

The Track Guy



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NEWSLETTER

Some Bid Results

Rail Expansion-WE Energy-Oak Creek, WI

1. Railworks Track Services Private

Track Improvements-Radio Island-Moorehead City, NC

1. Bullock Construction 702,300
2. Queens City RR Const. 941,900
3. Railworks Track Services 1,182,400

Track Rehab-WV Central-Belington, WV

1. Amtrac RR Contractors 609,400
2. Railroad Construction of SJ 630,000
3. Marta Track 648,100

Track Repairs-W. Tenn. RR-Trenton, TN

1. Balfour Beatty Rail 802,800
2. Railworks Track Services 812,000
3. G.W. Peoples 871,700

Track Repairs-Gibson Co RR-Trenton, TN

1. Railworks Track Services 806,500
2. Balfour Beatty Rail 830,500
3. G.W. Peoples 920,400

Rehab-Brighton Line-Brooklyn, NY

1. Railworks Transit 10,300,000
2. Railroad Construction 12,478,300
3. Judlau Contracting 12,787,000

Track Guy Consultants

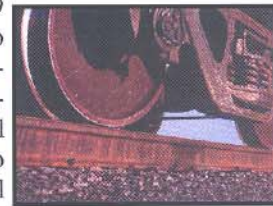
We are in the midst of remedial work on our web site. Web Makeovers has been hired to give us a new look and help to generate hits on our web site through search engines. In today's market it is easier to search the web than get caught in an impersonal phone answering machine. E-mails and web searches are becoming the normal business activities so we must change in order to not be left in the dust. We are excited about this and hope you enjoy the new look. We will have an interactive area where clients can build their Training Programs and get quick proposals on cost. We hope to incorporate a billboard for question and answers and hope to generate a good place for sharing of information and hearing what others in the industry have to say. We will go live in May. Our network is up so zuspan@trackguy.com works.

We have some opportunities coming up in California, London, Mexico, Washington DC, Baltimore, Chicago, New York City, Korea and Boston. We will keep you posted.



Spotlight; 315,000 lb cars

The rail industry is over capacity and one way to help is to increase loads, but will that really solve the problem or will it overstress the track structure to the point of failure? There have been estimates that it will take 7-9 billion dollars to bring all our track to handle 286 loading. I can only imagine what 315 would do to that number. It is recommended that 112 lb rail be the smallest for 286. If we go to 315 then a standard 115 or 119 lb rail would be to light and force the industry to upgrade to 132 lb rail. That would be an extra 35 tons per mile or about \$ 35,000/mile at today rail prices. This also means that all the plates must be changed due to a change in base width. Just imagine if your railroad had to change to a 6" base rail. These types of upgrades could be devastating to many Short Lines. The only other 5½" base rail is 130 PS but this section was rolled prior to the control cooling process and presents some significant risks especially under heavier loads. The relay market has been hit hard due to the unbelievable price of clean scrap steel.



We had this same problem in 1963 when we went from 220 to 263 and in the mid-90's when we went from 263 to 286. Each time the supply industry stepped up to meet the demands. We have been testing 315 loading at Pueblo since 1988 and the results are devastating to the Track Structure. Some unit coal trains are coming out of the Powder River Basin as 315 and the demand keeps increasing. We are



double tracking and triple tracking all over the country with passenger track following suit. Many coal burning plants are seeing accelerated wear and deterioration on their track structure with the 286 cars. What will happen when 286,000 gets scratched off and 315,000 is painted over on the hoppers? Aluminum hoppers are being ordered by the hundreds if not thousands. Some original testing with 315 loading reported a 90% failure rate of thermite welds. A test in 1999 proved that elastic fasteners out performed cut spikes consistently on curves. Our existing bridges may be the Achilles heel for increased loading. They just were not built to take 315 loading. Maintenance costs will increase by 31% and this would pertain to track, rolling stock and structures. The Railroads are booming and everyone must be ready to meet the challenge in ALL aspects of the industry, whether it is Freight, Transit or Light Rail. The first time we went through a load change it was almost catastrophic. The second time, a little better. Hopefully the 3rd time will not hurt.



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.

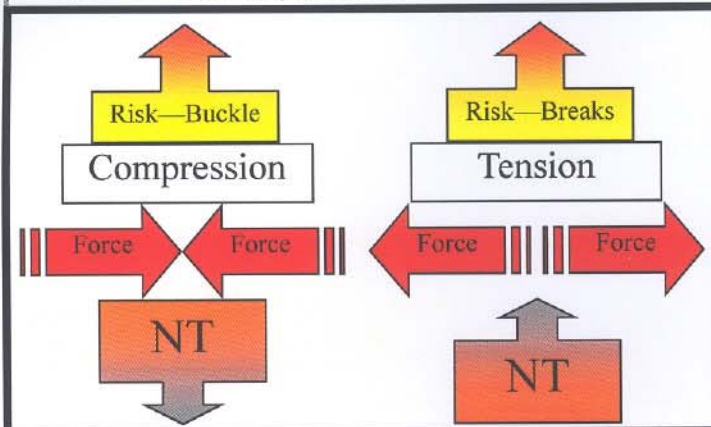
What affects the Neutral Temperature?

Neutral temperature (NT) is that temperature where the rail is force free (neither expanding nor contracting). The desired neutral temperature (DNT) is that temperature where us humans would like to see the rail locked in at a specific temperature that we calculate. There are a number of factors that can change the neutral temperature. Some of these are obvious and some are subtle and can be spread over time. The NT will change over time and it is our responsibility to monitor that change and keep the risk of sun kinks and pull aparts at a reasonable level. The best time to inspect track for signs of movement are March and April. There is a long list of tell tale signs that may indicate a change in neutral temperature and we must be diligent or problems will occur when the hot days come. Did you know that lining a 1,200' long, 6° curve inward 1½" will lower the neutral temperature by 20°? This will increase the risk of a track buckle. We do have tools at our disposal to calculate those risks and convert them to a percentage. It is not linear and as we get closer to that magic point the risk becomes exponential. Some of the factors that affect NT are:

- Improper rail installation
- Not enough or ineffective rail anchors
- Lining and surfacing
- Lack of ballast
- Rail creep
- Undercutting
- Tie renewal
- Field welding and rail replacement
- Panel installation and cut & throws

This is not a complete list. We must take care when performing maintenance operations to ensure that we do not change the neutral temperature. Most properties dictate a working range that is plus and minus from the DNT. Two phrases to remember, are:

1. Increase the compression in the rail — Decreases the NT and increases the risk of buckling.
2. Increase the tension in the rail — Increases the NT and increases the risk of pull aparts.



What is your 2006 Training schedule?

We have developed a new Training Program. It is now possible for a company to custom build a Training Program to suit their needs. We have developed 45 distinct modules with approximate times associated with each



topic. A company can pick the topics that they wish to incorporate in the program and we will build a seminar based on your choices. Groups over 15 people have seen up to 75% savings, depending on who furnishes what. We typically travel to you when presenting the custom programs but any arrangements can be made. Details on our custom program can be seen on our web site under the Training tab or give us a call for details.

We do intend to go on the road again this year with our Trackwork 101 course. We have made a few modifications based on your input pertaining to topics. The responses have been extremely favorable and we thoroughly enjoyed making presentations in Pittsburgh, Boston, Philadelphia, Chicago, Dallas, Salt Lake, Phoenix, San Diego, San Francisco and Seattle. This year the cities on our list so far are Pittsburgh, Orlando, Atlanta, St. Louis, Houston, Las Vegas and Portland. If you have any recommendations or comments, please let us know. This trip will take place in October and November. Exact dates will be forthcoming once we establish the meeting rooms.



The Renaissance is upon us?

The Freights, the Transits, the Short Lines, the Ports and the Intermodals are booming. Trackwork is in abundance and it should continue for at least 5 more years and probably more. Tax credits, RRIF loans, SafeTea-Lu, Local tax referendums, Private Partnership, Local sales tax, User fees and creative financing have brought billions of dollars to the rail industry for new construction, rehabilitation and upgrades for 286 loading. Congestion is paralyzing the Country and every major city has a land use plan for the 21st century. The need is now and the Railroad Contractors are ready. Transit jobs are tough, but with proper management and controls, they can be a win-win for both owner and contractor. Smaller projects are very competitive with many bidders. Innovation and cost controls must be in place to turn a profit and much to some peoples surprise, Contractors deserve to make a profit. We absolutely must build quality track and continue to maintain the integrity as if our family was riding on each train. So let's build all that track and do it safely. Do it right and the profit will come.