



Non-Invasive Measurement System

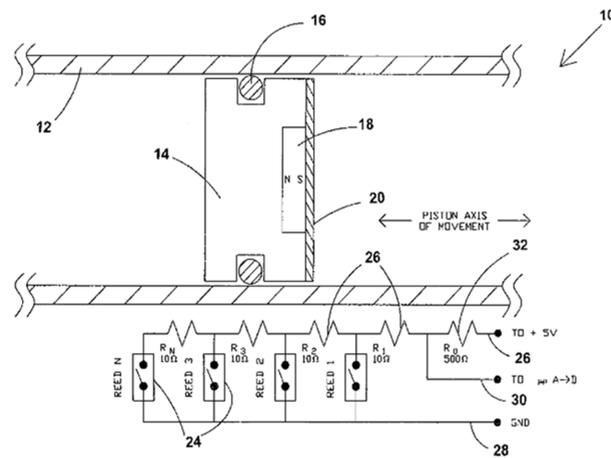
US Patent # 7,278,310

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Situational Summary

- The National Surface Warfare Center's Crane Division Technology has created an measurement system that is used for a manufacturing process.
- The purpose of its creation was because manufactures employees couldn't tell how much material was left in the tube after being used.

System Details



Technology Synopsis

- It is used in manufacturing with companies that produce explosives.
- The measurement system consists of an electrical strip placed on the outside of the tube that will give a reading of the level of material that remains in the tube after the manufacturing process.
- The piston has a magnet attached to its backside that corresponds to the electrical strip showing the level of material in the tube.

Value Proposition

- This technology can help cut waste and improve production in a manufacturing company which helps the company produce a lean manufacturing atmosphere .
- The non-invasive measurement system does not cause any pinch points which can lead to damage of equipment and human injury.
- It can be retrofitted for any kind of manufacturing process.
- On the electrical strips it displays an LCD reading for the worker to give a specific reading of material left after use.

Competition/Competitive Advantage

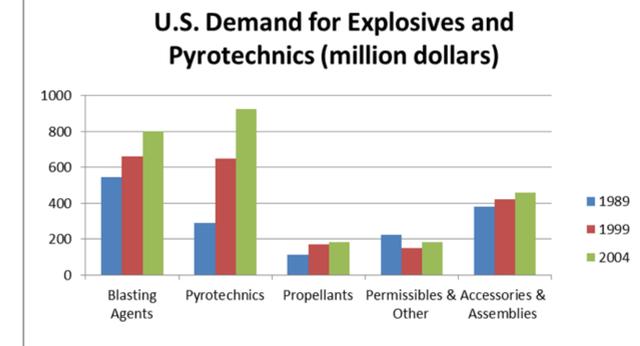
Company Name	Product Name	Comment
Ningbo Cixi Imp. & Exp. Corp.	Eastern Long Oil Tape	It measures about 164ft, but you have to manually use the tape to measure the fluid.
Northeast Controls Inc.	Model 900B Impeller-Type Flow Meter	Limited on measuring pressure and viscosity. Causes a pinch point that can cause damage to equipment and humans.
Austin Powder Co	Model 900B Impeller-Type Flow Meter	Limited on measuring pressure and viscosity. Causes a pinch point that can cause damage to equipment and humans.
Orica	Model 900B Impeller-Type Flow Meter	Limited on measuring pressure and viscosity. Causes a pinch point that can cause damage to equipment and humans.

The competitive advantage of this technology begins with the fact that it can measure materials at a higher pressure and higher amount of viscosity compared to current products on the market.

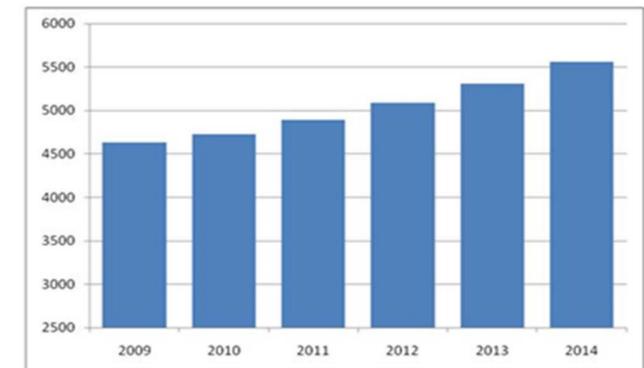
Potential Applications

Industry	Industry Segments	Application Segments
A. Military	1. Explosive	1. Metal Tubes
B. Commercial	1. Pyrotechnics & Explosives 2. Fuel 3. Oil	1. Metal Tubes 2. 500-20,000 above ground gallon oil tanks 3. 500-20,000 above ground gallon fuel tanks

Market Opportunity



- The industry's revenue for the year 2010 was approximately \$2.3 billion USD.
- The U.S. explosives and pyrotechnics market grows at an annual rate of 4.5%.
- The mining industry uses about 87% of all the explosives used in the U.S. on an annual basis, explosives are used in virtually every segment of the manufacturing and major construction industries.



- Flow Research has released a new study that shows the global flowmeter market is projected to grow substantially to exceed US \$5.5 billion by 2014, with the most rapid growth taking place in China, the Middle East, and in developing Asian countries.
- It is predicted that by 2013, the global flow meter market will reach 3.48 billion U.S. dollars. In the industrial field, measuring instrument referred to as fluid flow meter or flow table. Flow meter for industrial measurement is one of the most important instruments.

Targets for Licensing

- The companies that would probably license this technology would be companies that provide the Mining industries with Pyrotechnics & Explosives and manufacturing companies with specialize instrumentals and special flow meters.
- Getting in contact with smaller companies that manufacture explosives such as Austin Powder Co. & Orica once information was given they seem interested in this technology.