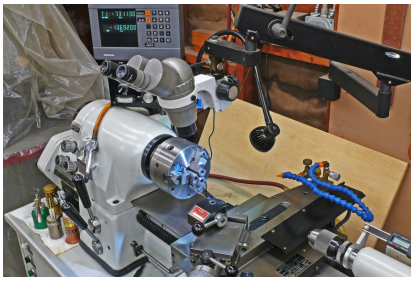
SCHSM

Southern California Home Shop Machinists



Acra tool room lathe—see page 5

Current Officers:
(new terms start in March)

Douglas Walker
President

John Miller
Vice President

Jim Endsley
Treasurer

Fred Bertsche
Secretary

Ron Gerlach
Webmaster

Upcoming Events:

International Printing Museum tour
Date and time:
Sat., April 8, 10:00 A.M.
Location:
315 Torrance Blvd.,
Carson, CA.
Cost: $12 regular admission / $10 Seniors

The February 4, 2023 meeting of the Southern California Home Shop Machinists was held both live at El Camino College and online via Zoom. Douglas Walker called the meeting to order at 2:05 p.m. Attendance varied due to late arrivals and early exits, but was approximately nineteen attendees at the school and fourteen online.
In attendance was one new visitor and possible member, Steven Christ (pronounced CRIST).

Club Business

Doug Walker discussed elections and the possible candidates. With four officer positions available and only three new candidates, the positions were filled as noted below. The new officers start next month.

President: Douglas Walker **Vice President: Michael Miller**
Treasurer: Frank Schettini **Secretary: Butch Sherrick**

Jim Endsley advised that he was able to secure a reservation in Alondra Park for the 2023 picnic, but stated the Parks Dept. was not accepting the deposit money at this time. Jim also stated that as of the beginning of the meeting we had 31 paid members, and an account balance of $1,603.94. During the meeting some additional members paid their dues.

Doug Walker passed around a poll to see who was interested in attending the tour of the International Printing Museum on April 8. The museum is located in the city of Carson, Ca.

The club logo was discussed. Doug displayed a page with candidate graphics for the logo. Michael V. pointed out that for ease of use the logo design should be in the Vector format vs. a bitmap or JPEG.

Presentations

Ron Gerlach reported on his recent visit to the Plumier Foundation in New York, which is dedicated to preserving and educating people on ornamental wood turning. Ornamental wood turning dates back over two hundred years, and involves lathes with extremely intricate mechanisms to move the work piece and cutting tool in multiple directions. This produces some very ornate work pieces that are highly prized to this day.

Presentations (cont.)

Ornamental Turning and the Rose Engine-Excerpts from a presentation by Ron Gerlach

Designs that would be difficult or impossible to create with conventional tools.

How does someone go about creating these beautiful works of art? How could these have been created 200+ years ago?

- The answer is the Ornamental Turning Lathe otherwise known as a Rose Engine Lathe
- Ornamental Turning Lathes actually predate the modern lathes that helped usher in the industrial age
- The Rose Engine supports the work on a slowly turning spindle and the cutting action is by fixed cutting tools or by tiny high speed spinning cutting tools
- The key to the Rose Engine's function is that the spindle is allowed to be "pushed" laterally and/or "pumped" axially
- The spindle generally contains a series of Rosettes mounted on the spindle. These Rosettes are large OD discs with cam profiles on their perimeters
- A fixed "rubber" pushes on these cam surfaces to create the motion. Springs keep the spindle in a rest position.
- Side to side motion of the spindle (lateral)
- End to end motion of the spindle (axial)
- These movements are set and thus timed with the rotation of the spindle
- The work is held at the end of the spindle by a chuck
- The work then moves systematically too and from the cutting tool to produce the beautiful patterns

The Holtzapffel Lathe of 1636

A modern day ornamental turning lathe by Dave Lindow and others

If the member would like to pursue this fascinating subject, here are some links:

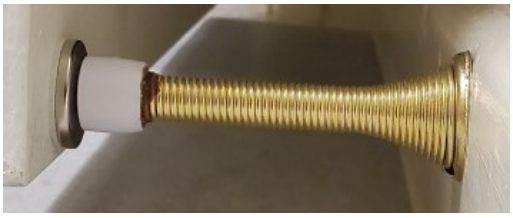
Society of Ornamental Turners: https://www.the-sot.org/
Plumier Foundation home page: https://plumier.org/
YouTube video of Holtzapffel lathe: https://www.youtube.com/watch?v=7VA-Y6qAlmo&t=3s

Presentations (cont.)

Magnetic Doorstop-Excerpts from a presentation by Larry McDavid

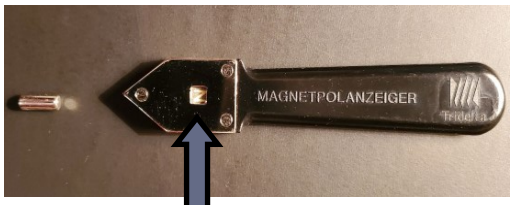
After completing my bathroom remodel I was surprised to find that the main door into my bathroom would no longer remain open. It was a really annoying problem! If you have a door that won't stay placed against its doorstop, you may find my solution helpful.

Magnet protruding



I found on Amazon a 3/16-inch diameter neodymium iron boron magnet 3/4-inch long. I used some reclaimed-rubber adhesive to bond this magnet into the inside of the stop coiled spring, leaving the north end of the magnet protruding slightly from the spring. I replaced the rubber end cap, hiding the magnet.

Also on Amazon I got a 3/4-inch diameter, 1/8-inch thick neodymium magnetic disk that came with double-sided foam adhesive disks. I put the foam adhesive on the north face of the magnetic disk and stuck it to the bottom of the door so it aligns with the newly-magnetic door stop. Now, the door is attracted to the door stop and does not open by itself! There is an air gap caused by the rubber end cap so strong, rare-Earth magnets are needed.



Window displays “N” or “S” to denote magnetic polarity

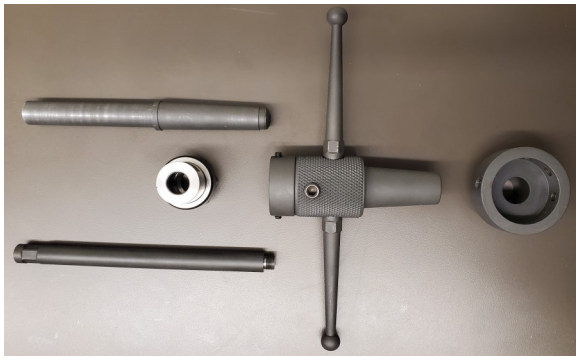
When working with magnets of all kinds, it is necessary to recognize magnets have north and south poles and to identify those poles so the magnets can be oriented to serve their intended purpose. While you can do this orientation experimentally if both parts are available, it is handy to actually identify the polarity of each magnet. A "magnetpolanzeiger" is needed! Good German word that! It just translates as "magnet pole indicator." I happened to have one in my magnetics tool box from earlier magnetic sensor work. Similar polarity indicators are available today on Amazon.

Show and Tell

John Miller: John displayed a swing arm and hub he fabricated for a custom motorcycle that he’s building. He solicited opinions from the club for any design improvements. The motorcycle will have a 180cc engine and be strictly for off-road use. John has modified his design somewhat since it’s inception.

Show and Tell (cont.)

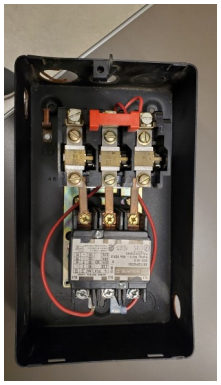
Bill Nelson passed around a die holder for a lathe that he made. The handles included ball ends that he made using a ball turning tool that he has shared in a previous meeting. The knurling was done with a clamp-type knurling tool that he made from a kit sold by Hemingway. After machining he parkerized the metal which gave it a nice finish. A beautiful piece of work.



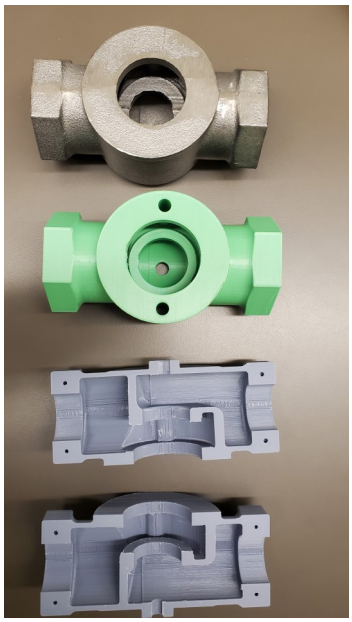
Don Huseman displayed a very large antique monkey wrench he is going to try to refurbish.

Michael Vulpillat expressed a need to work in titanium, and was asking if anyone had any experience with the metal. Please contact Michael if you have info to provide.

Allen Braun shared pictures of his new shop wiring improvements, running a 220v single phase line to feed a three phase rotary converter which will power multiple tools in his shop. This prompted discussions comparing this approach to using a Variable Frequency Drive (VFD). Allen also passed around a magnetic contactor/drum switch and an industrial switch box he will be using in his set up. He also showed pictures of a 3d-printed stainless steel piece he designed at work.



Ron Gerlach displayed a cast iron intake part (top part in photo) that he produced for an antique hit-and-miss engine using the lost pattern process, as well as a 3D-printed part (second part from top) identical to the one he used as the pattern. He also displayed a 3D printed cutaway version to demonstrate the internal passageways of the part. By producing the missing parts, Ron is resurrecting a rare engine of which there are only a couple running examples known to exist. Superb quality work.



Southern
California
Home
Shop
Machinists

When and where we meet:

First Saturday of every month, 2:00 p.m.

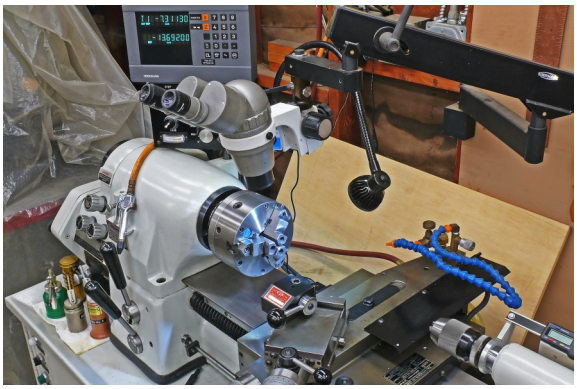
El Camino College
Classroom AJ115
1st Floor of the Industry and Technology Building
16007 Crenshaw Blvd
Torrance, CA 90506

The building is near Parking Lot B. Enter the campus from Manhattan Beach Blvd.

We're on the Web!
www.schsm.org

This Month's Featured Equipment (from top of first page)

Member Larry McDavid's Hardinge-like Acra tool room lathe with VFD speed control, half-tenth resolution Heidenhain DRO, KDK tooling, chuck and 5C collet closer and stereo microscope, purchased new when he retired in 2003.



Each month the newsletter will feature a different piece of member-owned equipment. Members are encouraged to participate. If you would like to do so, please email a photo and brief description to Butch Sherrick, club Secretary.

Participation

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 who 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 Douglas Walker to make arrangements to give a presentation.

If you would like to contribute an article to this newsletter or make a comment, contact the Secretary, Butch Sherrick. He can be reached via the SCHSM Groups.io Group.

Please note that presentations submitted for the newsletter may be edited for brevity. To enjoy the entire presentation members are encouraged to attend the monthly meetings.