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Last Meeting was at the Cascade General Shipyards - courtesy of **Nick Peters** - thanks Nick. And thanks to Al Rose for masterminding the shipyard tour. The **next meeting** is scheduled for June 14th, 1pm at the **Silverton Foundry**. See enclosed maps for directions. The **July meeting** is scheduled for Bud Statton's.

Before the next meeting, don't forget the **Machine Tool Trade show** June 11th and 12th at the Oregon Convention Center. (777 NE Martin Luther King Jr Blvd. Portland, OR 97232) Hours are 10 to 6 on Wednesday and 10 to 5 Thursday. Contact Gary Martin if you can bring a project or man the 10' by 30' booth (#868, 870 & 872) available to the club. You can bring your projects as early as 9am. Plan to pick up an attendee badge on arrival although some exhibitor badges will be available. **Important: Bill Miller** asks that you contact him if you know of any tables that might be usable for displays. Also, the club needs our banners for the show but can't find them. They were last seen at PRIME 2002 but evidently have slipped into someone's garage that hasn't spring cleaned yet. If you know where they are please contact Gary Martin. Thanks **Bill Miller** for completing the leg work needed to get the booth for the club.

Other Business. **Bud Statton** related that the club treasury contains \$2169. **Dave Francisco** stated that newsletters will no longer be mailed to members not current with their \$12 dues. **Gary Martin** mentioned that the organization that presents the NAMES exhibition has a step by step procedure for putting on their show which they can share with PME. **Richard Williams** offered that members of the Mid Valley Model Engineers club agreed to donate \$20 each to support continuation of Prime. The PME members also agreed via a show of hands. The owner of the PRIME name is asking \$2500 for those rights but that was believed to be too much.

Current Business: **Bud Statton** says the club treasury contains \$2246.72 as of 5/30/03



Nick Peters describing the features of the shipyard to the club members.

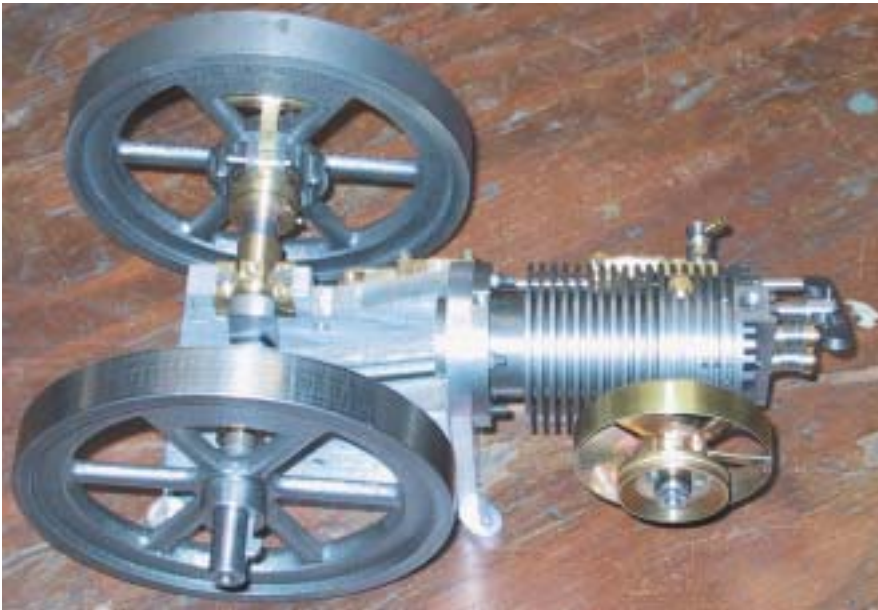
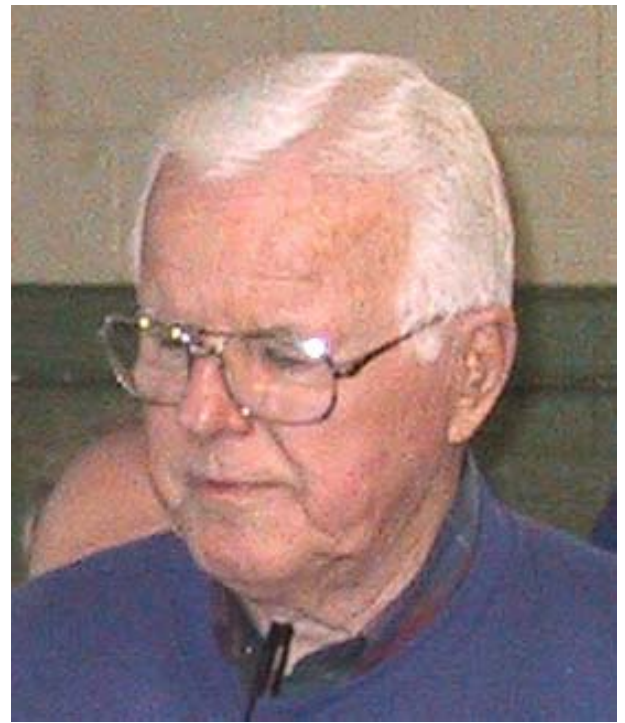
FOR THE BEGINNER

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Last time we talked about 'Tapping.' How big does the hole have to be to put threads in it? If you are going to use a 1/4" bolt you can't drill a 1/4" hole in the metal, the bolt will slip through. In most shop books there is a chart telling what size drill to use for what size tap. 'Tap Drill Size'. These give 75% of thread depth most of the time. This is a good place to start. You will find that it is hard to tap in some hard metals with these drill sizes. Do you need 75% of the thread, not if it is a hard material? Some times I will use 50% if the tap is really working hard. I used to hold the tap against the drill to see if the threads were larger than the drill. Don't laugh, it works. As long as I can see threads outside of the drill I will cut threads. If you don't have letter, number and fractional drills you don't have all the drills listed on the chart anyway.

OK, so you broke the dumb tap in the part. Now how do I get it out without messing up the part? If you have a tap remover set you can try that. Put your safety glasses on first. There are directions with the set. After you have broken the remover in the hole also, put what is left of it aside. I have never gotten one to work for me. When you broke the tap you were twisting too hard or you tried to bend the tap. That thing is in that hole so tight you could almost break the tap turning it out of the hole. These are the steps I use, if I can get a vise grip on what is sticking out of the hole, I will try to back it out. This usually breaks the tap flush with the material. Next I get a small punch and try to turn it out hitting it in a reverse direction. Sometimes this will break more of the tap out sometimes it will spin it out. Well good thought anyway. The last trick I have in my toolbox is heat. I hate to use heat as it can mess things up so much. Sometimes it will do the trick. If you can get the tap red-hot and then cool it slowly, remember the heat-treating. This will soften the tap so you can drill it with a high-speed drill. Watch out not to slip off the tap and drill beside it into the threads. If your base metal is aluminum, I'm really sorry, I don't know any good ways to soften the tap without making a mess of the aluminum. Just try to back it out. To try to prevent this, (if the tap turns too hard) try to back it out and re-drill the hole. If nothing works sometimes it is quicker to make a new part.

Wes Ramsey



Bob Eaton (above) describes the head he is building for a four cylinder gas engine (the Sea Lion). The detail shown upper left includes the overhead camshaft, valves, plugs and exhaust ports. **Mike Foti** (below) displayed the exceptional gas engine he designed and built (left). **Greg Dermer** brought the novel quick change tool post and tool holder he uses on a smaller lathe.





Once again the casting boys show their progress. Counter clockwise from upper right - **Greg Dermer** shows his angle plate pattern. **Bud Statton** holds the pattern for a train wheel. Not to be outdone, **Al Pohlpetter** describes the pattern for his 16 inch flywheel. One member sought information about the device pictured below. The majority vote was that it is a tissue slicer for microscope slides.





Tom Hammond (left) shows off the smallest lathe he knows of - an American Watch Tool Co #1 built in 1886. He also brought a recent ebay purchase consisting of a variety of exquisitely machined metal gears. Tom thinks they were made to demonstrate the capabilities of the Mikron company. **Jamie McAdams** is looking to sell his stereo microscope (above). Call (503) 324-5512 for particulars. **Nick Peters** (below) describes the features of one of the drydocks the club toured. Nick says they are large enough to lift the ships that pass the Panama Canal. Impressive structures.





Directions to the Silverton foundry from Portland

[These directions are from Mapquest - discretion advised]

1. Merge onto I-5 S toward SALEM. 23 miles
2. Take the OR-214 exit- exit number 271- toward WOODBURN/SILVERTON.
3. Stay on OR-214 S for about 13.6 miles. Pass through Mount Angel.
4. In Silverton turn right onto C ST. 0.06 miles
5. Turn RIGHT onto N WATER ST. 0.07 miles
6. Turn RIGHT onto BROWN ST. 0.06 miles
7. Turn RIGHT onto PINE ST (Portions unpaved). 0.04 miles
8. Search for a red star.

GPS: 45.010751, 122.786915

