Founded by Dave and Beth Carr in 1995

August 2004

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The **Last Meeting** was held at Cascade Microtech in Hillsboro courtesy of Jamie MacAdam. Thanks for sharing, Jamie. You work in a cool place. Those of us interested in precision machinery enjoyed the experience and the tour.

The **August Meeting is canceled**. See the **Future Meetings and Events** box for upcoming activities. See you at the **Great Oregon Steam-Up at Brooks.**

Important Membership Information

The mailing label for your newsletter includes a date, **2003, 2004 or 2005**. This is the year your membership dues expire. We have carried the 2003 group until now with the expectation each person will renew**. The 2003 members who do not respond to this announcement by renewing their membership will not receive any future newsletters.** If our records are in error please call the phone number below.

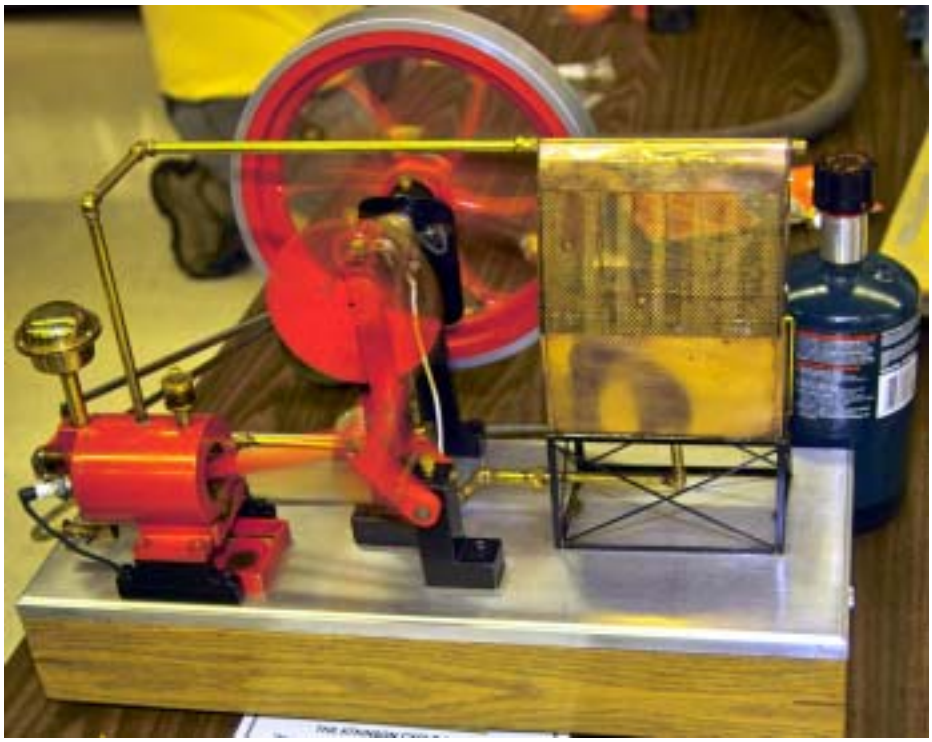
To renew, please send $12.00 to Carl Petterson, Membership, 1631 SW Pendleton St., Portland, OR 97239. Phone 503-245-8335.

FOR THE BEGINNER # 18

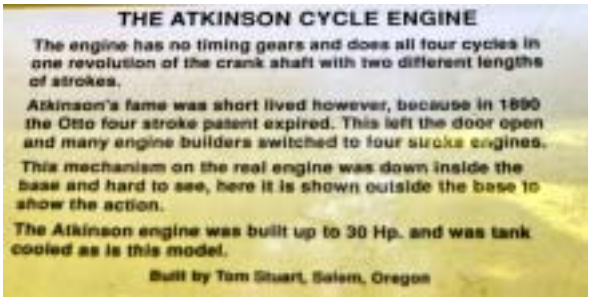
I was asked by one of our members if I could go into "metal selection" one of these times. Boy! There are about three chapters in my text book on the selection and identification of metals. I went to a steel supply store to by some metal; I had gone into the metal information section of my text to get some idea of what metal would be best for this project. After looking up all of my needs I picked the metal that looked best for the job. The sales person didn't laugh at me but asked where I got the specs. for the metal. We then talked about what I wanted to do and how I would do it . She then suggested a different metal and it worked out well. In my shop, and most of the others I have been in, there is a scrap box or pile of scrap some where. I can tell cast from brass, steel from copper, but to tell one alloy of steel from another or one aluminum alloy from another without some markings on it, forget it. Sometimes if I have a special alloy I will mark it so I can tell it the next time I want it. Most of the time I just toss it into the scrap pile or put it in a special place until forget why it's there then toss it into the scrap bin. I have talked to several other machinists and they say they do about the same.

There are some color charts for grinding to tell some different alloys of steel but it is sometimes hard to tell some from another. This is where time in the shop or working with the old guy that has been there forever can help you out a lot. Cold rolled is shiny, is close to holding its true size, does not work as well as some others, and does not weld really strong. Hot rolled looks like it has been heated, it has, welds better, is a little stronger, can be several thousands different in size. Most stainless will not rust, is kind of hard but machines well and is stronger than cr or hr. There are a lot of aluminum alloys out there, if it does not matter use it. If it does, check with your supplier. Never grind aluminum, sand it sometimes works. Copper, brass, and bronze harden as they are worked. To soften them you have to use heat, and that's for another time.

-Wes Ramsey



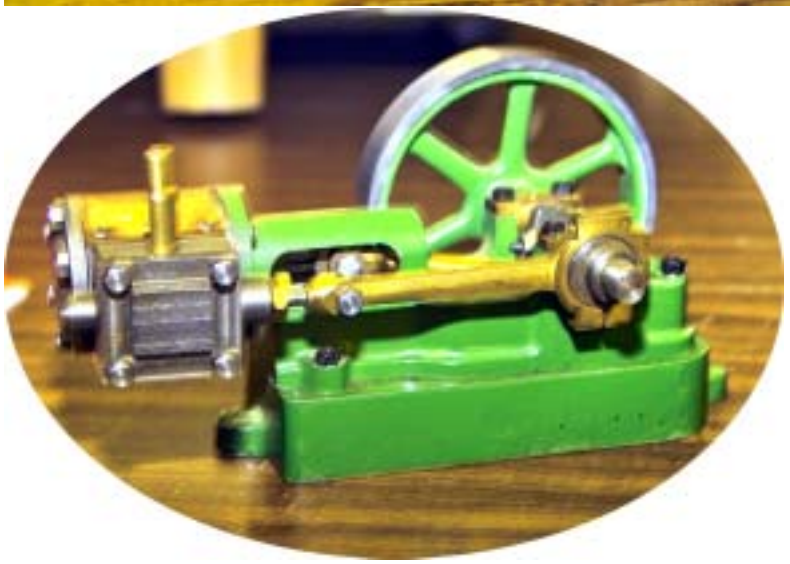
Tom Stuart brought the scale drill press pictured left and the Atkinson engine shown above and described at right. Imagine - four cycles in one revolution. Cool.



Al Pohlpeter brought the Stuart horizontal steam engine shown at left.

Jim Pfaltzgraff brought a sine plate (not pictured) that was power scraped with the home built scraping tool shown below. Jim brazed a carbide tip to a shaped rod designed to fit a harbor Freight air hammer. Clever.

My notes didn't show who brought the colorful steam engine pictured lower left. Maybe I'll know by the next issue.



A hand planer? Yup. **Tom Hammond** brought this one (above) just to show they exist. And it seems to work as evidenced by the piece of brass being planed.

Gary Martin brought the pattern (at right) he made. The left and right halves of the pattern are shown in the front and back views of the board.

Tom Hammond also brought in the small lathe shown below. He thinks it was made about 1960. Note the interesting "three jaw chuck" holding a brass rod.

Gene Lewis brought the jewelry pieces shown at left.

Elsewhere at the meeting, sales were offered on a variety of items. E.g. a set of zero to twelve inch micrometers (above), 6061 aluminum at half of the regular scrap prices (below right) and a high frequency arc stabilizer shown lower left. The stabilizer is used with welding equipment to help maintain an arc. Sales were brisk and smiles were prevalent.

Future Meetings and Events

August –
A regular Portland Model Engineers meeting will not be held in August.
However, members are encouraged to visit the 34th Great Oregon Steam-Up at Brooks, July 31, August 1, 7 and 8th, 2004. **This is the premium antique-power exhibition event in the Pacific Northwest.**
Located west of Exit 263 on Interstate 5, a few miles north of Salem.
Admission $7.00, kids under 12 are free.
Operating steam, gas and diesel tractors, stationary engines, traditional and progressive tractor pulls, sawmill operation, threshing, baling, field plowing, trolley and miniature train rides.
International Harvester tractors, engines and related items are featured this year**.**

PME members can exhibit at the Steam-Up by emailing Tom Stuart at TomsEngines@aol.com ahead of time. Please bring your own card table or table and chairs. He will be located south and east of windmill. You will need to pay the normal entry fee but you can show your projects to a huge audience.

September 11, 2004, Second Saturday-
Club Picnic at Bud Statton's Property, 44750 NW Star St., Banks, Oregon. 503-324-9514.
Directions: 1. Drive west on HWY 26 for 21.65 miles from I-405 in Portland.
2. Turn slight left on NW BANKS RD., at flashing yellow light about 1 mile past HWY 6 TURNOFF.
3. NW BANKS RD becomes NW CEDAR CANYON RD., 1.06 miles.
4. Turn right on NW HARDWICK RD, first paved road to right, 0.53 miles.
5. Stay straight to go onto NW SATELLITE DR, 0.50 miles.
6. Turn left onto NW STAR ST.
7. Look for melted metal, scorched lawn, weird people.

Two experienced members will be operating two furnaces, one for brass and one for aluminum. Bring your scrap metal for melting and your patterns for casting. Bud's generous family will provide the picnic meal. Bring your projects in case you don't want to cast anything. Picnic chairs and other picnic items are welcome. The club appreciates Bud's generosity for hosting our picnic for the second year.

September 25 and 26, 2004
GEARS (Gas Engine & Antique Reproduction Show) Kliever Armory, 10000 NE 33rd Drive (North of Columbia Blvd), Portland, OR 97211. This outstanding model show is a cooperative venture between the three Oregon model clubs and will be open 9:00 to 5:00 each day. Admission: $7.00 adults, kids less than 12 are free. A lot of information is included on the web site: www.oregongears.org. This will be a great event for the beginner or the expert.

October-
Portland Model Engineers general meeting. While we have some ideas we welcome your suggestions for future meetings. Call any officer listed at the top of your newsletter or talk to one at the next meeting.

October 23, 24, 2004
Second Men, Metal and Machines Expo, Visalia, CA. Several members attended this last year and enjoyed it. Ask Carl Petterson, Gary Martin, Bob Diffely or Bill Miller for details. It is a great show.