Bay Area Engine Modelers Club, Branch 57 of EDGE&TA

The Crank Calls

January 2011

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MEMBERSHIP
$25.00 US
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NEXT MEETING
January 15, 2011 at
Chabot College, building 1500
25555 Hesperian Blvd, Hayward 94545
Doors open at 9:00 AM
Meeting starts at 10:00 AM

Upcoming Events

2011 annual membership dues are now due!

Several BAEM members and significant others enjoying the offerings at the December Potluck

MEETING NOTES

Bob Kradjian
December 11, 2010

President Don Jones slapped a huge piston on the desk to signal the beginning of our annual Christmas meeting and potluck luncheon. This was the grandfather of "piston slap" and our meeting was underway at 11 am.

Our visitors were mostly from the Sacramento and Carson City area courtesy of Marc Cave. They included Gary Bunch, Chris Porter, Edgar Lathrum, and Dakota Cave. Karl Van Dyk introduced himself as an old member who'd been away for a time. Is that a re-member? We were honored to have Margie Bennett with us.

First Pops: None

Treasurer's Report: Ken Hurst says we're solvent with sufficient funds on hand.

Don made two announcements:

First: dues are due for 2011.

Second: an exploratory meeting with the GoodGuys staff was to take place on the 15th of December at the GoodGuys headquarters to discuss our participation in the West Coast Nationals. The West Coast Nationals date is August 26 to 28, 2011. The location is the Fairground Facility in Pleasanton.

This meeting is now history. Here is a brief report: Members Mike Rehmus, Ken Hurst, and Bob Kradjian had a cordial meeting with Harry Daviess, Heather Nething, and CEO Gary Meador. An agreement was reached to allow us the use of the entire Agriculture building for WEME show. (This nicely renovated 7,200 square foot building is approximately the same size as the Vallejo facility, but with a simple rectangular floor plan.) They are going to provide Golf Cart facilities to aid members in transferring engines and equipment after the show is open. Vendors will be allowed to exhibit without charge if the material sold is hobby-related and they comply with the customary registration and tax reporting. Exhibitors will be provided with three-day passes. (Parking is controlled by Alameda County and is not provided.) This is a remarkably generous agreement and it shows the cordial relationship that our club has had with the GoodGuys dating back to 1997. There is no financial consideration in this mutually advantageous arrangement. Discussion of related issues, such as security, compressed air supply, 220-volt power followed. The GoodGuys will include us in their usual print and media advertising. We need to supply flyers and printed material as we have in previous years. Our thanks to the GoodGuys organization! See their web site at: www.good-guys.com

This amazing organization will put on 21 events in 13 states this year (my unofficial count).

BITS AND PIECES

Blower Extravaganza!

By sheer chance alone, members Dick Pretel, Karl Van Dyk, Dave Palmer, Ken Hurst and Dwight Giles all brought lovely superchargers for display and discussion.

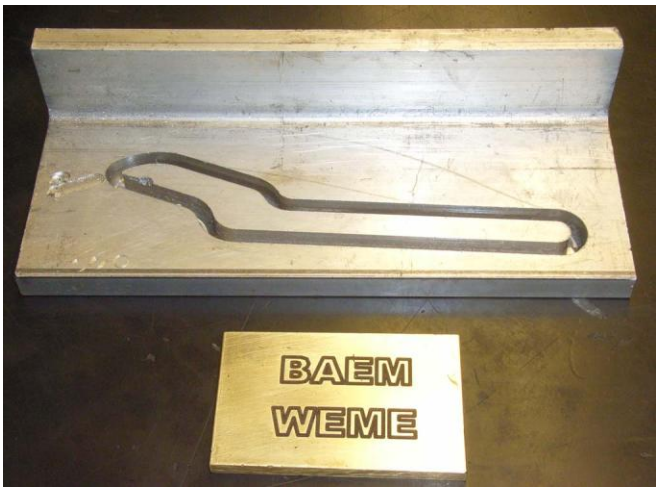
Dave's son works with auto superchargers for Mercedes, Corvettes, and even Mini-Coopers. Most units have two lobes, one had four lobes.

Of interest is the powder coating on the Mercedes vanes. They install them at no clearance and then force them into rotation. This compresses the coating and gives them a near zero clearance. Eaton makes these blowers and controls about 90% of the U.S. market. Wipers, used in some blowers, are usually thin Teflon blades on the edge of the vanes.

Karl Van Dyk works at PRI and is an expert at the use of 3-D Printers. The printers deposit thin layers of molten ABS plastic. A Solid Works program

guides it. As the layers pile up the hot substance would tend to slide or slump. To halt this a glasslike substance is deposited on the outside (or the inside if preferable) after a number of layers. This material is either chipped away or dissolved after the model is finished.

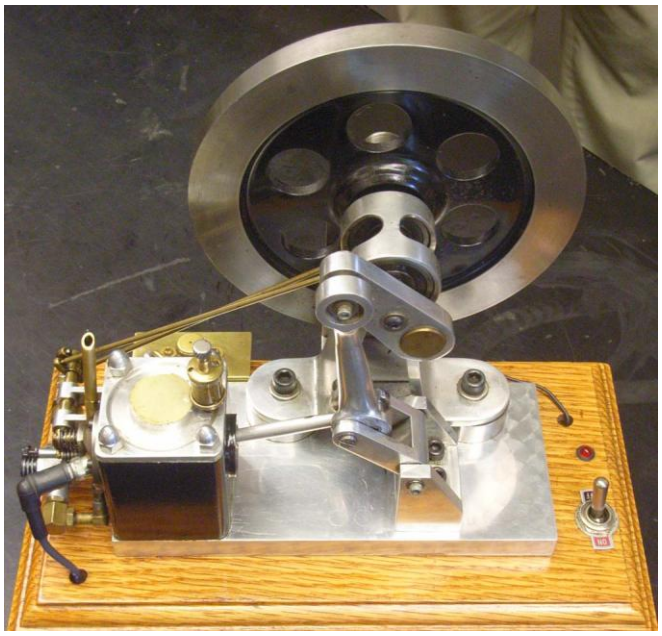
Ken and Dwight showed a truly beautiful prototype of the blower for the Black Widow V-8. The men are developing four of these for the first batch of engines in cooperation with Southern California member Jim Kipp. Jim and his co-workers are perfectionists and very nice people to boot. The water jet cut and polished throttle arm to the Walbro carb is a gem.



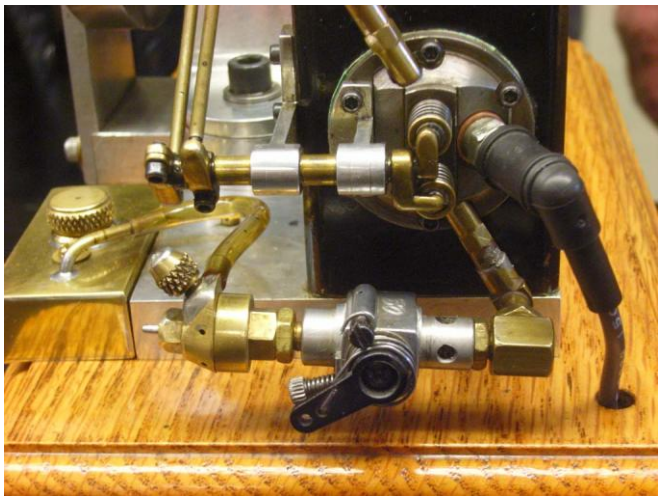
Mike Rehmus tells of his CNC explorations. He acquired an older machine and described his adventures in getting it up to date and learning the quirks of programming. This involved burned out driver boards, underpowered motors, code problems, and a variety of other issues. However, he is prevailing, and showed us a plate of aluminum with his initial test cuts.

Michael Cooper exhibited his new work and his some of his older classics at the Quicksilver Mine Company in Forrestville, California. The exhibit closed early this month, but you can still see it at: www.quicksilvermineco.com. Do not fail to see this web site, you'll love it!

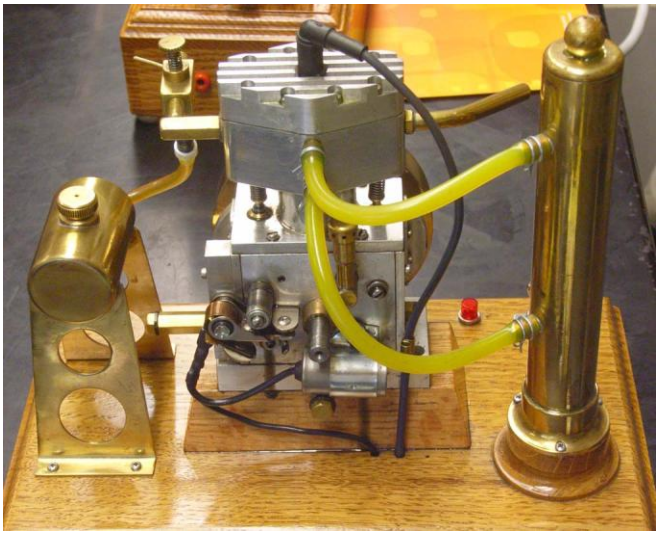
George Gravatt wowed us again with two nifty engines, both of which promptly purred into life with the first pull of the starting cord.



The first was an Atkinson cycle engine built from *Home Shop Machinist* plans about 10 years ago. The engine required a good bit of re-design by George. He describes it as virtually two separate engines, one part operating at half the speed of the other part.

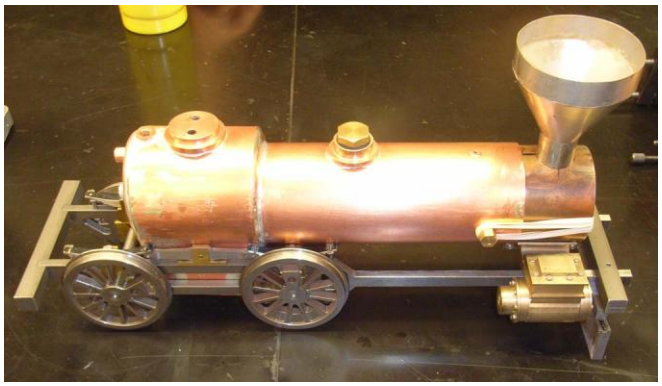


Close up of the carburetion end of George Gravatt's Atkinson Cycle engine



The second was an Upshur design. It is a marine vertical single published in *Model Engine Builder* magazine. Dwight Giles originally built the engine in 30 days, but turned it over to George who took six months to get it running. It required the making of three new T-cylinder heads to get a successful operating piece. He increased the valve diameter from1/4" to 5/16". The piston and sleeve were increased from ¾" to 1". He also created a windage tray for the crankcase and fashioned a rod dipper to solve an oil storm issue.

John Gilmor updated us on his locomotive boiler progress. His major announcement was how nicely he was able to join the copper with his TIG welder. He used common grounding wire for the filler. The TIG is also perfect for "tacking" copper pieces prior to joining with silver solder. This resulted in a nice mock-up of the entire boiler. The end plates were nicely fashioned in a hammer form.



Continuing on the boiler theme, Peter Lawrence reported that the Harris 56 silver solder mentioned in last month's newsletter is also being supplemented in his shop with Harris 45 (45% silver) for areas that require larger gap fills.

He also was able to dissolve a broken tap with an alum solution. The aluminum piece was placed in a plastic bucket with the alum and it took about a week to dissolve the carbon steel tap. Nice trick! It will not work for high-speed steel or cobalt taps. Dave Palmer mentioned that it is important to thoroughly flush out the tap hole following this method.

ZA (Zinc Alloy), a low melting point casting material, was a topic again. Zamak is a trade name for versions of this alloy. ZA 3 to ZA 27 seems to indicate the percentage of copper in the alloy. Copper 1 to 11% is the usual range.

Peter made up an ingot of Zamak by melting 197 pennies with 20 grams of aluminum! This results in 2.5% of aluminum alloyed in the zinc.

See "Budget Casting Supply" for ingots of Zamak. For a history of Zamak and a slew of interesting details about all the iterations of this metal, see http://eazall.com

We adjourned for a fabulous feast and good conversation. It is amazing how our members manage to bring a wide variety of delicious food for our annual Christmas party. Many thanks to members, and especially the ladies for facilitating the food preparation and serving. It was much appreciated!