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NEWSLETTER

Phoenix, Arizona

Line Section 2

1. Herzog 55,000,000.
2. Archer Western 59,000,000.
3. Kiewit 60,500,000.

Phoenix, Arizona

Line Section 5

1. Sundt/Stacy 66,300,000.
2. Kiewit 74,400,000.
3. FNF/Herzog 75,300,000.

Metrolink Track Rehab

1. Herzog 5,042,500.
2. Metroplex 5,047,600.

Trackwork 101[©]

We had a very successful and enjoyable experience in Boston and Philadelphia. Boston was a lot of fun since we had representatives (9) from Jay Cashman, Balfour Beatty and Metroplex who are building the Greenbush, south of Boston which is the last project of the Old Colony Railroad. This project has been plagued by numerous political set backs but seems to be well under way now. Rail welding began the week we were there and most of the other material has been received. We also had attendees from Advanced Track, Nashville & Western Railroad, J.F. White, SYSTRA and a retired Railroad Consultant. Total attendees were 18. In Philadelphia, 20 people decided to attend and we had some great questions and good participation. Companies represented were ASLRRRA, Pandrol, PB Transit, Bombardier, Seda-Cog, Cleveland Track, Sunoco, Raritan Central RR, Tracks Unlimited and Pohl Corp. We received very positive feedback from everyone. We still have an A+ rating. Please register early for our seminars in Dallas (Oct. 27), Denver (Nov. 1), Salt Lake (Nov. 4), Phoenix (Nov. 8), San Diego (Nov. 11), San Francisco (Nov. 15) and Seattle (Nov. 18). Thank you all for your support.

Track Guy Consultants

The trip to Siberia was absolutely amazing. I will never complain about my life again. I have a tremendous sense of gratitude now. I also have a new diet (The Siberian Diet). I lost 20 pounds in 15 days. The track, surprisingly, is in very good condition. Their safety standards are much more strict than our FRA and the people that work on the track disappear if there is a derailment. A lot to fear if something were to happen. The owner of the 4 properties was extremely pleased with our report. The next step is to execute our suggested plan.



A few Photos of our Siberian Venture

Our trip to Siberia started in Pittsburgh to JFK to Amsterdam to Stockholm for a short visit with Anders Rosenqvist and then off to Moscow. Landed in Moscow and drove to another airport and flew another 2,000 miles east on the other side of the Ural mountains to Tyumen. From there we began our journey North to Tobolsk and inspected the first property. Then drove 8 straight hours further north at a rate of 110 mph to Niznevarovsk where there were two properties to inspect. The sun never went down so we inspected track till we dropped. We continued our travels north, driving 6 hours at a bit slower rate due to winter heave (in feet) of the roadway to a town called Noyabsk. Then back to Moscow for a 4 hour tour of the Kremlin and Red Square, then home. All work on the Railroad is done by hand. I was reading an 1897 Railroad Engineering book and found a number of similarities to the work in Siberia. Rosenqvist has furnished several pieces of equipment and we are getting quotes on tamping. It is interesting to note that they only get 3 months of work time per year due to the very heavy snows (measured in feet, not inches). The snow removal equipment is unbelievable. They say if you are riding in the locomotive, you can stick your hand out the window and scoop snow.



Me and a lining crew in Siberia. The big guy on the left had a sweat shirt that said America and the only English word he knew was New York.



A home made compromise joint between R50 and R65 Rail using the standard R50 bars with a piece of re-bar welded on the underside for the R65 side and torched holes for the different hole drilling. No account was given to the head.



Tightening a joint. Note the very short track wrench. Not very ergonomic. This was the standard size in the 19th century. Also the handles in the shovels are tree branches.



This is what happens when a hole is reamed with a torch.

A serious snow plow in the retracted condition.. There are steel teeth to break ice between rails. All snow is conveyed and cast to the side.



How is this for a highway grade crossing made out of rails welded together.



Ask The Track Guy



This is where you, the reader get to ask questions about Railroad Track engineering, design, construction, maintenance or anything to do with Trackwork. Simply write or e-mail a question and we will answer in a timely manner. Some questions will be published here.

What is the difference between a Shop Weld and a Field Weld?

The term Shop Weld is synonymous with "Flash Butt" or "Electric Flash Butt" Welds. When we join rails together using this process, we must be able to generate extremely high voltage. The flash butt workhead has the ability to grab both ends of both rails with a very high clamping pressure. One side carries a positive charge and the other side has a negative charge. By touching and releasing the ends, a dead short is created. This dead short in the electrical path creates tremendous heat and in turn melts the rail ends. Once the rail ends are almost liquid, the machine will squeeze the two pieces of rail together like two pieces of clay, the upset is then sheared and the weld finished ground and magnetic particle tested. The photo to the right is the first electric welder for rail at the turn of the century. First weld in 1897. 5,300 by 1902.



A Field Weld is produced by introducing molten steel into a mold where the rail ends are kept at a 1" distance from each other. The rail ends are lined up and a 1" gap maintained between them. A mold is placed around the ends. The rail ends are then pre-heated for about 6-7 minutes, depending on rail size, until they are almost molten, then a crucible containing a powdered mixture of manganese, scrap metal and other material is ignited and becomes molten steel that flows into the mold, fusing the two rails together. The top is sheared and the weld finished ground and Ultra-Sonic tested. Photo to the left is a modern field weld.



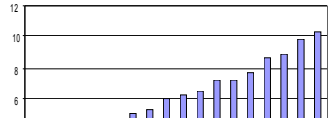
How long does it take, on average, to put together a #8 Double Slip complete and in service, underground at a station?

Without knowing the work times, this is a tough one to answer. I would first panelize it, if it is on wood ties, or preassemble if on Direct Fixation. To panel a #8 slip should take no more than 3 days. If you can get it to the site as one panel, then about 8 hours to remove the old and install the new, another 4 hours to dump ballast, raise and tamp, then another 4 hours to adjust and install the switch machines. We did one in the "B" yard just outside Penn Station in 4 hours soup to nuts, but we had a gigantic crane sitting in the parking lot on top of the wall. We pulled the old slip out as a panel and installed the new one with trains running all around us and a combination of overhead catenary on one side and live 3rd rail on the other. Quite a challenge. In a tunnel,

it is a different story. If you have only 5 hours per night, then you would need to straight rail to a one directional move and remove all unnecessary rails, points and frogs. Then change timbers and install the new steel for the double slip. This could take about 8 shifts to get to the point of installing ballast or concrete (skeleton track). Slips are small and compact (a double crossover folded inward). If everything fits right, then the process is not very long. Having a good fabricator and detailed prep work are the key, especially when there are time constraints. Without time constraints and new "greenfield" construction, a slip should not take more than 1 week from start to in service.

Do you have some details on the new Transportation Bill?

We finally have a new Transportation Bill that the President has signed. It is called SAFETEA-LU. The SAFETEA part is the Presidents name and the LU is Senator Don Young's wife's name. It represents \$286.4 billion over the next 6 years (through 2009) with \$52.6 billion funding Transit Projects. This is an increase of 46% over the last Bill (TEA-21). Our next Newsletter will break down the \$52.6b into individual projects. The annual breakdown is : \$7.3b in FY 2004, \$7.7b in 2005, \$8.6b in 2006, \$8.9b in 2007, \$9.8b in 2008 and \$10.3b in 2009. New Starts will receive \$9.3b and research will receive \$374m. Urbanized areas will receive \$22.2b and Rural areas, \$2.2b. The states receiving the most money of the big pie (\$286.4b) are California (17.2b), Texas (14.5b), New York (8.4b), and Pennsylvania (8.2b). All states received at least 19% with Colorado being the highest at a 46.8% increase over the last Transportation Bill. Some of the New Start programs receiving money are: Phoenix (\$587m), Charlotte (\$193m), New York City (\$2b) and Pittsburgh (\$217m). These levels of Federal funding combined with State, Local and Private funding will make for a very busy 6 years in the Transit arena. The graph is funding levels for 1992-2009.



NOTE: If you have any noise and vibration issues, give us a call. We now represent Getzner who has the very best material for controlling noise and vibration, especially suited for floating slab type construction. At JFK we took the track through the International Arrivals building with a floating slab on the Getzner material. The testing has exceeded the very strict design criteria. No complaints from the offices under the floating slab.

NOTE: PlasTie is in production. Visit our website for details on this solution to tie rot and longevity of the Railroad wood tie.

NOTE: Our Trackwork 101[®] Course is now accredited for 8 PDH's by the Professional Institute of Engineers.