



ISO 9001:2000



TECH TALK

VOLUME 15

News and Views From Hi-Tech Seals

WINTER 2005

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Hi-Tech Seals is celebrating our 15th anniversary in business this year. Hi-Tech Seals opened the doors on August 31st, 1990. We were a small group of 3 when the doors opened in our 1900 sq. ft. warehouse in south Edmonton. Over the next 4 years we expanded to 8 employees. That same year we opened up our Calgary operation with 3 employees. Since that time, Calgary has moved to it's current location where we now have 9 employees.

In 1995 we started work on becoming an ISO 9002 company, and in 1996 became registered to the ISO standard. The following year, 1997, Edmonton had grown big enough, that we needed to move to our current location at 9211 - 41 Avenue. In November of 2000, we purchased Merdraulic Inc. in Scarborough and expanded into Ontario. Since that time, our Ontario operation has also moved, and is presently located just north of Scarborough, in Newmarket, Ontario. With an opportunity to develop the Québec market, we decided to open up in Boucherville, Québec in the fall of 2003. We now have 4 branches and over 55 employees across Canada.

Through the years we have become an ISO 9001 Registered company at all 4 branch locations and continue to work hard to improve our quality control programs. We have also developed a growing machining department that can manufacture plastic and rubber parts for you.

We thank-you, our customers, for allowing us to serve you, and hope that we prove that our service is second to none.

Ian McJannet
Operations Manager



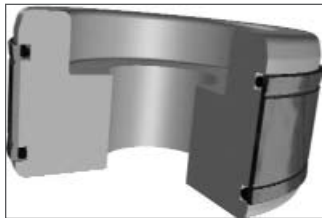
TECHNICALLY SPEAKING

PISTON SLEEVE™

Hi-Tech Seals is pleased to offer the New **MPI - Piston Sleeve**. This new double acting Piston Seal/Bearing is manufactured in a wide variety of sizes. This one piece seal assembly can be easily installed using a standard press with a special assembly tool.

Other benefits are low friction, increased bearing area without increasing piston length, replaceable as well as contaminant resistance. The opposing seal lips are pre-loaded with o-rings which sit in machined grooves in the piston.

Hi-Tech Seals offers a variety of o-ring materials and hardness's to custom fit your application. Please contact your HTS Sales office to discuss your applications or request a technical manual on the **Piston Sleeve** from one of our Technical Sales Representatives.



Gerry Kasper
Newmarket General Manager

O-RINGS vs SQUARE RINGS

O-RINGS are formed in polished steel compression molds and cured under high pressure. This insures a dense product, homogeneous and free of voids or laminations. It also permits use of rubber compounds designed for best seal performance.

SQUARE RINGS are formed by binding rubber around mandrels with cloth during curing. The resultant hose is then ground and cut into rings. Because of this low pressure process, it works only with special sticky compounds.

O-RINGS have continuous molded surfaces of minimum area, very important. It maximizes resistance to cutting, cracking, and similar damage caused by heat, installation, fluids, etc...

SQUARE RINGS have ground surfaces with corners. This makes them vulnerable to failure in dynamic and static applications. The corners of a square ring can get damaged during installation.

SQUARE RINGS have 27% greater volume than O-rings of the same section height. Consequently they overfill seal grooves designed for O-rings. When this occurs, installation may cause damage, or there may not be adequate space for thermal expansion and fluid swell, therefore leakage may result. Square rings of reduced section height avoid overfill problems. But less height means less squeeze, less force section against groove walls, and that is not good. First because force exerted by the seal over area in contact with the groove (seal force) is what prevents leakage. Second, square rings are already deficient in seal force, it is dissipated by their broad contact footprint; even a slight squeeze reduction may cause leakage.

O-RINGS have more seal force, squeeze is greater and seal force is maximized through a narrow footprint.

O-RINGS ARE BETTER SEALS!!!!

Justin Campeau
Boucherville Branch Manager

DuPont Performance Elastomers

On July 1st DuPont Dow Elastomers, the joint venture between DuPont and the Dow Chemical company, became a wholly owned subsidiary of the DuPont Company and is now called "DuPont Performance Elastomers".

Only DuPont Performance Elastomers manufactures Genuine Viton fluoroelastomer. To ensure you are getting the highest quality fluoroelastomer available, insist on products made only with DuPont Performance Elastomers Genuine Viton material.

Q. How will the change affect you?

A. When identifying your Viton fluoroelastomer look for the new label with the DuPont Performance Elastomers identification.



Only parts made with 100% Virgin Viton as the sole elastomeric component are labeled with this seal.

Troy Yohemas
Purchasing Manager

Oil Impact on Supply Chain

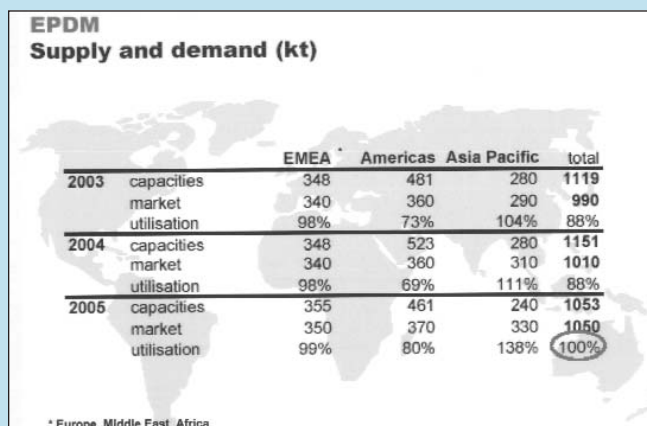
Increasing Oil prices have a spin off effect on Supply Chains Worldwide.

Economic conditions left behind by the tragic effects from the recent hurricanes and increased demand on petroleum based products has lead to the shortages on the supply of oil. World markets have been seeing rising costs in raw materials, as well as rising transport costs due to increasing fuel and labor costs.

The following illustrations Courtesy of the Excel Corporation.

Price Increases January, 2004 to Present
•EPDM - up 35% - 55%
•NBR - up about 40%
•Natural Rubber - up 23% by the 4th Qtr
•SBR - up 31%
•Carbon Black - up 30%
•Process Oil - up 38%
And with oil at \$65 - More to Come

- Results to the supply chains are currently seen in our daily consumable products like fuel at the gas pumps and home heating costs. These rising costs are also seen in industry. The above illustration shows some recent increases in key polymer costs.
- Key polymer demand has also caught capacity.



- Rising consumption of the Asian Pacific market has impacted the global supply and demand of most polymers.
- Although rising fuel costs cannot be controlled. Steps are being taken to increase capacity of key polymer production. Shortages in Polymers can be limited with effective forecasting of future demands.

Although capacity can be controlled to ensure there are no shortages of key polymers, pricing will continue to be unstable due to petroleum prices. With Oil at \$65/barrel and climbing, knowing when we can see a stabilization of polymer costs is difficult to determine.

Troy Yohemas
Purchasing Manager

Employee Profile



Our fifth installment of "Meet the Techie" takes us to Newmarket, Ontario **Gerry Kasper**, General Manager of our Newmarket facility. Gerry is looking forward to celebrating his 5th year anniversary with HTS in Jan 2006. Gerry spent his previous 14+ years working in the seal industry. He has successfully passed the "Basic Rubber Technology" course offered by ACS Rubber Division and has also been involved in specific industry oriented training sessions. In his spare time he enjoys golfing and spending time with his family and friends.

NEW FACES:

Edmonton

John Chiu Barb Dompé Adilia Mejia
Kelsey Norton Laura Schellevis Grant Wilson

Welcoming back Stephanie Berrigan and James Leighton.

Calgary

Jeff Christopher Michael Kelly Rochelle Murray

Employee Recognition

We are please to share with you, employees with milestones in the recent and coming months.

5 years of service:

Edmonton, AB

Brian Benkendorf - Inside Sales
Rose Larm - Purchasing Department
Kris Martinuk - Q. A. Department
Danny Chu - Machining

Newmarket, ON

Gerry Kasper - General Manager

From all of the staff at Hi-Tech Seals, we thank you all for your hard work and dedication over the past years.

** If you know of anyone who does/does not want to receive our Newsletter please contact us **

Word Search

WIN A iPod shuffle



DYNAMIC
FOOTPRINT
HOMOGENEOUS
MANDRELS
OVERFILL
RUBBER
STATIC
VULNERABLE

AREA
COMPOUNDS
CURED
FLUIDSWELL
HEAT
LAMINATIONS
MOLDS
FAIL
RINGS
SQUARE
VOIDS
ASSEMBLY
CONTINUOUS
BINDING
CORNERS
GROUND SURFACE
HOSE
MAXIMIZES
PERFORMANCE
SEALFORCE
STICKY

Fill in the blanks using the left over letters.

L	O	S	G	S	T	A	T	I	C	R	D	S	B	H
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E	G	A	O	I	S	T	I	C	K	Y	R	E	N	A
W	P	L	U	O	S	A	R	R	E	B	U	N	D	T
S	E	F	N	V	L	I	A	F	P	E	C	R	I	T
D	R	O	D	L	A	M	I	N	A	T	I	O	N	S
I	F	R	S	L	E	R	D	N	A	M	O	C	G	T
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L	R	E	R	M	A	X	I	M	I	Z	E	S	F	E
F	M	S	F	O	V	E	R	F	I	L	L	E	H	R
A	A	D	A	Y	L	B	M	E	S	S	A	R	O	A
R	N	L	C	D	Y	N	A	M	I	C	S	E	S	U
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ANSWER:

**** You may also complete the word search online at: www.hitechseals.com and follow the link ****

Winner of the Poker Set from our last Issue:
Terry Best Regina, SK

Please fax back your response no later than January 13, 2006.

Name: _____



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