STACK TALK

FEBRUARY 2014

The Official News Letter of the Adobe Mountain Railroad Phoenix Arizona, Operated by the Maricopa Live Steamers Railroad Heritage Preservation Society,

In two weeks our spring meet will be in full swing. Have you registered? You are running out of time fast. Are you bringing something good to eat at the Sat. potluck? I hope it will at least be a main dish or side. I look forward to eating some good food. Check you shop, closets, and garage--we need lots of donations for the raffle table. This spring you will see lots of new things in the park. A water tank at Pardee point, more yard track in Schnyder yard and a new(well, part of it is new) ballast temple has been reinstalled at Schnyder yard. Jim Theobald and Chuck Petrarca have been busy putting out new buildings on the main line. Thank you very much. I will leave some surprises' for you to find when you get here. A lot of work has been done since the operational meet. Thank you very much everyone. I am looking for a bright red engine stand. It seems to have disappeared from the park or in someone's container. It is club property and I would like it to reappear or at least contact me that you are using it temporary. All the Sundays in March have two birthday parties and on top of that Sat. March 22 and 29 we have Boy scouts coming out for train rides. We will need all the help we can get. Please come out those two weekends and help. Weeds are growing everywhere and this rain we may get is going to add more. Members that have containers need to come out and cut down the weeds between your containers and some general clean up is needed. Some of the container's faults fronts need repairs and then there are those that need to put the faults front on their container. Summer is right around the corner. Let's get this stuff done before it gets too hot. May 11th is the last day of giving rides to the public.

Safety First

Perry McCully

A new water tower has been installed at WAYLOST, it will replace the blue barrels seen in the background. Some say it looks like a rocket about to be launched.

STEAM LOCOMOTIVES

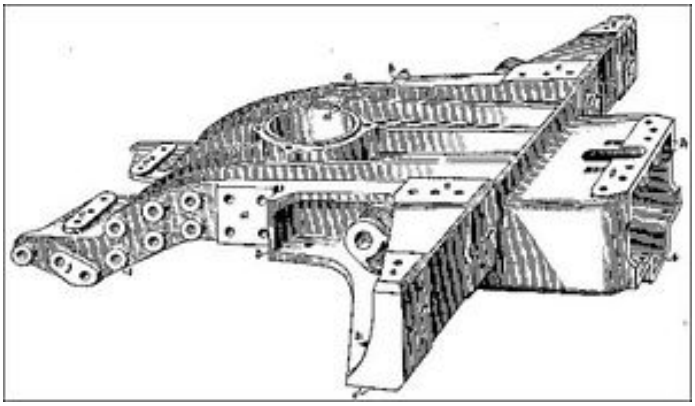
FRAME DETAILS

Well hello again. This time we're going to look at some of the details necessary for the frame to fulfill its function, that being to provide a solid foundation for the rest of the locomotive.

First we need to assemble the two side rails into a solid structure, for this we need frame ties and the end beams. Seems rather straight forward, but if these parts are not adequate the entire machine will lack the necessary rigidity resulting in structural failure, sometimes in a most spectacular fashion!

Here is a picture of a frame with the ties and end beams in place:

And here is one of a rear end beam:



Typically the front of the frame is held by the pilot beam and the cylinder structure.

Another significant piece of the frame is referred to as pedestal binders, or just binders. They close off the jaw opening for the driver bearing box (driving boxes). Here is a picture of the frame and binder in place:

That is one beat up frame but you can see clearly how the binder has notches machined in it to fit corresponding tabs on the frame, that when bolted up it holds the jaws rigid. You will see later on how one side of the jaw is tapered to accept the shoes and wedges, which is what you see in the jaws in this picture. Again, this frame is in a very sorry state with welds and significant wear from spring hangers---wow!!

Here we have a picture of the Lima Locomotive Works with a frame in the foreground. As you can see one side rail has been set up on jacks, with the other laid out ready to be set on it's jacks. The "gooseneck" on the right end is where the cylinder block will be attached.

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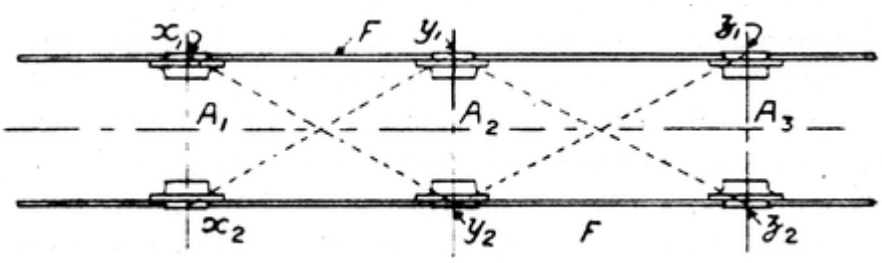
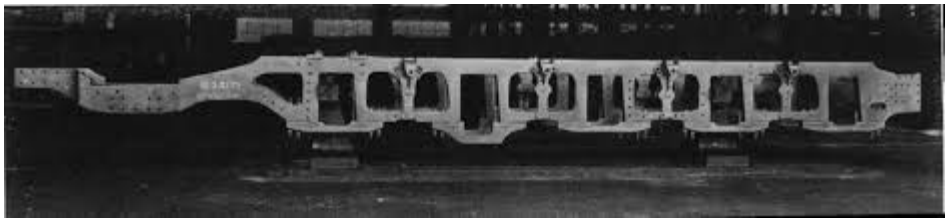
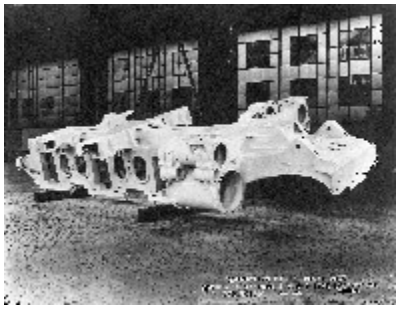
In this drawing we can see how they will square the frame by measuring not from the end corners, but from each jaw center. This exercise is to ensure proper "tram" of the driving axle centers along with achieving a square frame.



Here we have the completed frame fully erected, including the pedestal binders and in this instance the brake hanger supports. Again, notice on the left end, the seat for the cylinder block. Both of these frames still need the rear section attached for the trailing truck (notice the bolt holes) along with the pilot. If we look closely, we can make out the bolting for the cross ties which make it a rigid structure.



Finally, we have a picture of a completely cast steel frame which incorporates the pilot deck, both cylinders and steam chests, the main frame rails, cross ties and valve gear bracket. It is also quite likely there is at least one air reservoir cast in between the frames, which was common in the larger frames. The patternmaking and molding are nearly beyond comprehension, this casting is probably around 50 tons, being done all in one pour of steel, they were extraordinary people!



Consider for moment being a machinist and being given this as a rough casting with the instructions to "........git her done and don't screw it up!" As a bit of a point of conversation between now and next month, let's wrestle with this question. Where would we start?

Please keep in mind we are still open for questions and/or comments.

As always, thank you for your kind remarks and support, it is greatly appreciated.

Dave Griner

Bill Lowe welding up fence sections to install in the Station to separate the Public Run area from the Junior Engineer School

ADVANCED SCHOOL—SHELBY GALLO

RUNNING COAL BURNING LIVE STEAM ENGINE

New track has been laid in Schnyder yard

Below: A new steel bridge was installed to replace a wooden bridge. Only a week later heavy rains scoured under the concrete blocks.

Repairs have been made.

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