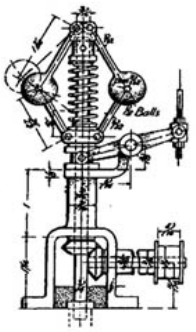

The NEMES Gazette

NEW ENGLAND MODEL ENGINEERING SOCIETY INC.

No. 181 May 2011 © 2011 NEMES

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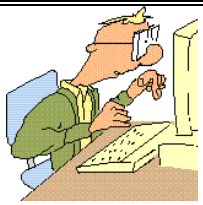

Editor's Desk

Frank Hills

Stanley Meyer's Machine

Every inventor dreams of endless cheap power. This is every charlatan's device. Despite the relative high level of education in many countries today, people are still fascinated by those claiming the potential of "over-unity". Over-unity is the "theoretical" ability of a process to produce more energy than it requires. Over-unity thus promises endless power, a worthy goal. I admit to being an over-unity junky. I don't believe in it. But I find the attempts to produce it increasingly creative and thought provoking. Why thought provoking you might ask? Because more and more of the people involved in the search for over-unity are professionally trained engineers and scientists. They follow up ideas that, we assume, prove unsubstantiated, but may have required real thought and effort to follow up. I love reading about the attempts of these people because it inspires me to think creatively. It's like solving a mystery. What made them believe this would work? The machine created by Stanley Meyer was one of these cases.

–Continued on page 2

Next Meeting

Thursday, May 5th, 2011

7:00 PM. Meetings held at:
Charles River Museum of Industry
154 Moody Street
Waltham, Massachusetts

Membership Info

New members welcome! Annual dues are $25 (mail applications and/or dues checks, made payable to "NEMES", to our Treasurer Richard Koolish, see right) Annual dues are for the calendar year and are due by December 31st of the prior year (or with application).

Missing a Gazette? Send mail or email to our publisher.

Addresses are in the left column.

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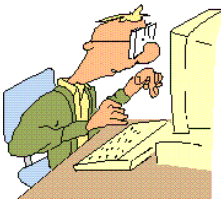


Editor's Desk

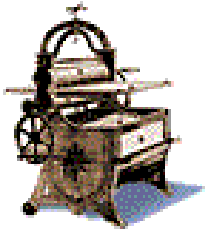
-continued from page 1

Stanley claimed to have produced a machine which separated water into hydrogen and oxygen more efficiently than standard electrolysis. His system involved a vertical array of tubes, each element in the array a tube within a tube with a narrow gap between them. Between these tubes a voltage potential is created. The idea, it seems, is to use the voltage potential to align the dipole water molecules across the potential. The voltage between the tubes is then increased in distinct pulsing steps until the molecule is ripped apart. Then the device is shut off for a micro-second and the process repeats. Between the aligning of the water molecules and the gentle tugging of the voltage, the separation of water into its two constituent gases is supposed to be more efficient than simply running a current between two plates in a tank of water. There are those claiming credentials with Universities who claim to have replicated the process, albeit with great difficulty. Tuning the pulses to the mechanical characteristics of the tubes seems to be problematic. No real research has sprung from any of this that I can find.

To his followers, an air of legitimacy is given Stanley Meyer's claim, however. He has a patent, though you don't have to prove a device works to get one. He published his work so people could attempt to replicate his device, though the results remain questionable. Electrolysis as a process is well understood and easily one of the most researched in this energy hungry world. No argument there. He was murdered…. What? The coroner's report states that he left a restaurant after having dinner and died of a brain embolism in the parking lot. Those with him claim he stood up in the restaurant, screamed that he had been poisoned, ran outside and died. It is also claimed that many of those following up on his research and making claims to successfully replicating the process are laying low because they have been threatened. Somebody must have killed him because he was on to something! This is classic conspiracy theory stuff. You gotta' love it!

Well, I did a little research. I have a copy of his patent. In and of itself, it is unremarkable. A paper claiming to explain and validate Stanley Meyer's system was supposedly written by a staff member at Dublin Institute of Technology. There is such a place; a small, young university only opened a few years before Meyers died. But I was unable to confirm the existence of the staff member. I also have a copy of this document. There is a great deal of information on the web about all of this. But that neither proves nor disproves anything. Finally, I discovered that Stanley Meyer was successfully sued by a team of investors for failing to prove his system worked in front of a panel of professional engineers. Well, what's the truth? Remember, I don't believe it. If any of you readers feels like taking their life in their hands against the oil cartels, the government, unknown assassination squads and the like, I have what you need to get started. Why don't I try? They guy behind me wearing the black suit says it wouldn't be a good idea.

Next month, "I Love Lucy in Space".



NEMES Gazette Editorial Schedule

Issue	closing date for contributions
June 2011	May 20, 2011
July 2011	June 24, 2011
August 2011	July 22, 2011
September 2011	August 19, 2011
October 2011	September 23, 2011
November 2011	October 21, 2011

President's Corner

Dick Boucher

The Meeting

This month our member Dave Piper will present his adventures in building his steam launch. Here are Dave's words:

Construction of the Steam launch "Rushforth"

I know what you're thinking: "Why would anyone want to build a steamboat?" Why Indeed!

Perhaps as an 8 year old, the locomotives at Steamtown left a lasting impression, or was it the 12 years I spent as a volunteer at Mystic Seaport? Ever since I graduated from college as a Mechanical Engineer, I've thought about it. In 1995, my personal situation changed, and I got a serious case of the "Steambug". I started with the engine and the journey of some 13 years began. I will start the continuation of this story where I left off at a NEMES meeting in December of 2001 and fill in details about her engine, boiler and the construction of the boat herself while speaking "Enginese" as well as English, ending up where she sits today, and her future, which remains bright, and what's the story behind her name...

I would like to dedicate this talk to our departed member, Ray Hasbrouck as a dear friend, motivator and mentor. Ray I hope you can make this one too!

Miscellaneous Ramblings

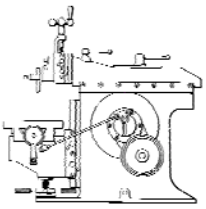
We didn't do much in the line of ramblings this past month. I was sick the weekend of the opening of the Waterworks Museum so I missed that but those that attended all had the same comment, "It is a great display"! I hope to be able to get there soon myself.

Due to the diligence of our editor and publisher, Frank and Bob, you will most likely receive this Gazette before May 1st. If you do, keep in mind the gas engine show sponsored by the New Hampshire Power of the Past Collectors Club in Dunstable Mass on Sunday May 1st. The show grounds are on Route 113 in Dunstable. Take Route 113 west from Route 3. The show grounds are just a couple miles from that intersection. Norm Jones is usually there with his tent and has space on his tales for additional displays. But if you have a table, please bring it along just in case we have a bumper show of members this year.

This show is very nostalgic for me, as it was there that I first met Ron Ginger and Rollie Gaucher. Rollie had his Bentley aircraft engine model and Ron had his boat "Thumper" on display.

Also keep in mind the Steampunk City weekend in Waltham on May 6th, 7th and 8th. Members planning to display should find the other member on the Waltham common on Saturday May 7th. Any questions should be referred to Elln at the museum. elln@crmi.org

Dick B.



Metal Shapers

By Kay Fisher

R. G. Sparber's Gingery Shaper - Part 14

Casting Pulleys, Feed Crank, Protractor Disc, and Rotating Head

A Quick Tour of my Foundry

Foundry Photo by R. G. Sparber

At about 9:00 AM I faced this rather unassuming plastic shed. Inside is the majority of my foundry along with a few lawn care products.

Foundry Contains Photo by R. G. Sparber

I store my sandbox against a wall and my sand in plastic containers on the patio.

Sandbox **Photo by R. G. Sparber**

The sandbox sits on an old folding table. It is not the most solid support yet experience has shown me that the vibration does not damage the molds. The yellow pails on the right hold 100 pounds of Petrobond. My foundry equipment is crude but effective. This is even more evident when you see my flasks. I have plans to make new ones out of aluminum U channel but other adventures have gotten in my way so far.

Cleanup Tarp **Photo by R. G. Sparber**

Before I dump out 200 pounds of dry sand, I lay out a cheap plastic tarp. This makes clean-up much easier. The open door in the background leads into my 150 square foot shop.

The day started off pleasant but hit 98° F by late afternoon. In a few months this will be considered a bit on the cool side here in Phoenix.

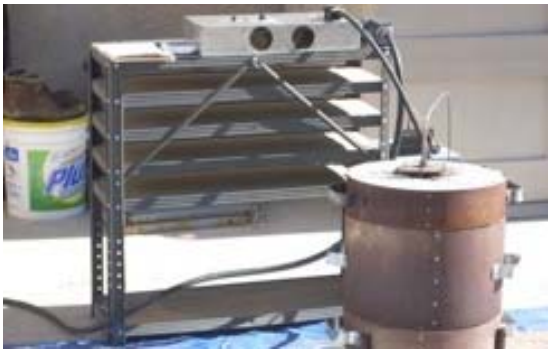
Sand & Firebricks **Photo by R. G. Sparber**

After placing firebricks down to support the furnace, I pour on a layer of sand. Any aluminum that leaks out of the furnace will hit this sand first. Note that the small triangle formed by the ends of the bricks is full of sand. Not a good area to miss. Additional bricks are placed for the crucible and lid.

Getting Ready **Photo by R. G. Sparber**

The sand is about 2” deep and covers all areas that might see molten aluminum. My steel crucible is in front of my furnace. The space to its right will hold my flask. To its left will be my ingot mold tray. This tray is large enough to take all of the melt if something goes wrong with the flask.

To the right of the furnace you will see two bricks which support the lid.



Furnace **Photo by R. G. Sparber**

My furnace is a Hartman electric. My controller is the over sized box with the two big cables connected to it. I also have a thermocouple which feeds through the lid of the furnace and into my crucible. I have been running with it in the melt at all times and see no problems so far. It is nice to constantly monitor the melt and see where I am in the process. I was able to see small but sudden drops in temperature as chunks of ingot dropped into the melt. The phase change is very distinctive.

Follow the vertical line of screw heads down the face of the furnace to see that the body section is offset. I accidentally assembled the furnace with the center section upside down. This creates significant air gaps between adjacent sections. Because of this, melt times were excessively long. Fortunately I was able to turn this center section over and all was normal for the third cycle. This kind of mistake makes me question my clarity of mind. Not a good thing when you are about to handle buckets of molten aluminum.

About a month ago I cast a pulley. The melt was too hot and the casting ended up with a hot tear on one end. During machining I discovered numerous hard areas inside the casting that eventually lead to me breaking a drive dog. The partially machined pulley went back into the crucible for a second try.

Flask with Pulley **Photo by R. G. Sparber**

I built a flask that is 8” square and about 14” tall. It permits me to cast the pulley with vertical room to spare. Above you see the molding board with the pulley pattern on top. All surfaces have been dusted.

Bottom Struck Off **Photo by R. G. Sparber**

With Loose Pertobond **Photo by R. G. Sparber**

I then sprinkled it with loose Petrobond. I use a flour sifter both for the Petrobond that is in contact with the pattern and for sprinkling on the bottom of the drag. You can see my main tool for pounding the Petrobond on the right side of the picture.

Top **Photo by R. G. Sparber**

Once the drag has been turned over and the molding board removed, you can see the top face of the pulley pattern. There is not a lot of clearance between the pattern and the flask. Note the minor burn marks on the wood. The flask has plenty of depth but would have been better if made a bit wider.

Cope plus Sprue Photo by R. G. Sparber

With the cope in place, I set the sprue. When I cast this pulley the last time, it did not have a riser and there were no shrink problems.

PVC Photo by R. G. Sparber

Before I started to ram up the cope, I decided to go with a larger sprue which would also provide extra melt if necessary. I just dropped a piece of PVC over the wooden sprue.

Pulling Cope Photo by R. G. Sparber

I then pulled the cope. The enlarged sprue is very smooth so will be easy to draw.

After Photo by R. G. Sparber

Given the rough finish of the cavity, I believe I did not pound the Petrobond hard enough. There was some crumbling. You can also see break-out of the top lip on the right side. My pattern probably needs a bit more draft in this area. None of this really matters because I allowed plenty of extra metal.

Flask in Position Photo by R. G. Sparber

The cavity is rather large so I will be pouring at the minimum temperature of 632° C. Even at that, there will be a lot of heat in this small area.

Ramming up Next Flask Photo by R. G. Sparber

After the pour, I wait 1 hour before opening the pulley flask. During this time I rammed up the next

part. In 7 hours I make a total of 6 pours. The flask you see here contains the rotating head (page 74 in Gingery's book 3). This is my oldest and most worn out flask. During the pour I had melt leak out the sides.

This pattern has a cast in steel core. I ended up just throwing it back into the crucible. When the aluminum melted off, I was able to rescue the core and try again.

Results Photo by R. G. Sparber

Here is the product of one full day. I cast two pulley blanks, the rotating head in the center (page 74), the protractor on the right (page 77), and feed crank in the upper right (page 68). I sure got a lot of mileage out of just a few patterns.

My first pour of the day took about 90 minutes, second was about 60 (remember the problem with the orientation of the furnace body). Subsequent cycles were about 45 minutes each.

My arm is not sore from all of that sand pounding but I definitely notice a little less endurance the next day. I still have a hand wheel to cast but will wait until more patterns are ready before starting up the furnace again. This assumes I don't have trouble machining these castings. If I do, it will go back into the pot and I'll try again.

Stay Tuned for part 15 from R. G. Sparber next month.

Keep sending me email with questions and interesting shaper stories.

My email address is:

KayPatFisher@gmail.com

Kay

NEMES Shop Apron

Look your best in the shop! The NEMES shop apron keeps clothes clean while holding essential measuring tools in the front pockets. The custom strap design keeps weight off your neck and easily ties at the side. The apron is washable blue denim with an embroidered NEMES logo on top pocket.

Contact Rollie Gaucher 508-885-2277

NEMES Tee Shirts

NEMES tee shirts and sweat shirts are available in sizes from S to XXXL. The tee shirts are gray, short sleeve shirt, Hanes 50-50. You won't shrink this shirt! The sweat shirts are the same color, but long sleeve and a crew neck. Also 50-50, but these are by Lee. The sweat shirts are very comfortable!

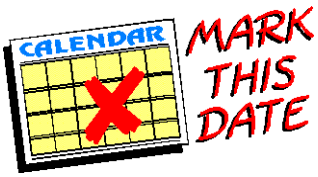
Artwork by Richard Sabol, printed on front and back:

Prices:

	Tee Shirts	Sweat Shirts
S - L	$12.00	$22.00
XXL	$14.00	$24.00
XXXL	$15.00	$25.00

Add $5 shipping and handling for the first tee shirt, $1 for each additional shirt shipped to the same address. Sweat shirts are $7 for shipping the first, and $1.50 for each additional sweat shirt. Profits go to the club treasury.

Mike Boucher
10 May's Field Rd
Lunenburg, MA 01462-1263
mdbouch@hotmail.com



Upcoming Events

Bill Brackett

To add an event, please send a brief description, time, place and a contact person to call for further information to Bill Brackett at thebracketts@verizon.net or (508) 393-6290.

Bill

May 1st NH Power Of The Past Engine Show
RT 113 Dunstable MA
Robt Wilkie 207-748-1092

May 5th Thursday 7PM
NEMES Monthly club meeting
Charles River Museum of Industry
Waltham, MA 781-893-5410
http://www.neme-s.org

May 6th-8th Steampunk Weekend
Charles River Museum of Industry
Waltham, MA 781-893-5410
http://www.crmi.org

May 15th Spring Steam-up
Waushakum Live Steamers
Holliston MA

May 15th 9AM The Flea at MIT
Albany Street Garage at the corner of Albany and Main Streets in Cambridge
http://www.mitflea.com/

May 17th-19th 9AM-5PM
EASTEC at Eastern States Expo
West Springfield MA
800-733-4763
http://www.sme.org/eastec

May 28th-29th Bernardston Show
Rt 10 off Rt 91 Bernardston, MA
Call Vickie Ovitt 413-648-5215

May 28th American Precision Museum opens
http://www.americanprecision.org/

June 2nd Thursday 7PM
NEMES Monthly club meeting
Charles River Museum of Industry
Waltham, MA 781-893-5410
http://www.neme-s.org

June 17th-18th Vermont Gas & Steam Assoc show
Brownington Stonehouse Museum
Old Stone Road off 191 exit 26 Brownington VT
Contact Gail Norman gailnorman@trans-video.net
802-485-8224

June 18th-19th Wings and Wheels Open House
The Collings Foundation
137 Barton Road in Stow, MA
Adults at gate $10
http://www.collingsfoundation.org/cf_OpenHouseEvents11.htm

June 17th-19th Father's Day Meet
Pioneer Valley Live Steamers
Southwick MA
http://www.pioneervalleylivesteamers.org

June 26th The 10th Annual Van Brocklin Meet
Waushakum Live Steamers
Holliston MA

June 19th 9AM The Flea at MIT
Albany Street Garage at the corner of Albany and Main Streets in Cambridge
http://www.mitflea.com/

June 25th-26th Orange Show
Orange Airport Orange MA
Call Grover Ballou at 413-253-9574