, with a bit of material left for finish machining. Then it was just a matter of separating the ring with a conventional parting tool. He showed a video clip of the cut in progress. Dan then described the shape of the trepanning bit and some of the trigonometry involved in calculating the necessary relief and clearance angles.

He used a diamond wheel in a Dremel tool to do much of the heavy cutting of the HSS tool blank to get the desired shape. He then finished the fine detail on a grinding wheel.



Finished Trepanning Tool



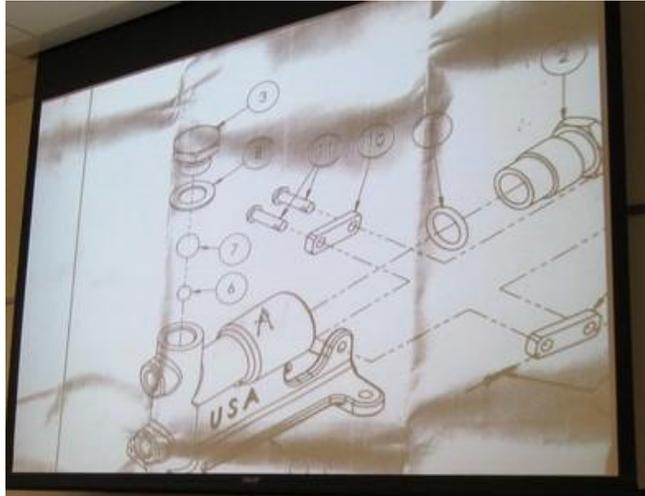
Ring Ready to be Parted Off



Diamond Coated Wheels for Dremmel

## Show and Tell

Don Huseman - Don showed a variety of squares and was curious if anyone else had similar tools. Surprisingly there were numerous members in the group that had similar items in their tool



*Boiler Feed Pump Casting.*

collections. He also presented a casting and drawing for a boiler feed pump and discussed his thoughts on how to proceed with the machining



**Silver and Deming Drill Set**

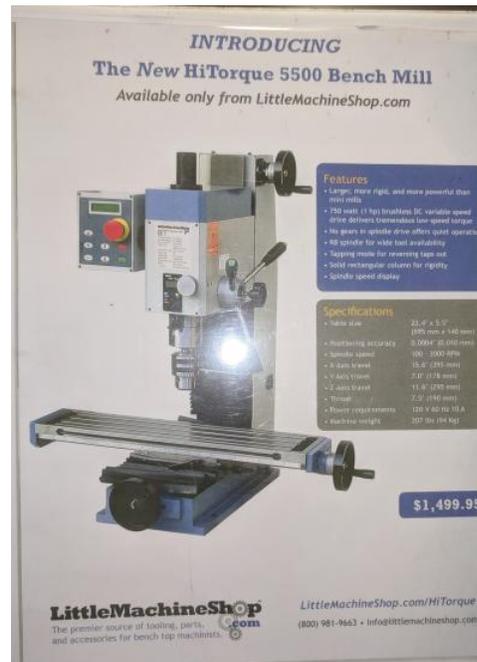
process. Don's last item was a nice set of Silver and Deming drill bits in a case. Unfortunately, there were no free samples to be taken home.

Bob DeVoe - Bob had several items to show and discuss. First was a sizeable chunk of meteorite he had cut and polished. The grain structure of the Iron and Nickel specimen was highly pronounced.



Bob DeVoe's  
Meteorite Sample

This was due to the very slow cooling that frequently occurs with these because on impact they imbed themselves in dust and fine dirt which serves to provide a nice insulating bed.



Bench Mill

His second item of discussion was about a mod he created for his Little Machine Shop mill with an R8 collet. He provided a copy of the manual which had a nice photo on the front cover. He likes the mill but was a little frustrated with the manner, in which the draw bar was tightened and released. It



Draw Bar Tools Supplied with Mill

required the use of an Allen wrench at the top and a spanner wrench at the bottom which proved to be quite cumbersome. His modification consisted of a new draw bar which allowed him to tighten the collet from above. The photo below shows the original draw bar (black oxide coating) and the new draw bar. The top nut is welded in place to turn the draw bar into the collet and the second nut allows the bar to be drawn up into the spindle.



Lewis Sullivan - Lewis showed 60-degree diamond encrusted sharpening tool for sharpening the business end of a Mortis and Tenoning jig. The cone shape is presented into the end of the square jig to remove metal from the inside leaving the square edges of the jig with a nice sharp edge.



Diamond Encrusted Cutter

Millar Farewell - Millar talked about the Boeing surplus sale in Long Beach. It is a sealed bid system held Mondays 8:30 to 2:00 and Tuesday through Friday from 6:30 to 2:00. The sales is held at 3460 Cherry in Long Beach. Several members in attendance had experience with this sale in the past.

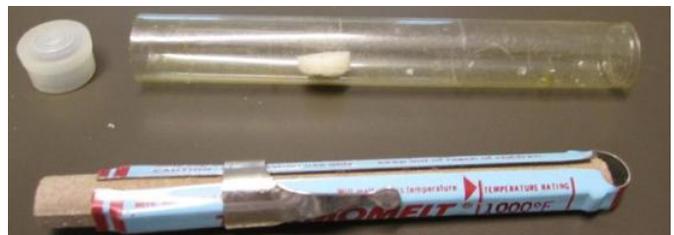
Eldon Barkley - Eldon talked about some micro drill bits and presses that were capable of drilling .004" holes through .008" diameter stock.

Matt Rulla - Matt brought in some Extreme Pressure Lube #3 which he obtained on eBay for less than \$9.00. This was explained as being the modern day and safe version of the old white lead lubricant used on lathe dead centers. Matt also had some



CMD Extreme Pressure Lube

Temperature Measuring sticks used for determining the surface temperature of metal. He has an assortment of sticks to handle temperatures in the 400 to 1500 degrees.



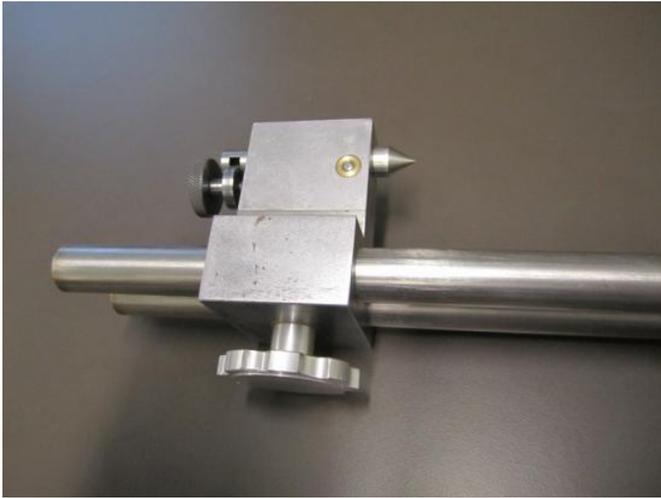
Ron Gerlach - Ron showed several items he reproduced for his 3HP McCormick Deering Type M engine. The original parts were made from pot metal and had deteriorated over the years. There were two needle valve knobs, an air control disc and a fuel siphon into which a needle valve screws into. The replacement parts were made with aluminum. The fuel siphon was made up of two separate pieces brazed together using Bernzomatic AL-3 Aluminum brazing rod.



Needle Valves and Siphon

Air Control Disk

Ron also showed a tail stock he made for his Royal Oak Form Relief grinding fixture which he is converting into a cam grinder. The Relief Grinder is a sturdy fixture with a work holding collet which rotates about its axis and can pivot away from the grinding wheel by means of a roller bearing pressing against a master cam. The fixture accepts the two .75" diameter rods that the tail stock slides on.



*Ron Gerlach's tail stock for his future cam grinder*

Jim Ensley - Jim showed a picture of a really big chip of metal that came from some unknown machining process. It is obviously a very big chip in comparison to the granola bar.



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SCHSM welcomes presentations by members or guest speakers on any subject related to metal working activities. If you have some knowledge or experience you feel may be of interest to our members, or if you know someone that may have something interesting to relate, please consider making a presentation at a meeting. Presentations may be a little longer and more detailed than a show and tell, and may be accompanied by slides, video, or physical displays. Probably every member has some experience they can share, and this is the purpose of SCHSM. Please contact President Charlie Angelis to make arrangements to give a presentation.

SCHSM meets in Classroom AJ115 on the first floor of the Industry and Technology building of El Camino College, 16007 Crenshaw Blvd. Torrance, California, at 2:00 p.m. on the first Saturday of every month. The building is near Parking Lot B. Enter the campus from Manhattan Beach Blvd.

If you would like to contribute an article to this newsletter, or make a comment, contact the editor, Fred Bertsche. He can be reached via the SCHSM Yahoo Group, or at [fbschsm@yahoo.com](mailto:fbschsm@yahoo.com).

Find us on the web at [www.schsm.org](http://www.schsm.org).