

# The PLS GAZETTE



PENNSYLVANIA LIVE STEAMERS, INC.

P.O. BOX 26202, COLLEGEVILLE, PA. 19426-0202

*Jan, Feb. - 2008*

## *Prez Sez*

This is my last 'Prez Sez' column. In March you will elect a new president. I want to thank you for your kind remarks and constructive criticism. I trust that you will be similarly supportive of your new president.

Since this is my last opportunity to bore you in this way, I'd like to discuss some of the less obvious effects of scale. Nearly everyone is familiar with the facts that area is proportional to the square of the linear scale ratio; and that volume (and weight) is proportional to the cube of the linear scale ratio. These explain the surprising power and ruggedness of our models.

It may be rather less well known that some effects of scale affect the operation of our boilers. For instance, water will rise higher in a small diameter tube than in a large diameter tube. Since we monitor boiler water level by observing the level of water in a glass tube, it is important to know that the inside diameter of the tube will affect the accuracy of the level observed. This scale effect has safety implications.

The heat transfer in boiler tubes is also affected by scale. In full size boilers, heat transfer in the tubes is enhanced by the turbulent nature of the flow in the tubes. Heat transfer from laminar gas flow is much less. Turbulent flow can be distinguished from laminar flow by the numerical value of the Reynolds Number of the flow. Reynolds Numbers above 4000 suggest turbulent flow; below 2000, laminar flow.

The Reynolds Number is directly proportional to the dimensions of the flow channel, the velocity of the flow and the density of the flowing fluid, and inversely proportional to the viscosity of the flowing fluid. The density and viscosity of the flowing fluid (flue gases) would be similar to these properties for full size boilers. The diameter of the tubes is smaller by a factor of two or three, and there is reason to believe that velocities in the tubes are lower by a similar factor, so that the Reynolds Number is lower by an order of magnitude. As a result the heat transfer from the gases to the tube walls is much less efficient.

In the firebox, coal fired boilers benefit from the radiant heat transfer from the incandescent fire bed to the fire box walls. When firing with propane or some liquids, the flames are transparent. The radiation of heat from clear gases is also scale dependent. The effectiveness of this radiation is strongly dependent on the mean beam length in the gases. If this length is less than several feet (for ordinary compositions) the radiant transfer is very weak. To use such a fuel the firebox should contain a refractory target that is strongly heated by convection from the flame, which can, in turn, radiate to the firebox walls.

On the water side of the firebox walls, heat transfer is primarily by means of natural convection. That is, motion of the fluid is caused by density differences due to temperature differences. For vertical surfaces, the heat transfer coefficient is a function of the height of the surface, which does not scale, so small fireboxes have lower rates of heat transfer.

*Bill Love*

## **Membership Renewals Due**

As a reminder, membership renewals are now due for 2008. Please take the time to complete the renewal notice that you were sent in January and forward it with your dues. If you have misplaced your renewal notice, you can receive another one by e-mailing [secretary@palivesteamers.org](mailto:secretary@palivesteamers.org) or by calling Lee Nonnemacher at 610-275-6070. Please do not forward dues without the renewal form. We must have the renewal form completed for our records.

# Pennsylvania Live Steamers, Inc.

*President* – **William J. Love** – 9 Red Cloud Circle – Royersford, PA 19468-5701 email ; bill.love2@verizon.net

*Secretary* – **George F. Lord**- 2988 Pennview Ave. – Bromall, PA 19008-1126 – 610-356-5713

*Treasurer* – **Lynn Hammond**-439 Fletcher Rd.- Wayne,PA. 19087-610-688-0463 lhamm950@aol.com

*Board of Directors* – Pete Brown-petejudy@yahoo.com, Lynn Hammond, Ron Shupard-shusmoke@aol.com, Ron Henderson – ronjhenderson@verizon.net, Buddy Borders-Borders@physics.upenn.edu, Bill Meyer-wvmeyer@verizon.net, George Cooper

*Gazette Editor* – **Phil Paskos** – 508 Boeing Av. – Reading, PA – 19601-1124 – 610-374-0498 email: **philpaskos@verizon.net**

**Clubhouse Phone** – 610-454-0477 **Club Web Site**: <http://PALiveSteamers.org>

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## CALENDAR OF EVENTS – 2008

|                           |  |
|---------------------------|--|
| <b>Saturday, Mar. 8</b>   | <b>Board of Directors Meeting – 9:30 AM</b>        |
| <b>Saturday, Mar. 15</b>  | <b>Membership Meeting – Elections – 12:30 PM</b>   |
| <b>Saturday, April 12</b> | <b>Board of Directors Meeting – 12:30 PM</b>       |
| <b>Saturday, April 19</b> | <b>Membership Meeting – 12:30 PM</b>               |
| <b>Saturday, April 19</b> | <b>Spring Cleanup Day, All Hands</b>               |
| <b>Sunday, April 27</b>   | <b>Boiler Testing – 8:30 AM</b>                    |
| <b>Sunday, April 27</b>   | <b>Run Day – Members and Guests Only, R.D. 5/4</b> |

The PLS *Gazette* is published 6 times a year starting in February. Deadline is BOD Meeting  
*Membership cards will be mailed to all paid up Members with the April Gazette*

## Notice of elections

PLS annual elections will be held during the scheduled membership meeting on Saturday, March 15, 2008 at 12:30 P.M. To be elected are a president, secretary, treasurer and two board members. Nominees for the offices are as follows:

President - Patrick Murphy

Secretary - Lee Nonnemacher

Treasurer - Lynn Hammond

|                      |                 |             |             |
|----------------------|-----------------|-------------|-------------|
| Board of Directors - | John Bortz, Jr. | John Geib   | Bill Manley |
| Paul Quirk           | Bruce Saylor    | Ron Shupard |             |

The Board wishes to thank John Geib and Lee Nonnemacher for serving as this year's nominating committee.

## HELP!

At this writing we are erecting new walls along the mainline down grade from the 7&1/4 inch station. 2 sections have been completed on the right side going down the grade.

We are now starting to work on the third second on the lower left side. The forth left upper section is the longest and will take some time. While this is going on we have to move the switch along the passenger unloading wall back 10 ft and realign the track there. The brick walk will have to be completed at the top of the new steps and also along the unloading area. These 2 projects will be time consuming. **Additional Saturday and Wednesday HELP IS NEEDED.**

Our first run day is only 11 weeks away April 27. There is much work to be done before that day which is also boiler test day. There are also new projects in the works for later. I know the weather hasn't been the greatest now but out of about **86 regular and 250 associate members** there are only about **4-8 members** working on the present projects.

Other members are taking care of the business of the club. The future existence and survival of PLS depends on more active members to help keep up with the maintenance and future projects here at PLS. ***Bruce Saylor***

## PLS Calendar of Events – 2008

|                           |  |
|---------------------------|--|
| Saturday, Jan. 12         | Board of Directors Meeting – 9:30 AM                                       |
| Saturday, Feb. 9          | Board of Directors Meeting – 9:30 AM                                       |
| Saturday, Mar. 8          | Board of Directors Meeting – 9:30 AM                                       |
| Saturday, Mar. 15         | Membership Meeting – Elections – 12:30 PM                                  |
| Saturday, April 12        | Board of Directors Meeting – 12:30 PM                                      |
| Saturday, April 19        | Membership Meeting – 12:30 PM  |
| <b>Saturday, April 19</b> | <b>Spring Cleanup Day, All Hands</b>                                       |
| <b>Sunday, April 27</b>   | <b>Boiler Testing – 8:30 AM</b>  |
| <b>Sunday, April 27</b>   | <b>Run Day – Members and Guests Only, R.D. 5/4</b>                         |
| Saturday, May 10          | Board of Directors Meeting – 12:30 PM                                      |
| Saturday, May 17          | Membership Meeting – 12:30 PM  |
| <b>Saturday, May 24</b>   | <b>Spring Meet</b>   |
| <b>Sunday, May 25</b>     | <b>Spring Meet</b>   |
| Saturday, June 14         | Board of Directors Meeting – 12:30 PM                                      |
| Saturday, June 21         | Membership Meeting – 12:30 PM Afternoon/Evening Run, Members & Guests Only |
| <b>Sunday, June 22</b>    | <b>Public Run Day – R.D. 6/29</b>  |
| Saturday, July 12         | Board of Directors Meeting – 12:30 PM                                      |
| Saturday, July 19         | Membership Meeting – 12:30 PM  |
| <b>Saturday, July 19</b>  | <b>Annual Picnic &amp; Run, Members &amp; Guests Only</b>                  |
| <b>Sunday, July 27</b>    | <b>Public Run Day – R.D. 8/3</b>   |
| Saturday, Aug. 9          | Board of Directors Meeting – 12:30 PM                                      |
| Saturday, Aug. 16         | NO MEETING – Afternoon/Evening Run, Members & Guests Only                  |
| <b>Sunday, August 24</b>  | <b>Public Run Day – No R. D.</b>   |
| <b>Saturday, Aug.30</b>   | <b>Fall Meet</b>   |
| <b>Sunday, Aug. 31</b>    | <b>Fall Meet</b>   |
| <b>Sunday, Sept. 7</b>    | <b>Perkiomen Day</b>   |
| Saturday, Sept. 13        | Board of Directors Meeting – 12:30 PM                                      |
| Saturday, Sept. 20        | Membership Meeting – 12:30 PM – Afternoon/Evening Run, Members & Guests    |
| <b>Sunday, Sept. 28</b>   | Only<br><b>Run Day – Members and Guests Only</b>                           |
| Saturday, Oct. 11         | Board of Directors Meeting – 12:30 PM                                      |
| Saturday, Oct. 18         | Membership Meeting – 12:30 PM  |
| <b>Saturday, Oct. 25</b>  | <b>Autumn Cleanup Day, All Hands</b>                                       |
| <b>Sunday, Oct. 26</b>    | <b>Run Day – Members and Guests Only</b>                                   |
| Saturday, Nov. 8          | Board of Directors Meeting – 12:30 PM                                      |
| Saturday, Nov. 15         | Membership Meeting – 12:30 PM  |
| Friday, Nov. 28           | Turkey Trot Run Day  |
| Saturday, Dec.13          | Board of Directors Meeting – 9:30 AM                                       |

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### New Members

New associate members are Tari Lawson, Wayne J. Gillmore, Ronald H. Klinger. Welcome to All !!

### Frank Watson

The final, lonely whistle sounded last month for one of our most beloved members.

Frank Watson, one of the master builders, passed away on Thursday, January 17, 2008, at home. Frank's lifelong love of trains began in Philadelphia, where he was born on June 19, 1923. He grew up around the corner from the Reading Railroad.

Frank's began his career in machinery as an apprentice surveyor instrument maker in the city, loving the fact that his job included a fine view of the Reading Terminal. After a tour in the Army, Frank worked for the Army Quartermaster Research and Development Center, also in Philadelphia, in charge of a small instrument development group. He worked on several devices for the DEW (Distant Early Warning) line, items that had to be functional at very low temperatures because of the belief during the Cold War that the Russians would be coming over North Pole.

In the 40's, Frank met and married his wife, Florence. During a marriage that lasted over 55 years, the couple raised two daughters, Linda and Lisa.

After the Army, Frank began working in the private sector, joining Burroughs Corp, where he worked off and on until retirement.

Frank was always hungry for knowledge, grabbing every opportunity to learn something new and to pass that knowledge on to his colleagues and friends. He had an extensive knowledge of metallurgy, was an avid reader of mechanical, political and railroading books. He was also well studied in mathematics, especially as applied to machinery and steam engines.

Frank's love of railroading also encouraged his proficiency in photography. His photographs of trains and trolleys appear in dozens of books.

According to his friend and fellow railroading enthusiast, Tom Tucker, Frank was a never-ending source of information on trains, trolleys, and engines.

"I have lost a great and true friend," Tom noted, "and I feel sorry for the members of the Live Steamers Railroad who will never have the chance to meet and learn from him."

According to Tucker, Frank always strove for perfection in his work. In his Wayne, Pa, basement shop, Frank built ¾ scale and 1-½ scale locomotives and railroad cars, down to the last, microscopic screw. A generous man with his time, he loved sharing his extensive knowledge in both his home and shop. Frank was also a great source of information on the history of railroading and its impact on politics and government. He also loved his kids, chocolate and the Phillies.

In recent years, Frank lost his beloved wife, Florence, and his daughter, Linda. A daughter, Lisa Arnold; three grandsons; one granddaughter survive him.

Frank's final days at home were made easier by his family friend, Carole Allen, and his steady stream of friends and family who came by to hold his hand and offer their friendship.

His life is now a memory, but like the fine black dust of the coal train that gently covers the earth, Frank Watson's spirit will stay forever in our hearts.



The above was submitted by Tom Tucker. The picture was taken by Janet Jones in 2003.

PLS Budget for 2008

|                       |       |
|-----------------------|-------|
| Receipts              |       |
| Member Dues           |       |
| Regular Member Dues   | 6640  |
| Associate Member Dues | 11400 |
| Dues Sub-Total        | 18040 |
| Donations             |       |
| General Donations     | 2500  |
| "1 1/2"" Donations"   | 3000  |
| "1"" Donations"       | 200   |
| Ga. 1 Donations       | 100   |
| Donations Sub-Total   | 5800  |
| Storage Fees          |       |
| Building #3 Fees      | 3000  |
| Building #6 Fees      | 1900  |
| Storage Fee Sub-Total | 4900  |
| Sales Receipts        |       |
| Table Sales           | 3000  |
| Table Sales Taxable   | 600   |
| Kitchen Sales         | 1200  |
| Kitchen Sales-Taxable | 1000  |
| Soda Sales            | 2000  |
| Xaras Prints          | 240   |
| Boiler Treatment      | 130   |
| Steam Oil             | 50    |
| Sales Sub-Total       | 8220  |
| Grand Total           | 36960 |

PLS Expenses for 2008

|                                 |       |                                 |      |
|---------------------------------|-------|---------------------------------|------|
| <b><u>Maintenance</u></b>       |       | <b><u>Special Project *</u></b> |      |
| Building Maint.                 | 500   | Steaming Bay Roof               | 2000 |
| Landscaping                     | 1000  | Computer DVD                    | 100  |
| Signals Maint                   | 750   | Club loco                       | 500  |
| Retaining Wall                  | 2400  | 1 in. siding                    | 400  |
| Track Maint                     | 600   | Add Steam Bay                   | 400  |
| Mower Maint                     | 200   | Machine Shop                    | 1000 |
| Backhoe Maint                   | 200   | 1" Car Storage                  | 900  |
| Other Maint                     | 500   | Canvas Cover for storage shed   | 200  |
| Ga.1 Maint                      | 200   |                                 |      |
| Maint. Sub Total                | 6650  |                                 |      |
| <b><u>Utilities</u></b>         |       |                                 |      |
| Electricity                     | 3000  |                                 |      |
| Telephone                       | 320   |                                 |      |
| Gas & Heating Oil               | 1000  |                                 |      |
| Solid Waste Disposal            | 400   |                                 |      |
| Liquid Waste Disposal           | 700   |                                 |      |
| Utilities Sub Total             | 5420  |                                 |      |
| <b><u>Corporate Expense</u></b> |       |                                 |      |
| Legal & Professional Fees       | 1000  |                                 |      |
| Insurance & Taxes               | 6000  |                                 |      |
| Office Expense                  | 300   |                                 |      |
| Postage                         | 1600  |                                 |      |
| Corporate Fees                  | 165   |                                 |      |
| Charitable Contributions        | 300   |                                 |      |
| Bank Charges                    | 50    |                                 |      |
| Other Printing                  | 300   |                                 |      |
| Corp Expense Sub Total          | 9550  |                                 |      |
| <b><u>COMMUNICATIONS</u></b>    |       |                                 |      |
| Gazette Expense                 | 1400  |                                 |      |
| Web Page Expense                | 500   |                                 |      |
| Computer Expense                | 300   |                                 |      |
| Internet Expense                | 720   |                                 |      |
| Comm. Sub Total                 | 2657  |                                 |      |
| <b><u>Sales Expense</u></b>     |       |                                 |      |
| Table Sales                     | 3000  |                                 |      |
| Sodas                           | 1000  |                                 |      |
| Kitchen Expense Taxable         | 800   |                                 |      |
| Snacks Non-Taxable              | 500   |                                 |      |
| Boiler Treatment                | 130   |                                 |      |
| Steam Oil                       | 100   |                                 |      |
| Sales Exp Sub-Total             | 5030  |                                 |      |
| <b><u>Miscellaneous</u></b>     |       |                                 |      |
| Contingency Fund                | 1000  |                                 |      |
| Security                        | 200   |                                 |      |
| Other Expense                   | 500   |                                 |      |
| Portapots                       | 950   |                                 |      |
| Picnic Expense                  | 500   |                                 |      |
| Misc.Sub Total                  | 3150  |                                 |      |
| <b><u>Special Project *</u></b> | 5500  |                                 |      |
| <b><u>Grand Total</u></b>       | 37957 |                                 |      |

**Generous Donations to PLS**

The following people have made generous donations to PLS.

Newell Godshall, Howard Kriebel, Stanley Heist, George Spohrer, Todd Parker, Dave Taylor, Joe Springer, Frank Mahoney, Paul Nichini, Ken Williams, Tom Diedrich, Richard Werner, William Mentzer, Ray Matus, Ed Leiser, Robert Small, William Saul, James A. Brobst, Robert Goepel, Carol Mc Mullen, Ed Kabak, Wayne Baldwin, Chris Becker, Joe Natale, Lee Nonnemacher, Joe Rohanna, Hans Schneider, Robert Moser, Dave Cushwa, Ronald Klinger, John Bortz, Jr., Jack Richards, C. Robert Morris, Frank Webb, Harry Quirk, Steve Leatherman, Duane Quenzel, Roy Ganderton, Peter Heberer, Robert Werner, Jr., Francis Sheridan, Karl & Helen Soltan in Frank Watson's memory.

**THANKS TO ALL!!**



Frank Watson's Legacy Will Live on ! Thank You Janet Jones for these pictures.

**The PLS Gazette  
P.O. Box 26202  
Collegeville, PA 19426-0202**

**FIRST CLASS**



**Think Spring !!**