Load cell history: what’s the big deal?
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In the past few weeks, I published three writings on the “history of load cells” (see attachments 1-3 at the end). Many readers expressed their appreciation of the publications. They found them informational and educational. Why did I do that? Two main reasons:
1. I strive to be a thought-leader of the industry via my email newsletters.

What does that mean specifically? First off, let me tell you who the three authors are:
1. Fred Herrmann wrote the first piece. Fred is the owner of Indiana Scale, currently specialized in floor scales. For more info about Fred, click here: www.west-east-international.com/doc/IBN2.pdf.
2. Rudy Kolaci wrote the second piece. Rudy is the owner of Totalcomp, a major distributor of scales and components. For more info about Rudy, click here: www.west-east-international.com/doc/IBN2.pdf.
3. Jon Stimpson wrote the third piece. Jon is the owner of National Scale Technology, a company specialized in making various special load cells.

Now, let’s see what these three gentlemen have in common:
1. They all worked for some big “scale” companies before starting their own.
2. They are all very successful in their respective businesses, enjoying their own American dreams.
3. They were all part of IBN (Industry for Better NTEP, www.west-east-international.com/doc/IBN2.pdf).

Although Jon’s business has little to do with NTEP, he was one of the first persons coming out to endorse Rudy’s open letter to NCWM late last year.

Their writings tell me two big things:
1. Business is war. Big businesses will do everything possible to protect their own turfs, from proprietary designs to some “official” standards (e.g. NTEP and VCAP), whose purpose is often to make it harder (and more costly) for the little guys.
2. Opportunities abound. America is the best land of opportunities, on which the little guys like Rudy can see and seize the opportunities to create a viable business that strives for de facto standards (for load cells) so as to lower the cost of the scale industry.

This is the beauty of America: As some big guys become fat and lazy, the little guys can beat them by working harder and smarter! America must remain that way! It took me 17 years to realize that (www.west-east-international.com/doc/AmericanDream.pdf) - What about you?

We, the three authors and I, have realized our own American dreams. Now we want to share them and we want to keep America that way, so that our next generations will have the same opportunities as we have had.

This is the real big deal behind the history of load cells!

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Attachment 1 by Fred Herrmann
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Back in the seventies, scale manufacturers such as Fairbanks and Toledo used load cells in their scales that were designed with proprietary mechanical and electrical characteristics. The intent was to capture the replacement market. They had exclusive blanket orders with a single load cell supplier such as Revere, who agreed to sell that design only to them. They would only sell parts to their exclusive dealers. They could command a price of $485.00 for a replacement cell for a floor scale, for instance. This practice severely curtailed the opportunity for independent scale dealers as they could not easily get parts. They had a "Lock" on the market.

This practice continued for some years until a man came along to upset the apple cart. He was a one-man "Bailey-Hazen Road." His name was Mr. P. He was an engineer hired by Fairbanks from the failing Howe Richardson Scale Company as a load cell Guru and became such at Fairbanks, controlling all aspects of their load cell needs, including purchasing.
The problem arose when he decided to shop for better pricing and sent the proprietary-design load cell specs to Sensortronics for quotation. Sensortronics outbid Revere and got the next year's blanket orders. (I believe this was in 1986.) Revere was left holding the bag on their development costs and was open to opportunity. Mr. P was another "Sojourner" in the scale business who eventually departed, leaving destruction as his legacy. (He did the same thing to Howard Zupp, the designer of tank mounts when he sent the drawings to Rice Lake for quotation.)

Rudy Kolaci had broken away from Revere to start a load cell distributorship and saw an opportunity here. (At this point, Rice Lake was not aware of an opportunity and only sold load cells under its own part numbers, clouding interchangeability.)

Rudy started Totalcomp and produced an interchangeability chart that, to this day, can be found at the front of his catalog. He went to all of the load cell manufacturers that had been stabbed in the back by a scale manufacturer and negotiated supply.

THE RACE WAS ON!!!!!!!!!!!!

Mr. P had sown the seeds of the destruction of exclusivity by breaking the very agreement that protected it!

Now, armed with the knowledge of what could be substituted, a large group of independent scale dealers could compete against the manufacturers' exclusive dealers with proper parts.

(Toledo protected itself for may years by making its own cells in its Spartanburg plant. Once that closed, they went outside for a while before starting their own plant in China.)

The competition got fierce and we saw load cell prices go:

$485 - -265 - -120 - -90 - -80 - -65 ...

Incidentally, the same thing occurred with digital indicators. Until Transcell offered the TI500E to ANYONE, there was not a "Merchant" indicator available nor were there spare parts and this also aided the independent dealers to compete.

I was a Revere load cell salesman during the period of 1976 to 1980 and I sold load cells to Howe Richardson. Howe bought half their load cells from Transducers and half from Revere even though the Revere price was 20 to 30% higher than the Transducers Inc price.

I had the opportunity to sell load cells to Fairbanks around 1979 and made a trip with Jerry McGurkin a Revere load cell product manager. Our plan was to make a special size shear beam load cell for Fairbanks. Even though I wanted to make a standard size beam with 1" and 3" hole spacing, the management at Revere wanted the cell to be a special size. They insisted that we would get all the repeat business, especially repairs. Well, Fairbanks bought this special beam cell that was called the model SSS. It was a hermetically sealed, stainless steel, shear beam. Our competitor Revere did not make a cell with this special size and bolt hole spacing. We enjoyed good sales of this model for several years. That was until Fairbanks decided to use a beam cell that had a standard bolt pattern from multiple manufacturers.

In the early 1980's after my company, Totalcomp, had been in business for several years, I received a phone call from Jack Fahy who was at that time the sales manager for Transducers, Inc. He later moved on to be sales manager at Sensortronics where he was for many years. But, while he was at Transducers, Inc he wanted a recommendation as to what physical size a planned new beam should be. Jack and I talked about it for some time and after careful consideration I recommended that he use the same envelope as the 65023 Sensortronics beam cell. I was pleasantly surprised a few months later when Transducers Inc introduced the model 5123 beam cell with the same 1" and 3" bolt hole spacing dimensions as the Sensortronics 65023.

To this day, the majority of load cells use this de-facto standard size. I am sure that this led to the commoditization of load cells. The benefit being that dealers could get load cells at an affordable price. It also brought the price of scales down for the benefit of the scale user.
To the "partial history of load cells," Jon Stimpson responded as follows:

Cute story, but it was Mr “T” who sent the Zupp designs to RLWS.

Also, the anti competition policies allegedly employed by the load cell manufacturers is fiction. Revere made copies of BLH load cells early on, but had to pay a royalty to BLH on each one, (and every other load cell they built, for years) since Ruge held the patent on strain gages.

I also knew the buyer at Howe Richardson, Frank O’Neill, who agreed to pay Sensotortronics (or Transducers - I don’t remember what goes first) $25,000 to build copies to Revere’s CP and CSP cells. He bragged about it to me (the Revere sales engineer who called on him). Also it was Ray Vito, who replaced Frank O’Neill @HR after his death, who pointed out to Rudy that a load cell distributor could do well since Revere and BLH deliveries SUCKED.

THAT is how the monopoly was broken. It wasn’t really a monopoly since anyone could have duplicated the designs with the proper incentive, as Frank provided.

I lived it, so I am sure of it.

To Rudy's 'History of load cells continued', Jon Stimpson responded as follows:

Rudy’s story is correct with one exception. The Revere SSS was an orphan shear beam from the start. It never gained much acceptance and it was NOT the cell Fairbanks “standardized” on for their floor scales. Revere created another series of cells they named HSB (hermetic shear beam) and made them proprietary for Fairbanks. I replaced Rudy when he left Revere and I called on John Hale, chief engineer @ Fairbanks, to complete the design-in of the HSB. In those days, HSB’s sold for about $300 EACH, in quantity!

Rudy has, of course, been instrumental in many changes in the load cell industry. I recall visiting him in his facility in Fairlawn, NJ when he received the first A&D load cell signal conditioners and agreed to distribute then in the US. That was the start of modern load cell electronics here!