

LALS ENGINE BOOSTER



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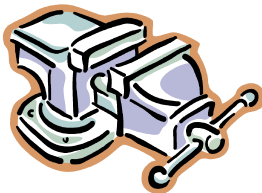
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Aluminum Bronze, A Wonderful Material

By I. Douglas Alkire



In the March/April 2007 issue of LS & ORR, there is an article by Kozo Hidaka about "tube joints". He states that free-machining stainless steel can be used for the fabrication of union nuts because the stainless steel is not only corrosion resistant, but also considerably stronger than brass. However, he cautions that a good lubricating compound should be used on the threads to prevent seizing.

Yes, stainless steel is a very gally metal without lubrication.

In my work in the 1980's as a mechanical design engineer for aerospace vehicles, I learned of a wonderful material which was used for highly-loaded sleeve bearings on the vehicles because it was not only highly corrosion resistant and very strong, but was also extremely slippery. That material is aluminum bronze.

I have found that very few live steamers are aware of this metal. It is not cheap, but I found a local supplier, Pacific Metals (now out of business), which sold short ends at half price. I bought some to use for the union nuts on my 1" scale B&O P-7, and found that the alloy machines very much like heat-treated 4130 steel. Since it is so slippery, sharp tools are a must for machining. Cutting tools do not dig in as they do in brass. If they are not sharp, they just skid on aluminum bronze.

Because of the very slippery nature of aluminum bronze, galling against other metals does not occur, and lubricant is not needed. Where can a live steamer get the metal? I found that McMaster-Carr carries it in its catalog in several alloys. I copied the following technical information from the catalog:

Alloy 642 Aluminum bronze round rods — in 5/16", 3/8", 1/2", 3/4", 1" and 1 1/2" diameters. The high aluminum content makes this bronze non-magnetic. Excellent toughness and corrosion resistance. Hardness is Rockwell 90 B scale. Melting point is 1,840° F. Yield strength is 60,000 psi.

Alloy 630 Aluminum bronze balls from 1" to 2" diameter. This aluminum bronze has excellent corrosion resistance. Heat-treat it for higher tensile strength. Hardness is Rockwell 96 B scale. Melting point is 1,930° F. Yield strength is 65,000 psi.

Alloy 954 in solid rods, cored rods, and rectangular bars. This aluminum bronze is characterized by high strength and excellent corrosion resistance. Heat-treat to achieve higher tensile strength. Does not tolerate misalignment or dirty lubricant. Use against hard-faced steel shafts with both shaft and bearing machined to a fine surface finish. Hardness is 170 Brinell. Melting point is 1,900° F. Yield strength is 35,000 psi.

(Continued on page 3)

Member Calendar

Jul. 28	Work Day Member Meeting
Aug. 06	BOD Meeting
Aug. 18*	TTOS Run
Aug. 18	Potluck/Night Run
Aug. 25	Work Day Member Meeting
Sep. 01	Change Directions
Sep. 10	BOD Meeting

Board/General Meetings begins at 7 pm.

* Date change

Public Service Schedule

Jul. 22	Public Rides
Jul. 29	Public Rides
Aug. 05	Public Rides
Aug. 12	Public Rides
Aug. 19	Public Rides
	Disney Barn Open Small Scale Sunday Steam Plant Open
Aug. 26	Public Rides
Sep. 02	Public Rides

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Splinters from the Board

July 2, 2007

By Peter Fuad

Kountry Kitchen. Bonnie Kaufman has agreed to prepare and serve gourmet lunches in the Kountry Kitchen on the third Sunday of each month. The Board voted to keep the present arrangement of retaining a cook for the other Sundays.

Safety. Ron Bergmann reported that Mark Hanlon, safety engineer, sent a letter to the City stating that all tasks for rehabilitation of the facility outlined in his safety report issued following the 2005 accident had been satisfactorily completed, that the Museum had been proactive in completing such tasks, that the Museum was in full compliance with its safety program and that no additional work was required. Hanlon stated he will be completing annual reports to Recreation and Parks.

Ron Bergmann will ask Mark Hanlon to confirm in writing to the city Hanlon's prior consent to reducing the weight of the center bench cars by 60 pounds, requiring Level II re-certification every two years instead of annually and reducing the level of requiring track ballasting. Ron will schedule a meeting with the city on safety matters.

New Center Bench Cars. Dan O'Brien reported that the new center bench cars should be in operation within several months. Also, the Board decided not to sell any of the Museum's remaining gondola cars.

The following new members were welcomed or announced. Resident: Gino Joukar; Jonathan Watts and Georges Arseneault. Non-resident: Jerry Roseborough, Weldon, CA; Jason Van Horn, Galt, CA; Kenneth Hobbs, Perris, CA; William Rogers, Oakview, CA and Alberta Live Steamers

A party request for another Carolwood Movie Night on July 21 was approved

Photos by Miles Kristman ⇨



Los Angeles Live Steamers Railroad Museum Engine Booster

The *Engine Booster* is the monthly publication of the Los Angeles Live Steamers Railroad Museum, a non-profit 501(c)(3) organization. Museum/track are located in Griffith Park, 5202 Zoo Dr., Los Angeles, CA. Mailing address: PO Box 2156 Toluca Lake, CA 91610.

The *Engine Booster* is edited and composed by Donald Frozina and is produced on a PC using Microsoft® Publisher 2000 software. Articles and photos are always welcomed, although the right is reserved to edit all copy. Deadline is the 20th of the month prior to publication. Input can be dropped into the "Booster" mailbox in the UP caboose, mailed, e-mailed or faxed as follows:

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Los Angeles Live Steamers Railroad Museum Board of Directors 2007

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Phone 323/661-8958

TTOS 2007 Run at LALSRM

By Steve Waller



The 7th Annual Toy Train Operating Society Run will be on Saturday, August 18th from 11 am to 3 pm. We're hoping to run at least three 7½" scale trains. To be on a train crew, you must be Level I certified and sign up at least one week in advance. Contact Steve Waller 626/710-7768 (cell) or wallerworld@email.com for information.

Volunteers will be served lunch by TTOS; all others who would like food service at the Kountry Kitchen that day are asked to RSVP at least one week in advance, so we know how much food to buy. Cost for lunch is \$5.00 per person. For lunch reservation forms, see the LALSRM bulletin board or contact Steve Waller (see above).

The event is co-sponsored by TTOS-Southwest Division, which has its monthly gatherings in nearby Arcadia. TTOS-SW caters to collectors of Lionel & American Flyer trains, also G-scale. Check out www.ttos-sw.org.

Wanted: *Engine Booster* Editor

By Donald Frozina



After almost five years as your *Engine Booster* editor, I find that it is time to pass on the job of editing and composing it to someone else.

As many of you might know, my (paying) job has been transferred to the Cincinnati, Ohio area. As I have been with that company over 23 years, my family and I decided to follow the job. This will happen no later than November.

Editing and composing the *Engine Booster* consists of gathering the articles from the authors each month, then putting them into electronic (PDF) form and sending it to our printer for publication.

Interested persons, please contact Ron Bergmann, 818/998-8146.

Aluminum Bronze (Continued from page 1)

In my own application, I used aluminum bronze for the cylinders and cylinder heads of my 3-cylinder axle pump with stainless steel pistons, as well as for all the union nuts on the locomotive.

President's Message

By Ron Bergmann



I cannot believe I am writing the message for the August *Engine Booster*. Where has the time gone? The first six months of this year went by so fast.

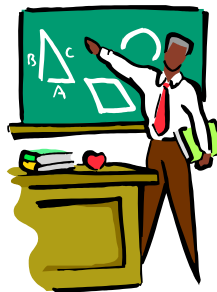
The Board is still looking for a General Superintendent. The job entails planning the work day each month and supervising/Directing our members to get the needed tasks completed. If you are interested, contact me or one of the other Board members.

We have trained several more people to act as Safety/ Incident Coordinators over the last several weeks. The position is an important one and we can always use additional volunteers.

I wish everyone a great summer, what's left of it, and hope you all enjoyed a nice vacation from the grind. H

Happy railroading.

Training Classes



Conductor: Want to learn to be a conductor? Call Roger Bacon at 818/887-0898 or Steve Harris at 818/842-2296 to schedule a class. There is an excellent DVD available to either borrow or own (\$5). The conductor class typically meets on a Saturday. Note: You must have completed both your Level II and Level I safety training to attend this class.

Diesel Engineer: Want to learn to operate the Museum's diesel/electric locomotives? Call Roger Bacon at 818/887-0898 or Gary Burdorf at 310/573-2019 to schedule a class. The diesel class typically meets on a Saturday with the check ride on the following Sunday. Note: You must have completed all your conductor requirements to attend this class.

Small Scale Sunday Reminder

By Chris Mahony and John DeRosa

Remember, if you have a ¾ or 1-inch scale locomotive and equipment, please come out every third Sunday for Small Scale Sunday. We would love to see it, running or not. So bring it out, run it if you can, and let's all have a great time!

Who's Been Workin' on the RR

May 7 — Jun. 4

Baker, Gary x2	Moore, Todd x2
Berg, Ginny x3	Ward, Doug
Berg, Ted x3	Westphal, Charles
Bergman, Ron	x2
Calderwood, Sam	Westphal, Collin
Heiman, Gene x2	x2

For Sale

Complete train, 1½" scale K-4

Pacific (propane fired), support flat car/riding car, tank car that's sealed to make it a rolling ice chest, riding caboose that's great for storage. \$17,500/OBO. Complete train, 1" scale GP S/P Black Widow (electric/battery), riding flat car, S/P caboose/storage car with marker lamps. \$11,500/OBO. 1" scale Little Engines Atlantic (coal fired), completely rebuilt tender, just repainted and detailed, \$6,500/OBO. 1½" scale motorized traction car (built to be a pusher/braking car for the Pacific) 2½ horse power motors (all drive motors and gearing made by Real Trains), 4 deep cycle batteries, very strong, can push or pull anything. \$3,500/O.B.O. Contact Steve Pike, 818/352-7705.

Hiawatha Hudson steam engine.

Museum quality detail, runs on air, \$32,000. Matching streamline cars (2) \$5,000/each. Also new trucks for tender which have been completed, \$TBD. 2901 Pacific steam engine, \$25,000/OBO. Needs some work as generator and sanders were taken, and compressor was loosened. "Lucky 7" steam engine, \$7,500. Rolling stock, \$600/each: 2 gondolas, 1 caboose, and 1 pickle car. Contact Becker Rothhammer, 818/632-6807.

Electric locomotive and riding car.

This set is designed to be easily handled by one person with a small car. Powerful, reliable, and batteries included! \$2,000. This engine tested very well at Maricopa Live Steamers during their Spring Meet. Contact Joe Powell at 702/434-8710 or ymmchn@earthlink.net for pictures/questions/etc.

Engineers and Conductors

June 2007

<u>Date/Passengers</u>	<u>Engineer</u>	<u>Conductor</u>	<u>Owner</u>
06-03-2007	Thaine Morris	Pete Fowler	Morris
840 passengers	Peter Fuad	Bob Quinn	Fuad
	Roswitha Kienast	Wolfgang Hell	LALS RM
	Ted Naimy	Ray Secara	Naimy
	Sam Calderwood	Tracey Beattie	Calderwood
	Peter Nott	Ron Bergmann	Nott

Track Inspectors: Ron Bergmann, Wolf Fengler

Safety Coordinator: Wolf Fengler

Station Master: John De Phillip Sr., Roger Bacon

Station Assistant: Pat Miller

06-10-2007	Peter Fuad	Bob Quinn	Fuad
948 passengers	Al Way	Roberto Lopez	Way
	Michael Murphy	Gail Woodward	B. Woodward
	Gary Baker	J. De Phillip Sr./J. Miller	LALS RM
	Ted Naimy	Ray Secara	Naimy
	Peter Nott	J. Hritz/L. Evans	Nott

Track Inspectors: Ron Bergmann, Al Way

Safety Coordinator: Ron Bergmann

Station Master: Larry Mitchell

Station Assistant: Pat Miller

06-17-2007	Peter Fuad	Bob Quinn	Fuad
723 passengers	Al Way	Kevin Jung	Way
	Michael Murphy	Chris Solak	Solak
	Gary Baker	Eric Fields	LALS RM
	Peter Nott	<i>unknown</i>	Nott

Track Inspector: Al Way

Safety Coordinator: John De Phillip Jr.

Station Masters: John De Phillip Jr., Roger Bacon

Station Assistant: Pat Miller

06-24-2007	Peter Fuad	B. Quinn/B. Frye	Fuad
798 passengers	Michael Murphy	B. Crone, C. Solak	Solak
	Gene Heiman	C. Westphal/C. Westphal	LALS RM
	Peter Nott	<i>unknown</i>	Nott
	Ron Bergmann	Mike Bruce	Bergmann

Track Inspectors: Ron Bergmann, Wolf Fengler

Safety Coordinator: Wolf Fengler

Station Masters: Wolf Fengler, Leni Goldberg,

Roger Bacon, John De Phillip Sr.

Station Assistant: Mike Bruce

3,309 Total passengers for month

20,183 Total passengers to date

