

The Mud Ring

The Official Newsletter of the Cinder Sniffers, Inc.
Home of the Original CliShay!

www.cindersniffers.org



Celebrating 65 Years



January 2021

Stop Rust or Bust

by Chuck Balmer

When I overheard some of the members discussing how to treat a steel boiler to prevent the formation of corrosion, I decided to look into the accepted techniques for minimizing rust. In general, boilers made completely from copper do not suffer from structural problems due to corrosion. In fact I have several boilers that have been stored wet for 50 years with no problems.



The use of water treatments to protect steel boilers from rust and calcium build-up is probably useful especially where the quality of the boiler water is unknown. The use of distilled or de-mineralized water will reduce lime build-up, but this can be expensive for large boilers and will not prevent rust. While lime build-up reduces the thermal efficiency of a boiler, it does not affect its structural integrity, and lime build-up can be taken care of with a periodic dilute muriatic acid wash. The acid will not attack the steel but will remove rust and lime. If the boiler has copper flues, the acid will attack them so do not leave the acid in for too long, and flush with clean water to remove all of the acid.

I did some research into both municipal and industrial practices for boiler lay-up. There are two basic procedures for storing a steel boiler. There is a long-term practice and a short-term practice. The general opinion is that the dry method of storage is best for long-term storage in excess of 6 months while the wet method is best for short-term storage provided that freezing is not a concern. Also if the boiler needs to be ready for service quickly, the wet method is recommended.

To prepare a boiler for long-term storage using the dry method, it is critical to quickly remove as much of the oxygen and moisture as possible. In large commercial boilers, the moisture can be removed by using a desiccant. When the boiler is

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Member Calendar

| | | |
|---------|--|---------|
| Feb. 13 | Annual Meeting | 10am |
| | <i>Greenhills Community Church</i> | |
| | <u>Facemasks and Social Distancing Req'd</u> | |
| Mar. 13 | Work Day | 9am |
| Apr. 10 | Work Day | 9am |
| | Express Meeting | 11:30am |
| May 8 | Run Day | 10am |
| | MEMBERS & INVITED GUESTS | |
| May 22 | Work Day | 9am |
| Jun. 12 | Run Day | 10am |
| | MEMBERS & INVITED GUESTS | |

COVID-19 Update

At our Annual Meeting on February 13, we will discuss how we will handle our meetings, work sessions and runs for 2021.

New Recording Secretary Appointed

Sadly, Dorothy Keith has resigned her position as Recording Secretary of the Cinder Sniffers. The Executive Committee wants to thank Dorothy for all her service and dedication!

Pursuant to our Code of Regulations, Art. III, Sec. 3, the Executive Committee has appointed Tracy Webster to fill the unexpired term of Recording Secretary. Please extend Tracy a warm welcome!

Steam Park in Switzerland

By Denis Larrick

Have you ever heard of the Swiss Vapeur Parc (Steam Park) on Lake Lemman near Montreux (and near St. Denis)?



Four acres of 7.25" gage steam, miniature buildings, and artificial mountains, meticulously landscaped. Here is an expansion they have been doing. Since they are land-locked, they built a huge concrete underground car barn and serpentine tunnel from prefabbed concrete sections



so they can pile more railroad on top some day. Their website (in English or French) has literally thousand of photos of the place.

Check it out at: <https://www.swissvapeur.ch/en/>

The Trains Are Always Late

By Hoss Lher

A man complained to a railroad engineer, "What's the use of having a train schedule if the trains are always late?"

The railroad engineer replied, "How would we know the trains were late if we didn't have a schedule?"

Gator Aid

By Donald Frozina

Photos by Roger Heurich

Roger has been busy patching-up our favorite gator that resides just past Mount Rushmore II and near the neighboring pond.



His' (or is it her's?) knee is all patched and getting a fresh coat of paint (or is it pond scum).

I'm sure all the other gators in the area will be green with envy!

Good work Roger, thank you!



What's In a Name?

By Denis Larrick

How did we get the name Cinder Sniffers? I've always assumed Bob Maynard's wife Evelyn came up with it based upon a crocheted picture of Cinder Valley station that hung in their living room. Steve, Larry, Jon, Andy, chime in here. You were around Bob more than myself in the early days. Disney's Cinderella was released in 1950, about the time Bob was getting interested in building his first loco. Could that have contributed? Does that make our President the Wicked Step Mother?

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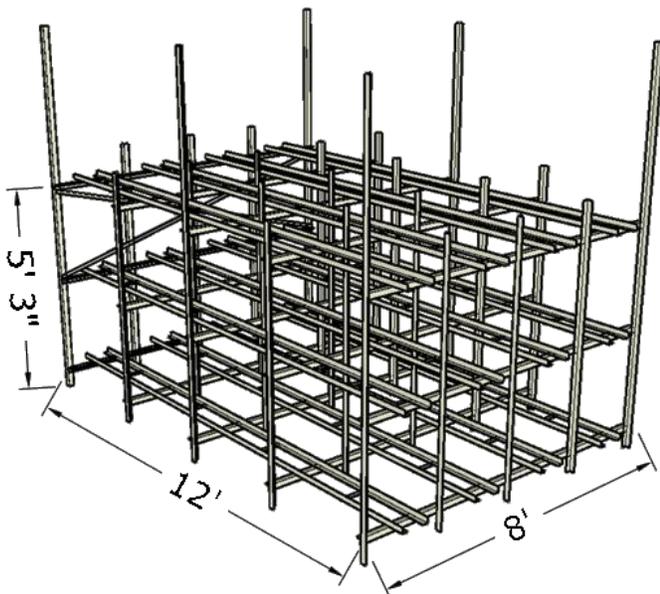
A Train Rack for the Shop

By Donald Frozina

With an ever-growing roster of 1-1/2" scale locomotives and rolling stock, it was time for us to construct a large "train rack" for the shop.

In determining what needs to be racked, the space available and the clearances necessary to still get a vehicle into the metal shop, Donna and I decided to create a 4-track wide by 3-level high rack; each track 12 feet long. This would provide 144 linear feet of storage. We also wanted something sturdy to hold everything safely, yet could be partially dismantled when we moved it to our future 24' x 30' train shed. We decided on using 1-1/2" x 1-1/2" x 1/8" HRS angle iron throughout, with some 1" x 1/8" strapping in strategic places.

The track height of the first level could be no lower than 7-1/2" from the floor to accommodate the lower limit of our rolling train elevator, as the heaviest pieces of equipment would be stored on this level — Rail Systems SW-9 Cow and Calf, Allen Mogul, Railroad Supply American and a Railroad Supply SD-9. Lighter equipment would go on the 2nd and 3rd levels and any oversized (in height) on the 3rd level. We wanted at least 26" of usable vertical clearance between the levels with 22" of usable horizontal clearance between the tracks. After several late-night design conferences, we settled upon the following:



We procured the 700+ lbs. of steel from our local metal supplier, Boone Steel, about 7 miles away from us. They gave us a good price and delivered all the 20' lengths of material for only \$15!

Once we had the steel onsite, we cut it to the lengths needed per our design. For this we used our Delta 6" x 8"



horizontal bandsaw and lots of cutting fluid. As each piece was cut we stacked it in the back of our trusty pickup truck, Joey, while Rose, our 3-legged pit bull, supervised our progress with dubious eyes.

Next, we fabricated the 12 track subassemblies. We created a track jig on the wall with 2" x 4"s to create 7-5/8" spacing between the rails. Then MIG-welded 7-1/2" x 1" x 1/8" strap steel in 4 places on each subassembly to keep the gauge constant. (5 more welds on each rail subassembly were added when the laterals were attached.)



Once all the track subassemblies were welded, it was time to weld on the laterals to create the 3 level subassemblies. We again employed our wall-mounted jig, then clamped the laterals on the rail subassemblies and welded each

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Rust (Continued from page 1)

prepared for service, the desiccant can be flushed out before refilling. Due to the small size of our model boilers, this is not practical, because we do not have access ports to install the desiccant.

The preferred method for industrial boilers is to inject nitrogen to drive out the oxygen and then maintain at a pressure of about 5 psi. This is expensive and not practical for our small boilers, because as modelers we don't have access to nitrogen gas.

Drying by only blowing air through the boiler is discouraged, because it will quickly promote the formation of rust long before the moisture is removed.

Another method is to simply heat the boiler after draining to drive out the moisture. Again the problem with this method is that heat will accelerate the formation of rust.

These methods may also cause the formation of calcium deposits, if the water is not treated.

If the modeler needs to put the boiler into long-term storage especially where there is the possibility of freezing, while not ideal, the dry method using a combination of heating and blowing air through the boiler is probably the best choice to quickly minimize rusting.

After consulting with my own personal metal finishing expert and chemical engineer, I would recommend the wet method of storage for our steel boilers because it is simple and inexpensive. Basically the boiler is filled completely with de-mineralized or treated water. This drives out all gaseous oxygen. While there is a small amount of oxygen dissolved in the water, over time it will react with the steel and form a very thin film of rust. However the reaction will cease as the oxygen is used up, and rusting will stop.

There is some controversy about wet storing steel boilers with copper flues longer than six months due to the possibility of galvanic corrosion. This would weaken the steel shell at the junction of the copper flue and the steel flue sheet. Over time this may cause the seam to leak but would be detected during an annual boiler test. Long-term storage of a wet boiler is not any more damaging than if the boiler were in continuous service for the same period of time.

During the running season, filling the boiler at the end of a run can be accomplished by the following simple procedure. If your water system has an injector, you must place

Special Run Day Pictures

November 14, 2020



Dave Sams Photo

Is this a picture of a Steamer pushing a Diesel?
Or a Diesel towing a Steamer? Ask Denis or Dave.



Dave Sams Photo

Jim Balmer exercising their CliShay

a tight fitting plastic cap on the injector overflow pipe to prevent air from being sucked into the boiler, and open the water supply valve. If you only have an axle pump, you already have a closed system. Make sure that the tender has plenty of treated water. While the boiler is still hot and under pressure, close the throttle, all auxiliary steam supply valves, and the axle pump by-pass valve. When the boiler cools, the steam will condense and create a vacuum that will suck water directly from the tender and completely fill the boiler. If the tender needs to be disconnected for transport, wait until the boiler is full before disconnecting the water supply, otherwise air will be sucked into the boiler. At the next run, simply drain off the excess water before firing, and remove any injector overflow caps.

Thanksgiving Run Pictures, Part 1

November 28, 2020



Dave is busy blowing leaves and twigs off the track in preparation of our annual Thanksgiving Run.



Denis tooling around being pushed by his loose caboose.



A mock-up of a potential future tunnel portal magically appears, courtesy of Denis.



Chuck and Julie are out running "Jack".



Kate all bundled-up and running the "Almost 50".



McAllister station is looking fantastic thanks to Jim Keith and team.

Thanksgiving Run Pictures, Part 2

November 28, 2020



Anthony hitching a ride on Dave's train.



The long bridge finally finds a resting place on the loader.



Carmel Crossing with new ties and decking thanks to Carl and Ed and The Wednesday Gang.



WOW! We have fall-blooming Snow Drops across from McAllister Station on the highway side.



This turkey got away and survived to visit us at the track.



Dave takes some final laps before loading up.

Rack (Continued from page 3)



one from the back. This again allowed us to weld everything by standing up—not needing to crawling around on the floor. Each subassembly ended up with 144 welds.

We placed all three level subassemblies on top of each other in the location designated in the shop (as we knew we could not move it easy once it was fully assembled).

Then using ratcheting straps, we pulled the first level subassembly up to the required height, clamped it to the 9' corner verticals (attached to



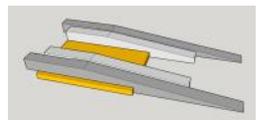
the ceiling joists), marked and drilled holes for the bolts and bolted them together, while checking for square and level. Then we proceeded to mark and drill the remaining bolt holes for the 6' verticals and bolt together. This was repeated for the middle level subassembly, and yet again for the bottom level subassembly, although clearances to get inside to drill the holes was a wee bit tight.



Checked for square and level again, then attached some 1" x 1/8" cross-brace strapping along the back.



Once we were satisfied that the rack was not going to move, we started loading some of our equipment from individual stands using our train elevator. Since the top level is 2-1/4" higher than our elevator can reach, we created a short wooden ramp to compensate for the difference.



This was one of the first major projects Donna and I tackled relating to our trains. On reflection we should have drilled the holes in the laterals before the final assembly. When the rack gets moved to the train shed, we will replace the 9' vertical angle irons with 9' 1-1/2" tubing.

As this rack can only hold a portion of our equipment, we've created plans to build an additional rack, once our Train Barn is complete. This second rack will only be 3-tracks wide by 3-level high; each track 18 feet long.

Twenty Twenty One Plus One Run

By Denis Larrick

Ten people attended the Twenty Twenty One Plus One Run on January 2, 2021, rescheduled at the last minute due to heavy rain on New Year’s Day.



Jim experiencing the joys of electric propulsion.

Cameos were observed of Ed Habel, Roger Heurich, the Keiths, and the Paynes—who vowed to have their Shay back at the track next summer.

Steam was provided by Steve Chromik and son, while Dave Sams and Denis Larrick ran their electrics.

Fingers and toes froze, but overall the weather was nice and well worth the trip.



Steve keeping warm on his 3-3/4” scale 0-4-2 Forney.



Selfie of Dave, with Steve and ? photobombing. (Who is that masked man?)



Dave chilling out on his Goose.