

What The Belt-Pack Salesman

Failed to Mention

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May 6, 2002

Whenever I have witnessed the non-staged use of radio controlled locomotives, otherwise known as Belt-Pack or RCL, I have always been struck by its slowness and anemia. Reasons for this anemia would warrant a separate letter-article. Suffice it to say, however, that to this observer, conventional switch engines run virtual circles around RCL.

Why then, have all industry RCL articles, to date, been so unabashedly biased in its favor? Is it for fear that not being in its favor would offend RCL advertisers? Is the railroad industry, then, overdue for counter-point on this topic from other observers including users, unions, maintainers and agencies, etc....? Would the benefits of stimulated readership interest, on this topic, outweigh the negatives of possibly offending the advertisers in question? (Perhaps cause them to advertise even more?) Perhaps it is time to rally this topic by the harvesting of everyone's experience. The utter absence of performance data on this subject is causing over-reliance on the pitches of Belt-Pack salesmen as well as the syndrome of "keeping up with the Joneses." This is dangerous and unprofessional.

Rest ill-assured, RCL has its opposors, who haven't received much press — yet. First, are those who oppose on the grounds of union scope and union contract provisos. (There will be litigation over this.) Others oppose over GCOR (rules) and locomotive inspection compliance. Another faction opposes due to liability concerns over public crossings at grade and the city or county ordinances thence enacted. Others argue there will be one less vigilant crew member, who formerly monitored operations from his elevated engineer's cab. Also, FELA attorneys are anticipating the claims RCL will trigger, to name just six issues for starters. In the final analysis, however, economic analysis will determine the future of RCL in a profit driven railroad industry. Of the six aforementioned starter issues, some will factor more into this economic analysis than others. In this observer's opinion, however, are other square-root factors far more economically significant, which involve the cost of the switching function itself and its applied utilization of the railroad real estate, together with the massive investment in its plant and machinery.

At this juncture, however, I need to share a true story (witnessed by over sixty people), which occurred at the 2-07-02 BNSF Town Hall Meeting held in Richmond, CA At this meeting, a locomotive engineer asked, "Using full accrual accounting, how much does a switch engine cost per hour?" (Fortunately there was enough collective knowlege to scrape up a guestimate of \$350 per hour; some say it's more.) Engr: "Of this, how much is attributable to the engineer with benefits?" Mngt: "Adding 50% for benefits, the engineer's wage is right at \$35 per hour." Engr: "The engineer, then, represents 10% the cost of the switch engine enterprise?" Mngt: "Yes". Engr: "If with the implementation of Belt-Pack, should there be a 10% drop in productivity, relative to conventional switch engines, it would suggest, then, the savings of the abolished engineer's job would be a wash, zeroed-out,

negated?" Mngt: "With Belt-Pack, there won't be a 10% drop in productivity." Engr: "You are correct because the Canadian experience is still over a 30% reduced rate of productivity in spite of their eight year experience with Belt-Pack." Mngt: "It wouldn't be used everywhere if it didn't work." Engr: "With all due respect, you've been listening to the salesmen — please see Belt-Pack, non-staged, for yourself." Mngt: "We'll ease into it and see how it works." Engr: "Thank you."

After the meeting, a superb BNSF switchman, Max Taliaferro, shared a superb question: "How will BNSF be able to calculate their new rate of return from their new way of doing business (RCL), when they're not even sure of what their present costs are?" This question, in turn, begs the even more relevant question of what will the new costs of RCL be? Obviously, the combination of these two questions will serve as the essence of its economic analysis. It is understood economic analysis favors RCL in highly repetitive, short and simple switching moves such as those found in unit-train loading or gravity hump yard operation. In non-gravity switching, however, it should be made understood RCL economy turns negative, relative to conventional switch engines. To qualify, this negative economy, I need to share the Canadian experience mentioned above.

Through networking, I was able to contact both Canadian National and Canadian Pacific RCL crews in Vancouver, B.C., who have been using it since 1995. Like Vancouver, Richmond, CA is a seaport town and originator-terminator of intermodal and nonintermodal traffic; both cities have satellite yards in addition to main yards; both have industry work zones and neither have snow. Richmond, in other words, is a microcosm of Vancouver, which makes predictive how RCL in Richmond may follow Vancouver's eight year lead. The crew interviews yielded nearly identical, yet independent results. Namely, both railroads suffer from "square" wheels (bad flat spots) on their RCL equipped switch engines. The punch-press like hammering from "square" enough wheels can cost more dollars in disassociating track structure damage than the already quoted engineers wage. Also, both railroads suffer from overspeed couplings and "shoved out" equipment, which results in the following: Since RCL recommendations discourage its operation while riding the side of a freight car, the operator becomes more quickly fatigued due to the extra weight, extra walking and numerous other operating stresses imposed by RCL. This, in turn, yields to the temptation of "radar", also known as "fish" joints, hence the overspeed couplings and the associated damage. Further, both railroads experience frequent RCL mal-mction and the attendant wasteful tinkering from roundhouse personnel, not to mention the waste-time for RCL crews and their "pointprotection-zoned" switch leads. Most noteworthy, by far, is the productivity ratio between RCL and conventional. According to the Vancouverites, at least three RCL switch engines are required to equal the productivity of two conventional switch engines, assuming 100% utilization of crews. Of course, busy switch terminals often cannot absorb the 50% increase in switch engine jobs this three to two ratio dictates. The Vancouverites, therefore, compensate the productivity loss by having mainline crews switch out their own inbound trains, and by having RCL crews "shotgun" outbound trains, thereby transferring much of their switching burden elsewhere east of Vancouver. In conclusion to this long paragraph, CN has reportedly withdrawn the use of RCL at certain Vancouver operating points due to time and capacity constraints. If true, this is most relatively telling since CANAC, one of the manufacturers of RCL, is a CN subsidiary.

From a public relations standpoint, railroads are wise in using the noble claim of improved safety to sell everyone on the idea of RCL. The inference being, how can you compare the price of an engineer's job loss with someone's possible accident. But, come on now, when was the last time you ever heard of an engineer killing or crippling a switchman or for that matter, a switchman killing or crippling an engineer? This is straw-clutching, guilt-transference at its weakest, and reminds me of the syndrome — lies, god damned lies and there are statistics. In this case, however, even the RCL injury statistics are not available as its users have swept their mishaps under the carpet. In the absence of published data, we will need to rely on the next best thing, logical-deductivereasoning.

Referring to the three to two ratio, above, 3 RCL engines x 2 switchman = 6 switchmen. Two conventionals x (1 engr. + 2 switchmen) = 2 engr. + 4 switchmen or 6 employees, also. The difference here, with RCL, six people are walking yard tracks instead of four, and the six, on average, are walking more than each of the four, since RCL operators are discouraged from riding the sides of freight cars. Please remember, the majority FRA reported injuries stem from the mere act of placing one's foot in front of the other, otherwise known as walking. Add to this, the middle-age demographics of middle-aged bellies made larger, heavier and more sight obstructive with RCL, and you will have the mid to long term recipe for prematurely worn body-parts, pre-mature retirements and the associated FELA claims.

So, which is safer, RCL or conventional over the short, mid and long term? In terms of scale and proportion, RCL safety claims need major mathematical revision because the advertised rate of injury per switch engine-hour does nothing to demonstrate the amount of switching work accomplished, or lack thereof, in relation to the injuries sustained. For a true picture, simply add up the sum total of RCL switching events performed, and divide by the injury lost workdays per 200,000 man-hours. Do the same for conventional to arrive at truly scale and proportional safety ratios for the two methods of switching. Otherwise, to hide RCL mishaps and/or manipulate RCL statistics serves nobody within the railroad companies. Outside of the railroad companies, however, this mis-reporting serves RCL vendors and ultimately doctors and lawyers.

Lastly, allow me to build on the \$350 per hour, filly cost switch engine rate. Hopefully, this figure allows for its pro-rata share of real estate taxes. What it does not allow for, however, is the Opportunity Cost of the bought and paid for value of the switchyard real estate itself. Please allow me to explain. Richmond and Vancouver have another factor in common — extremely valuable land under their tracks worth \$500,000 per acre or more. Competitive market realities do not allow railroads to impute or value-add the worth of switchyard acreage to their freight rates. If railroads could, this \$350 per hour rate would coincidentally double to \$700 in these high real estate value yards. This assumes tripe net (net of taxes, insurance and maintenance) and an 8.33% cap-rate (1% of the current value of an acre as monthly rent x acres divided by switch engine-hours per month). In this economic example, a mere 5% or RCL caused drop in productivity would negate the engineer's saved wage.

In conclusion, if we are truly a railroad community, then we should all have a voice, no matter how small, in helping management differentiate true economy from false economy.

In the case of RCL, when all factors are taken together, why would railroads want to de-leverage the productive capacity of well capitalized classification yards in exchange for marginal, if not negative, RCL economics? Is it because railroads are starved for high-tech identity? Rest assured my beloved railroad industry, as long as one locomotive engineer can monitor the transport equivalency to several hundred truck drivers, or far more, the railway concept will remain ahead of its time for the next thousand years. How many of the eight high-tech industries can claim that? Oh, in case you hadn't guessed, I was the engineer at the Richmond Town Hall meeting and Max Taliaferro is my yard job foreman. We would welcome the derby challenge of any cherry-picked RCL crew to approach, equal or exceed 2/3 of our productivity with a conventional switch engine. Thank you.

Robert Frank owns commercial real estate including the Sonoma TrainTown Railroad. He is an injury-free, 26 year, BNSF locomotive engineer veteran and legislative rep. for BLE div. 839. This is his first contribution to Railway Age and his tenth article on BNSF topics. You can visit TrainTown or his nine other BNSF letter-articles at www.vom.com/traintown/.