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Tealinc Touchbase Newsletter –May 2018

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Trading transportation

Tealinc Featured Equipment – TAKING BIDS FOR SALE OR LEASE!

Looking to add open top hoppers to your fleet this year? Tealinc, Ltd. is now taking bids from interested parties who want to buy, lease and / or trade our 2300 cube open top hoppers. All bids are due May 25.

Click here to view the bid packet.

Tealinc Scholarship – Recipients Announced!

After reviewing applications from some amazing students, Tealinc, Ltd. is proud to announce the winners of the Tealinc, Ltd. 2018 Scholarship Program. You can **read their biographies on our website** or follow the links below to learn more.

Congratulations to this years' hardworking recipients:

- DJ Auburg
- Natalie Zimmerman

The Edge with Darell Luther

Several years ago, two of my colleagues and I were sitting with a consulting client discussing freight logistics and costs. This client was a six billion dollar (revenue) operating subsidiary of a multi-billion-dollar international grain and food stuffs trading and processing company and the person we were meeting with was the president. Our client was making the point that in the commodity market, be it in the United States, on the North American Continent or on a worldwide basis, commodity trading and where you processed those commodities was all dependent upon the freight rate spread and logistical cost of getting a commodity to market. More-so in fact than he specific commodity sale price. He asked the question, "Are we (the client) trading commodities or are we trading freight?" His immediate answer to his own question was, "I believe we're trading

Commodity trading and where you processed the commodities is dependent on freight speed and logistical cost not on purchase or sales price

Transportation departments would arrange for transportation of commodity and match the purchase and sale price spread requirements with the inclusive costs of moving the product

Often the argument for commodity trading is "*What the market will support?*"

freight in which case, are we focusing enough on freight since it often takes a back seat to the commodity traders?"

This company, as were many grain trading and processing companies during that time, was focused on trading commodities and processing spreads. In a very simplified form, a trader would get a purchase price for the raw commodity (in this case soybeans, corn or wheat) and a sales price for the commodity delivered to a demand point such as an export market, feedlot, flour mill or processing facility, etc. The trader would then pass on the requirement for movement between the origin location of the commodity to the destination of the commodity to their transportation department. It was then incumbent upon the transportation department to arrange for the type of transport (truck, rail, barge, or ship) and get as close to matching the purchase and sale price spread requirements with those inclusive costs of moving the product.

Seems crazy doesn't it? Buy at one price, sell at another price and try to get the transport and logistics cost to stay inside of the buy-sell spread and leave room for margin.

If you've been in the business long enough, you know the story. The argument of "*What the market will support?*" is often made in commodity trading. This could be commodity trading for a whole grain to a whole grain or processed grain commodity or from a mineral to a finished product such as fertilizer or cement, or coal to electricity, etc. The truth in the "*What the market will support?*" argument is that transportation and logistics really don't matter in that the commodity purchase pricing and commodity sales pricing are often seen as the only variables, e.g. the price to buy and the price to sell are all determined by a set of complex market dynamics and are relatively set for a select type of commodity. Inherently this is true; however, our clients point was if the trading marketplace had a sense

Commodity purchase pricing and sales are often seen as the only variables

Knowing transportation and logistics costs across a series of origin-destination pairs a trader can then decide where to focus their attention

Tealinc has been involved with various aggregate, stone, sand and consulting opportunities!

Contact us today to see how we can help your business!

of the transportation and logistics costs and requirements before making a trade they'd know if they should make the trade, what expected margins are for the trade and logistics requirements and costs of the trade. By knowing transportation and logistics costs across a series of origin – destination pairs a trader can then determine where to best concentrate their efforts. For simplicity sake if a commodity trades at a $1.00 spread from location A to demand point B and transportation costs are $.90 the spread is $.10 (assuming no futures market activity). If that same commodity goes to demand point C and transportation costs are $.85 the spread is $.15 (assuming no future market activity). In this case that knowledge is worth an additional 5% return on the trade. Hence what is assumed to be a commodity trade is really a transportation trade.

The same theory applies to most all commodities shipped via rail, barge, truck or ship. When determining market opportunities, one is looking for a market dynamic that creates an arbitrage position where, for a fixed (in time) set of transportation and logistics costs, the market moves such that there is an opportunity to make better margins or there is an arbitrage position in transportation costs where the commodity price is fixed (in time) allowing for better margins to be made from the transportation differential.

This viewpoint is not only applicable to shippers and receivers of commodities but also to transportation companies. In certain areas there are arbitrage situations where the transportation costs influence the commodity price differential such that an alternative mode of transportation is engaged despite significant differences in distance.

One of these areas is aggregates. We (Tealinc) have been engaged in numerous aggregate stone sand and gravel consulting opportunities. These consulting assignments have been focused across the United States, so we see geographic

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Trucks for transport of aggregates is becoming costlier to run due to traffic congestion

If we can be of assistance helping you determine where trading transportation is applicable to your operations, give us a call

Need railcars to ship aggregate?

[Tealinc has railcars for you!]

differences in transportation pricing and logisticsOne area where there's a completely visible transportation arbitrage occurring is in California. The demand for aggregates in California is very high and according to the California Department of Conservation MAP 52 data major metropolitan areas such as the San Francisco bay area, Los Angeles and San Diego areas are running on 10 to 20 years of aggregate supply if something doesn't change. There is little new permitting being allowed as the cities grow into existing aggregate supply areas causing development of aggregate supply areas further from demand points.

A transportation market once strongly held by trucks is now slowly moving more to an alternative mode of transportation. Trucks for the transport of aggregates are becoming costlier to run as traffic congestion cause excessive delays and drive up trucking costs. This market, one would inherently surmise, would naturally gravitate to rail; however, this isn't the case. The market has found a transportation arbitrage position. Trucks are becoming costlier and add to pollution levels, rail is welcome from a "green" stand point but ironically is holding pricing and access, which is difficult in congested areas, out of the markets reach which creates a waterborne option. A significant amount of the new aggregate tonnage for these metropolitan areas is now coming from British Columbia, Canada via ocean going barges into San Francisco and Los Angeles. A Canadian company has found a transportation arbitrage and capitalized on it. They've effectively traded transportation!

If we can be of assistance helping you determine where trading transportation is applicable to your operations, give us a call.

*Darell Luther is the founder and CEO of Tealinc, Ltd. You may contact Darell directly in his office at (406) 347-5237 or via email at **darell@tealinc.com**.*

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Wabcopac vs. Nycopac truck mounted brakes

Modifications to truck mounted brakes have been made to retrofit them so that they are more reliable and easier to maintain

Truck mounted brake systems are primarily used where conventional body mounted brakes utilizing brake rods, levers and fulcrums were difficult to use especially on stub sill cars

Mechanical Brief with Steve Christian

Truck mounted brakes have been around for a long time. There have been several attempts at making the most reliable and easy to maintain truck mounted brakes. Some are better than others. In this article I will talk about the original Wabcopac/Nycopac truck mounted brakes and the modifications that have been made to retrofit them to make them more reliable and easier to maintain. Wabopac's and Nycopac's have been around for a long time. They are composed of heavy cast steel brake beams that have a brake cylinder mounted to each one with a push rod that runs through the truck bolster to the opposing brake beam where it was pinned with a vertical brake pin. The parts from Wabcopac and Nycopac are the same and can be interchanged between the brands. Each brake cylinder had a hose which attached the brake cylinder to the brake cylinder line. When air was pumped through the air brake cylinder lines, the brake cylinder pistons would push against the opposing brake beam to apply the brake shoes to the wheels. When the air is released, the cylinder spring pushes the brake beams away from the wheels and releases the brakes.

Truck mounted brake systems are primarily used where conventional body mounted brakes utilizing brake rods, levers and fulcrums were difficult or impossible to use. Stub sill cars which have limited or no space for conventional brakes are a prime example.

As a "Car Guy", I always hated the original truck mounted brakes. They are set initially at the car builder's plant and as brake shoes, brake pins and other parts wear, the piston travel increases, and braking is reduced. You can correct the piston travel by a manual adjustment of the pushrod. This involves loosening the jam nut on the brake cylinder push rod, removing the brake pin on the opposing brake beam and running the push rod in or out as needed to get the proper piston

Train personnel need to be vigilant to recognize truck mounted brakes so that they could compensate for the 50% handbrake application by setting additional hand brakes on the cars in a string

Remedy for reducing excessive piston travel when the indicator said it was needed was no easier than it was with the original design

I suspect that inspectors and maintenance forces

travel. This is a trial and error process to get it set right. You can do it on your back under the car or you can jack the car and roll out the trucks to make the adjustments from the top.

There are two other things that always turned me off about this brake system. First, the cast brake beams and the air cylinders are very vulnerable in derailments and passing over obstructions on the track and often are casualties. Secondly, the handbrake only sets the brakes on the "B" end; therefore, train personnel need to be vigilant to spot truck mounted brakes and compensate for the 50% handbrake application on those cars by setting additional handbrakes on more cars in a railcar string.

As time went on and the air brake manufacturers could go their own way (to some extent), WABCO came up with Wabcopac II. This retrofit to Wabcopac or Nycopac truck mounted brakes called for the removal of one brake cylinder from one brake beam on each set of trucks. A bracket with a transfer lever replaced the one cylinder and pushrod. A specially designed double acting slack adjuster was routed through the hole in the brake beam were the cylinder and pushrod had been. The slack adjuster attached to the transfer lever on one end and the brake beam on the other. By doing this you ended up with the same braking power with one cylinder as you had with two. The addition of the slack adjuster meant that the piston travel was adjusted as brake parts wore and brake shoes wore and were changed out. This was a great advance; however, the slack adjuster is still lower and more exposed than in body mounted brakes in derailments.

Car owners who could not afford to convert to this self-adjusting design could add visual indicators at a nominal cost to at least make it easier to determine when the piston travel was out of adjustment. The remedy for reducing excessive piston travel when the indicator said it was needed was no easier than it was with the

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would sometimes ignore the indicators to save a lot of grief adjusting the brakes. As a former car-knocker myself, I plead the 5th

Braking that is quicker or more severe than the rest of the train, your car will be trying to stop the whole train

Running unit trains that have all truck mounted brakes that are in various levels of braking it can be disastrous

original design. I suspect that inspectors and maintenance forces would sometimes ignore the indicators to save a lot of grief adjusting the brakes. As a former car-knocker myself, I plead the 5th on this. There are easier ways to generate repair billing on a repair track than adjusting truck mounted cylinder piston travel. As the result, these cars don't always get the attention they should.

Later, NYAB/Knorr came up with the Nycopac IIa retrofit that replaces one brake cylinder with a cylinder that has a double acting slack adjuster inside the brake cylinder housing. The second cylinder on each truck is replaced by a bracket and transfer lever like the Wabcopac II's except instead of the slack adjuster being applied a push rod that connects the transfer lever to the opposing brake beam. There is also a piston stroke indicator on the brake cylinder housing. This is the only way, on this system, to accurately tell when the piston travel is incorrect. Again, everything is down low and susceptible to damage by derailment or passing over an obstruction on the track.

Both retrofits are a vast improvement over the original Wabcopac/Nycopac design. They will provide more uniform braking and will result in savings in out of service time and repair bills. Trucks, wheels and draft components will wear better. It is amazing how much having reliable braking on your cars in a train will save you maintenance on many components on your car. In a mixed freight train, if your cars are out of sync with the rest of the cars in the train, your railcar will take a beating. If braking is quicker or more severe than the rest of the train, your car will be trying to stop the whole train. Burning brake shoes and brake beam heads and sliding wheels can result from this. If braking is slower than the others in the train, your car will have all the slack in the train behind it slamming into it. This can cause draft and car body damage. If you run unit trains that have all truck mounted brakes that are in various levels of braking it can be disastrous. Some railroads look closely at this when granting OT-5 authority. I have also seen

Tealinc has decades of mechanical experience behind us- contact us to enlist our help

U.S carloads up 3.3% in April 2018 compared to April 2017

Crushed stone, sand & gravel, coal & grain were up; nonmetallic minerals, waste & nonferrous scrap and primary forest products were down

railroads embargo a trainset because they had truck mounted braking problems until all cars were shopped at a contract shop and all piston travels were adjusted.

Enough of my rambling! If we can assist you with your mechanical, operational or equipment issues of any kind Tealinc is always ready to enlist our varied and extensive experience and talents to work for you.

Steve Christian is the Manager Value Creation-Operations for Tealinc, Ltd. You may contact Steve directly in his Colorado office at (719) 358-9212 or via email at steve@tealinc.com.

Railroad Traffic

The Association of American Railroads (AAR) today [May 2, 2018] reported U.S. rail traffic for the week ending April 28, 2018, as well as volumes for April 2018.

U.S. railroads originated 1,051,026 carloads in April 2018, up 3.3 percent, or 34,020 carloads, from April 2017. U.S. railroads also originated 1,099,000 containers and trailers in April 2018, up 6.8 percent, or 69,630 units, from the same month last year. Combined U.S. carload and intermodal originations in April 2018 were 2,150,026, up 5.1 percent, or 103,650 carloads and intermodal units from April 2017.

In April 2018, 15 of the 20 carload commodity categories tracked by the AAR each month saw carload gains compared with April 2017. These included: crushed stone, sand & gravel, up 8,466 carloads or 8.6 percent; coal, up 7,337 carloads or 2.4 percent; and grain, up 5,305 carloads or 5.7 percent. Commodities that saw declines in April 2018 from April 2017 included: nonmetallic minerals, down 2,513 carloads or 13 percent; waste & nonferrous scrap, down 1,056 carloads or 7.1 percent; and primary forest products, down 651 carloads or 14.6 percent.

“Total U.S. rail traffic so far this year is a shade below where it was in 2015, but

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"Total U.S. rail traffic so far this year is a shade below where it was in 2015, but otherwise is higher than it's been in the last ten years"- AAR Senior Vice President of Policy and Economics John T. Gray

otherwise is higher than it's been in the last ten years" said AAR Senior Vice President of Policy and Economics John T. Gray. "Additionally, 15 of the 20 commodity categories we track had higher carloads in April 2018 than in April 2017, the most since January 2015. That's good news for railroads and good news for the economy."

Excluding coal, carloads were up 26,683 carloads, or 3.8 percent, in April 2018 from April 2017. Excluding coal and grain, carloads were up 21,378 carloads, or 3.5 percent.

Total U.S. carload traffic for the first four months of 2018 was 4,347,225 carloads, up 0.6 percent, or 24,993 carloads, from the same period last year; and 4,595,381 intermodal units, up 5.8 percent, or 250,934 containers and trailers, from last year.

Total combined U.S. traffic for the first 17 weeks of 2018 was 8,942,606 carloads and intermodal units, an increase of 3.2 percent compared to last year.

Visit the AAR at:
https://www.aar.org/news/rail-traffic-for-april-the-week-ending-april-28-2018/

Oil soars as Trump dumps nuclear deal, dollar dips

Industrial Inside

LONDON (Reuters) - Crude oil prices hit 3-1/2-year highs on Wednesday [May 10, 2018] after President Donald Trump pulled the United States out of an international nuclear deal with Iran, while the dollar touched a new high for the year and world stocks held steady. Trump's move sparked fears of increased tension in the Middle East and uncertainty over global oil supplies.

Demand for safe-haven assets remained muted as the immediate market impact was seen as specific to oil supply, but investors remained mindful of the knock-on

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Trump's move sparked fear of tension in the Middle East and uncertainty over global oil supplies

The impact of Trump's decision was mostly limited to oil markets and energy-related stocks

Brent crude jumped as much as 2.8%, a 3 ½ year high

effects on inflation.

Gold prices XAU= retreated and bond yields rose. The U.S. 10-year Treasury US10YT=RR once again breached the psychologically significant 3-percent level and hit a two-week high of 3.0140 percent, supported by expectations of higher interest rates.

"In an environment where the Fed, particularly, is already at its inflation target and people are closely watching the pace of the monetary tightening, something like this which could possibly nudge inflation a little bit higher is going to be quite interesting for the market," UBS Wealth Management's UK chief investment office deputy head, Caroline Simmons, said.

"That's why you're seeing the yields go up a little bit on the bonds," she said.
The impact of Trump's decision was mostly limited to oil markets and energy-related stocks. West Texas Intermediate crude futures CLc1 hit their highest level since November 2014 at $71.17 per barrel, last up 2.7 percent.
Brent crude futures LCOc1 jumped as much as 2.8 percent to a 3-1/2-year high of $77.20.

"There is still an interim period before sanctions kick in. And other signatories and Iran want to keep the deal going so there is a period where things could be hammered out," ING rates strategist Benjamin Schroeder said.

"But I would have expected a bit of a safe-haven bid this morning," he noted, referring to bonds.

Read the full article at: https://www.reuters.com/article/us-global-markets/oil-soars-as-trump-dumps-iran-nuclear-deal-dollar-dips-idUSKBN1IA064

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Fed's Powell: rate hikes should not upend the global economy

"The pickup in both global growth and commodity prices have played bigger roles in the recent recovery of capital flows to emerging market economies than any policy moves by central banks"
-Jerome Powell

For the past 7 years, interest rates have been at a record low near zero following the 2008 financial crisis

"Some investors and

Financial Focus

Moves by the Fed and other major central banks to raise interest rates after a long period of keeping them low should not be disruptive to the global economy, Federal Reserve Chairman Jerome Powell said Tuesday [May 8, 2018].

In remarks prepared for a financial conference in Zurich, Powell said that the role U.S. monetary policy plays in driving global financial conditions and capital flows is often exaggerated. The pickup in both global growth and commodity prices have played bigger roles in the recent recovery of capital flows to emerging market economies than any policy moves by central banks, he said.

"Monetary stimulus by the Fed and other advanced economies played a relatively limited role in the surge of capital flows to (emerging market economies) in recent years," Powell said. "There is good reason to think the normalization of monetary policies in advanced economies should continue to prove manageable for" emerging economies.

After keeping its benchmark interest rate at a record low near zero for seven years following the 2008 financial crisis, the Fed began gradually increasing the rate in December 2015. It made a sixth quarter-point move in March. Many private economists believe the Fed will raise rates again in June and will hike rates a total of three or four times this year.

In his remarks, Powell said he did not dismiss the risks as the Fed, the European Central Bank and other major central banks raise rates.

"Some investors and institutions may not be well positioned for a rise in interest rates, even one that markets broadly anticipate," he said. "And, of course, future economic conditions may surprise us, as they often do."

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institutions may not be well positioned for a rise in interest rates, even one that markets broadly anticipate," Powell said. "And, of course, future economic conditions may surprise us, as they often do."

But he stressed that the Fed planned to do what it could to minimize disruptions by communicating policy changes clearly and well in advance.

In 2013, remarks by then-Fed Chairman Ben Bernanke triggered what was dubbed a "taper tantrum." Investors feared that the U.S. central bank would start trimming or "tapering" its program of buying bonds sooner than expected and U.S. bond rates temporarily surged, sending shock waves through a number of emerging-market economies. The Fed was using its bond purchases to hold down long-term interest rates.

Learn more at: https://www.cnbc.com/2018/05/08/feds-powell-rate-hikes-should-not-upend-the-global-economy.html

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We look forwarding to earning your business!