

Metro Detroit Metalworking Club

Newsletter

Volume 1, Number 4 (November, 1997)

NEXT MEETING

The December 1997 meeting of the Metro Detroit Metalworking Club will be held at the old fire hall at the Southfield Burgh historical site on Wednesday, December 17 from 7 to 9-ish PM.

The Historic Burgh Center is at the intersection of Civic Center Drive (10 1/2 Mile Rd) and Berg Rd. (Berg Rd is about 1/4 mile east of Telegraph Road between Telegraph and Lahser Rds.) The Burgh Center is on the North East corner, park in the Human Resources Center parking lot and walk north a couple of buildings (on Berg Rd) to the Old Fire Hall. (The Historic Burgh Center and old Fire Hall are about one and three quarters of a mile west on Civic Center Drive from the Southfield Public Library, where we have been meeting.)

Coming from Telegraph Rd turn East on Civic Center Dr. go about 1/4 mile to the traffic light at Berg Rd and turn North into the Human Resources Parking lot.

For more information on the club, contact our President, Bob Lorenz

MEETING NOTES

SOUTHFIELD, MI. The Novmeber meeting of the Metro Detroit Metalworking Club was held at the Marcotte Room of the Southfield Public Library. In the absence of our Glorious Leader **Bob Lorenz**, **Jim Schrot** stepped forward and conducted the meeting. Thanks, Jim!

Most of the meeting was taken up with a variety of technical discussions. Views were aired on the subjects of machine setup, lubrication, and cleaning. On the subject of lubrication in particular various members had experiences (or questions) to share on their lathes, including a 1984 Jet, a Taiwanese Grizzley, and an antique Hjorth hand lathe. There were also discussions of penetrating oils and of grinding on the lathe and the associated danger to the lathe from abrasive dust.

Jim Schrot suggested that we should run a problem-solving session at each meeting, and for an example began a discussion of ways in which to reduce chatter in turning.

David MacMillan raised the issue of boring a small cylinder in acrylic. He is engaged in making the "Lucy" transparent lucite (cast acrylic) engine, and is currently working on his third attempt to bore a good cylinder for it. The cylinder in question must be bored in a small block of acrylic. It is 0.250 inches in diameter and just over an inch long. In his first try he simply chucked up a jobber-length twist drill in

a drill press and drilled a hole. The resulting hole was obviously out of alignment and had a terrible finish. In his second try, he used a short end mill in the Sherline mill. This worked fine until the mill "ran out of flute," at which point the swarf welded itself to the mill and destroyed the finish on an otherwise good bore. Suggestions to resolve this problem included: boring a pilot and using a stepped (piloted) drill, using a vegetable oil as a lubricant, using extremely slow speeds, altering the rake on one of the cutting flutes to zero, using a 135 degree split point screw machine length drill in the mill, or simply boring it out on the lathe. All of these are great suggestions - the sort of thing that makes a club such as ours worthwhile. Unfortunately, he (I) have not had the chance to try any of these yet.

- David M. MacMillan

FROM OUR PRESIDENT

Our president, **Bob Lorenz**, has started the ball rolling by putting together a list of local metalworking suppliers who are willing to deal with the home machinist. This list _____, and will be kept permanently on our club website

(_____).

Other members are encouraged to contribute to this list.

Bob also offers the following thoughts:

Does everyone have a membership list? Is your phone number and /or E-Mail on the membership list, if you want it so listed.

Would the members like to list their particular interest in machining to be included on the membership list so members sharing the same interest could contact each other?

I would like to see a "focused" half hour or forty five minutes included in our meetings, however this requires volunteers to deliver the "Focal Point." If you would like to volunteer please contact Bob Lorenz, David MacMillan or Steve Guitierrez.

In order to have a "Focal Point" we, (myself, David MacMillan or Steve Guitierrez) need to know what you as the membership want to discuss. Send us your questions or perhaps you have a machining topic you could lead a discussion on. I would like to publish the questions or "Focal Point Topic" in the newsletter so the membership has an idea of what part of the meeting will be about and perhaps bring in the answer to another members question.

Please bring in your "Show and Tell" projects!

We now have 31 paid members with another 8 wanting to come to the next meeting after seeing the blurb in Home Shop Machinist magazine, including one gentleman that is a retired university machining processes instructor and at least one other is a retired professional machinist. There is a lot of knowledge to be shared in the club. Let us know what you want to discuss.

AN ENGINE BUILDING PARTY?

The members of our club range in experience from complete novices to some of the finest tool and die makers in the Midwest. What I am proposing here is geared towards the novice rather than the expert, though certainly I would welcome the participation of the more highly skilled club members.

At an early club meeting, Jim Mudge brought in plans for a simple vertical oscillating engine which could be run on the compressed air from a balloon. (Well, if you're as good as Jim it can; mine requires just a bit more air pressure.) The remarkable thing about this engine was that it was constructed out of commonly available telescoping square tubing. It wasn't, really, a machinist's project at all.

I was quite taken with this little engine, and resolved to build one. This I did a few weeks later, over the course of two evenings. It was fun to build, and runs well enough. I happened to have a flywheel that I'd machined for a previous, unfinished, project on hand, so I used it. I also used my Sherline mill as a sensitive drill press, and found it most satisfactory in that role.

I am embarrassed to admit, though, that although I've had machine tools of one type or another in my basement for a couple of years now, this simple engine was the first "moving parts" project that I'd actually **finished**. I discovered that actually finishing a simple project such as this has been one of the most encouraging things I've done as an amateur metalworker.

I think that it would be of great benefit to those like myself who are at the beginning of the learning curve to get some support from each other in completing simple - but working - projects such as this one. With this in mind, I'd be willing to host a small "engine building party." Perhaps three or four of us could get together to build this "Square Cylinder" oscillating engine? (My small shop won't hold many more than that.) I wouldn't mind building another. The construction of my engine took two evenings, but that was mostly because I didn't know what I was doing. I'm sure that this project could be completed in a single evening, or perhaps a weekend afternoon. I could supply refreshments, plans for the engine, and the use of some tools (though things might go more smoothly if people were able to bring their own hand tools). Material for this engine is easy to come by - hobby store square brass tubing and the like - and Jim's plans include a bill of materials. If you've never built a working engine before, this would be a good place to start.

I am myself not very competitive by nature, but it would be fun to see several engines of the same design running together. I have constructed a small compressed air source, so we have a reasonably constant source of air pressure for testing.

Please e-mail me ([_____](#)) if you'd be interested in such an engine building "party," or if you have any comments or suggestions. I'll bring this up at the December 17th meeting as well. Perhaps we can schedule something then?

- David M. MacMillan

CLUB WEBSITE

The club's website is at:

([_____](#)).

There is a section on the website which links to the individual websites of club members. If you have a

website related to metalworking, model engineering, or relevant technical subjects in general, please let the website administrator, David M. MacMillan ([_____](#)) know so that he (I) can add a link to it. If you would like to have a web page or site for your metalworking but don't know how to go about it, let me know. If there were interest, I would be willing to run a short seminar for club members on writing web pages. It's easy, and fun.

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