

Power and How It Gets There on the Fox River Line



A fine job - a good "bond" is attached and we move on to the next joint.

BONDING

The distance from the Museum's Castlemuir sub-station to the bumping post at Blackhawk Station is about 1.9 miles. Our cars use a nominal 600 v DC to operate. The trolley wire is 4/0 (4 aught) in size - almost ½ inch in diameter. A feeder line along the tracks is attached to line poles and runs from the sub-station at Castlemuir to about 900 feet south of DeYoung Junction. It is connected to the trolley wire at about 500 foot intervals. The purpose is to more adequately deliver power to the trolley wire over the length of the Museum's line. Rail length on the main line from Castlemuir to DeYoung Junction is usually 33 feet in length and usually 39 feet in length from DeYoung Junction to Blackhawk Station.



The rail heads at the joint must be prepared to take the weld. This is done with a powered grinding wheel or steel brush. A steel brush is used here.



After the rail heads are prepared, the mold is attached. The mold has cavities to hold the ignition charge and weld material.



When the mold is attached, the cavities are filled with both a thermit charge and an ignition charge. The ignition charge is ignited by sparks from a special "lighter."

The running rail is used as the electrical power "ground" return to the sub-station. Good ground return enhances power supply to trains. The average distance on an average interurban line between sub-stations was between 3.5 to 5 miles. On the CA&E sub-stations were about 4 miles apart and fed sections in both directions. On the AE&FRE sub-stations were much further apart, however the trains were usually only one car in length and were powered by much smaller motors than CA&E cars and probably there were not more than one or two cars in a power section at the same time. From records and anecdotal history the AE&FRE had feeder lines over the entire distance between Elgin and Aurora and the rails were "bonded." That is there was a copper bond about 4.5 to 5 inches in length connecting each rail to the next rail. The bonds were usually 4/0 in size, i.e. about the size of a normal index finger. All of this is to say by way of introduction what "***bonding***" is and how it is done and its importance in the operation of the Fox River Line. The story is written primarily to familiarize our readers in language that even your editor can understand of a very important part of what makes the Fox River Trolley Museum run. **It IS NOT a technical treatise.**



The weld takes place after ignition. The charge heats the welding material to 4000 deg. fahrenheit. After cooling the mold is removed and cleaned of residue and made ready for the next weld.



Another view of the weld taking place after ignition.

During several days in 2007, *Fred Lonnes, Al Barker and Ed Konecki*, Roadmaster, spent several days replacing broken or missing bonds between Castlemuir and Blackhawk station in the Jon J. Duerr Forest Preserve. This is a picture story of that process on one of those days. It occurred on one of those particularly beautiful October days, best described as "Indian Summer." As a result of this work, one running rail (mostly west side) is completely bonded between Castlemuir and Blackhawk Station.

Don Mac Bean



Mission

To preserve and interpret Chicago's electric transport era that began in the 1890s and peaked before 1950. The electric transport era is significant because electric railways, including interurban, rapid transit, and streetcars, helped the Chicago region grow to be one of North America's great metropolitan areas. The Museum strives to show that electric railways were more than convenient, they were and are a way of life for generations of people from all walks of life.

The Museum fulfills this mission by preserving, interpreting, and operating historic railway vehicles on its demonstration electric railway, over the Aurora, Elgin and Fox River Electric route at South Elgin, Illinois. Furthermore, the museum preserves, displays and interprets smaller artifacts, photos, oral histories, and documents which help relate the importance of electric transport in and around the Chicago Metropolitan Area, putting them in context with their surroundings and era.



Blind Spots

Did you ever have a situation at home where you had a burned out light, but it was burned out so long you just didn't notice it anymore? Have you ever had a pile of magazines or newspapers stacked in a corner for so long that you never saw them anymore? Then, one day, you have a guest come over. What is the first thing your guest sees? Does your guest see your exquisite scale model of a Chicago Aurora and Elgin interurban trolley car? Does your guest see your amazing library of railroad books that took you over 20-years to collect? Does your guest see your incredible photographs of historic railroad scenes? Nope. They don't see your treasures. The very first things that your guest sees are the burned out light and the pile of magazines. They see the lack of maintenance and the mess. They see your junk; they never see your treasures.

When everyone sees your junk, but you don't, you have a blind spot. Just like there is a blind spot in your car's mirror that keeps you from seeing traffic, there is a blind spot in your perception that keeps you from seeing what is really around you. People have blind spots to any thing and every thing, even to historical collections at railroad museums.

Let's apply the idea of a blind spot to our Museum. Our Museum has incredible treasures. We have the oldest operating Chicago Aurora and Elgin interurban trolley car. We have the only Chicago streetcar post office trolley in existence. We have two 400 plus year old oak trees. We have a 111-year old railroad. We have amazing things to ride and see, but we also have blind spots.

Our guests don't have blind spots. They won't see the treasures, but here are some of the things they would see on their first visit:

- Piles of junk wood (But wait— those are important switch ties);
- Piles of scrap steel (But wait— that is important track material);
- A cracked window in the trolley they ride on (There is a cracked window?)
- Broken downspout (There is a broken downspout?);
- Faded and peeling paint (Gee, I remember repainting that building);

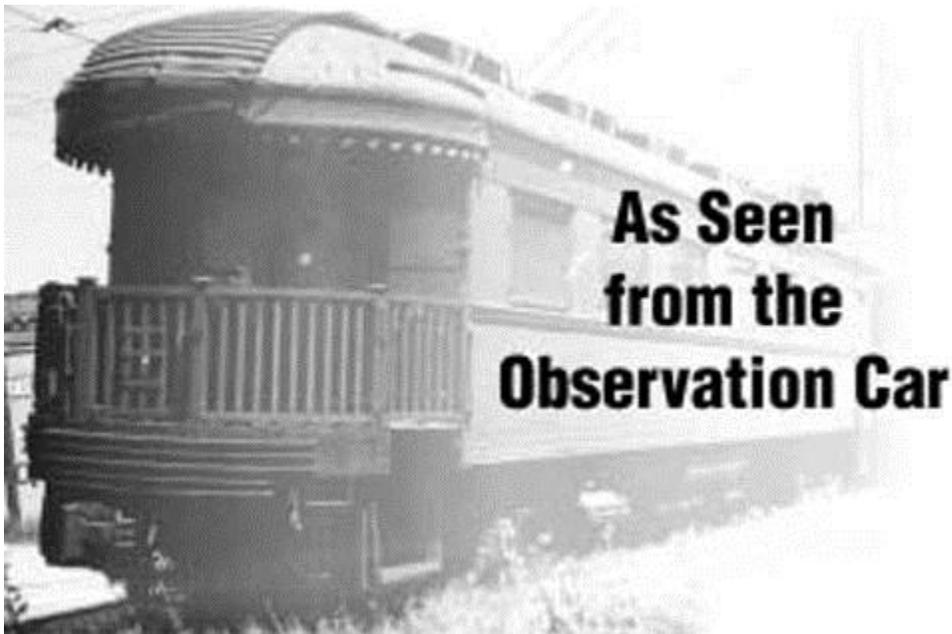
Let's start dealing with our Blind Spots. If we deal with our Blind Spots, we can make the Museum more attractive to our guests and help us attract new members. The next time you come to the Museum, look at the Museum like a new guest. Throw away your blind spots and take a clear hard look at what you see. Make a list of the items that you think are in the Museum's Blind spot and send them to me at my e-mail address or at the

Museum P.O. Box 315, South Elgin. IL 60177. I would like to make taking care of our Blind Spots our top priority in 2008.

See you in South Elgin!

Ed Konecki

Comments: edwardkonecki@aol.com



Following are excerpts from a letter of the Trolley Museum of New York seeking donations sent to members, friends and supporters of the Kingston Trolley Museum. Does the situation sound familiar? Are there lessons for us?

"Greetings . . . I have been working as the Administrator of the Trolley Museum since March. I've been told that I am the "first" official employee of the Museum in its 52-year history. This is both a challenge and tremendous opportunity. Kingston has been recognized by *Business Week Magazine* as one of the best places for artists to live and work. Almost every weekend, the waterfront becomes a destination for thousands of visitors. The Trolley Museum is an *active participant* in Kingston's revitalization. One of my major assignments at the Museum is to expand our role in the cultural community; to be proactive and creative in our operations, events and outreach. I am excited to be working with the Board of Trustees, the passholders (*members*) and volunteers in fulfilling the many goals of the Museum.

Since coming on board. I have had conversations with many residents of Kingston about the Trolley Museum. I have reached several conclusions:

- The majority of people I have spoken with know of our existence, but have never visited.
- Trolleys are more than an historical legacy. As we look towards the future, transportation as we know it today will change. Our past may indeed play a role in our future.
- The role of cultural tourism is key in the continued vitality of our city. We receive inquiries frequently from people from all over the world who are interested in the arts and history of Kingston, and are planning a visit. The Trolley Museum has become a central component in Kingston's cultural infrastructure.

The area around the Trolley Museum has seen recent changes, which will only accelerate in the future. You may have noticed we have a new parking lot, thanks to the City a list of many other substantial changes in streets and buildings including interest by a developer in extending the Museum's track to their development . . . and development of restaurants and bike/pedestrian trails along the Museum's track.

New York State is currently funding \$50,000 to study the electrification of our tracks. Steve Finkle, Kingston's Director of Economic Development, is working on a plan to translate the study into a funded project which would allow the Trolley Museum to operate some of its electric trolleys.

The Trolley Museum will be expanding its participation at many of the city's events. We have become an active member of the Rondout Business Association and are developing relationships with cultural institutions, schools, service organizations, and businesses throughout Kingston and the Mid-Hudson Valley. We welcome your thoughts and input.

There follows a listing of Museum operating dates and operating and office hours.

Signed, Steve"

Don MacBean

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