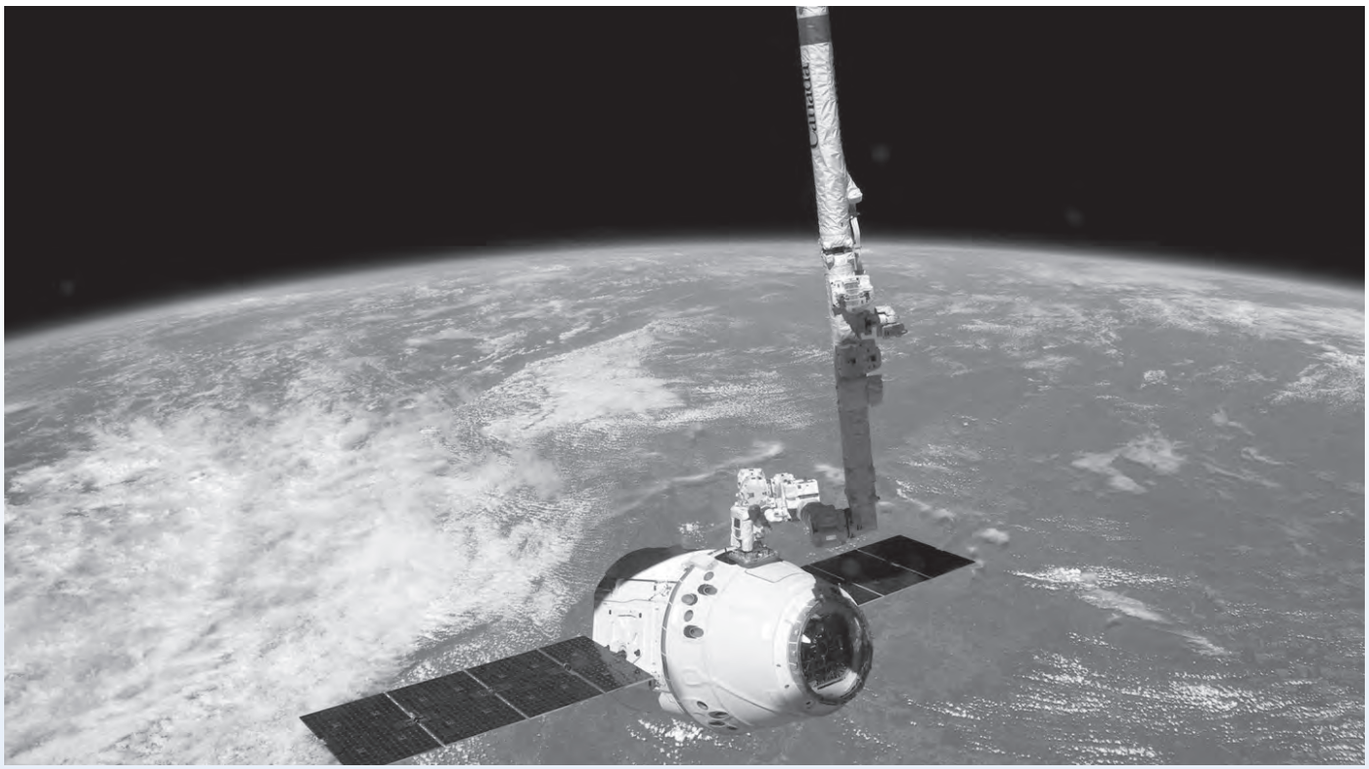
SYNERGIES

VOLUME 24

Tomorrow's Materials Solutions...Today.

MAGNAPLATE CELEBRATES 60 YEARS AS COMMERCIAL SPACEFLIGHT TAKES OFF



Robotic Arm Grapples SpaceX Dragon at International Space Station

General Magnaplate is proudly celebrating its 60th Anniversary this year and the timing could not be better as it coincides with the successful launch of SpaceX's Dragon capsule. Dr. Charles P. Covino, affectionately known as "Doc", established the company in 1952 and the rest, as they say is history.

Candi Aversenti, CEO of General Magnaplate, comments, "We are extremely proud to be celebrating sixty years in business, but more so we are proud to celebrate sixty years of serving our customers, sixty years of improving the quality of our customers' products, and sixty years of contributing to some of mankind's most valuable products and endeavors, including the NASA space program.

General Magnaplate has a long history in the U.S. space program and the Company's coatings have been utilized by NASA for coating mission-critical parts on virtually every vehicle sent into space."

"With such a strong aerospace background, General Magnaplate's coatings were a natural choice" adds Candi Aversenti. "Our coatings have been engineered to withstand the harshest of environments, and for 60 years

Continued on inside flap.

50's

1952

Magnaplate Metal Finishers is established in Hoboken, NJ.

1954

Magnaplate moves to Bloomfield, NJ plant.

1958

Magnaplate makes first Public Reg 'A' Offering.

Moves to larger Belleville, NJ plant.

60's

1959

Sylvia Covino (Doc's wife) joins the family affair.

Acquires Eastern Testing Labs of Long Island, NY.

1961

Hi-T-Lube® Invented

Hi-T-Lube is a dry-film lubricant that solves critical problems of wear, galling and fretting on steel, stainless steel and copper alloys at high and low temperature extremes, even under heavy loads.

1962

Doc Covino breaks ground by publishing his famous 'QA Manual' distributed by Industrial Press.

1963

Doc, and a hand-picked team comprising scientific specialists, evaluates all Quality Assurance for NASA and its prime contractors.

1964

Tufram® Invented

Engineers worldwide recognize Tufram as the solution to a host of problems faced by aluminum components on all types of manufacturing, processing and packaging equipment.

1967

Tufram, Inc. opens in Linden, NJ to produce cookware ranked No. 1 in the US two years in a row by Consumer Reports.

1965

Japanese licensee appointed: ULVAC.

1968

Canadize® Invented

Canadize augments surface hardness and lubricity for titanium and titanium alloys.

1969

First Man Walks On The Moon

Thanks to General Magnaplate, not only was 'man' able to walk on the moon, he was able to drill into it too. Canadize treatment on both the inside and outside of the titanium core-sample drill tubes prevented galling and eliminated contamination of the moon rock samples.

1970

Nedox® Invented

Significantly increasing metals' corrosion resistance and wear life, Nedox permanently combines the advantages of plating with the controlled infusion of low-friction polymers and dry lubricants.

70's

1973

Moon Rock Displayed In Linden

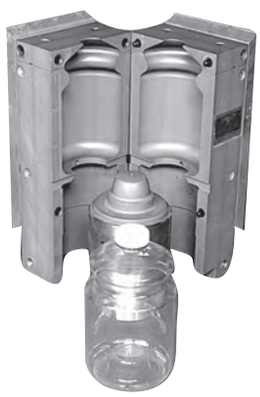
As a mark of gratitude for his contribution to the space race, NASA presents 'Doc' with a piece of the "rock" which was displayed at Magnaplate's Linden facility.

First Texas facility opens.

1975

Magnadize® Invented

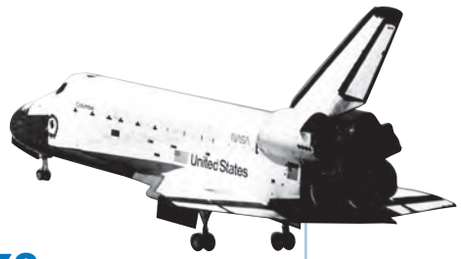
Increasing the surface hardness and lubricity of magnesium, Magnadize improves the metal's resistance to corrosion and oxidation, and prevents abrasion and galling.



1981

Space Shuttle Makes First Earth Orbit

As NASA entered more advanced phases of its space program, new problems kept cropping up, requiring technological improvements to provide extremely hard, dry-lubricated surfaces to hundreds of aluminum, titanium and steel parts, tools and pieces of equipment.



1978

Swedish licensee appointed: FFV a government owned facility (now Bodycote).

1976

Lectrofluor® Invented

Lectrofluor provides superior corrosion, chemical resistance and mold release even in extremely hostile environments.

80's

1980

California facility opens.

1982

Texas facility upgrades to current Arlington location.

Candida Covino joins company.

1983

Magnaplate HMF® & Magnagold® Invented

Magnaplate HMF creates an extremely hard, mirror-smooth, highly reflective micro-finish on the surface of ferrous metal, copper or aluminum alloy components. Magnagold, is an enhanced PVD titanium nitride coating for high strength alloys.

1985

Edmund Aversenti joins General Magnaplate.

1986

Candida Aversenti becomes President

Magnaplate SNS™ invented.

1988

Magnaplate HCR® Invented

HCR increases atmospheric corrosion protection beyond all known methods of aluminum treatment while also providing excellent wear resistance.

UK licensee appointed: Poeton Industries LTD.

Dutch licensee appointed: Mifa (now AHC Benelux).

1989

Plasmadize® Invented

Plasmadize combines the advantages of thermal spraying with the controlled infusion of polymers, dry lubricants or other materials to provide an entirely new composite with improved properties.

1991

Doc inducted into New Jersey Inventors Congress and Hall of Fame.

90's

1990

Dynaloy® Invented

Dynaloy, a hard, super-thin selectively deposited chromium coating is invented.

1992

General Magnaplate receives the Lyndon B. Johnson Space Center Award for its contribution to the 'space program'.

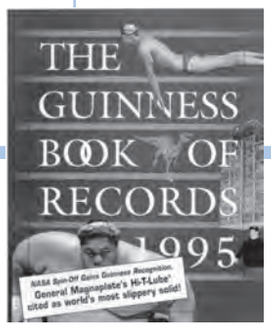
1995

Magnaplate TNS® Invented

Magnaplate TNS coatings solve the "sticky substance" problems encountered so often in all segments of the adhesive industry —adhesive formulating, label printing, tape manufacturing, and converting.

Hi-T-Lube® Makes Guinness Book Of Records

Hi-T-Lube is recognized by the Guinness Book of Records as the solid with the lowest COF in the world.



1997

Magnaplate HTR® Invented

Magnaplate HTR increases the release efficiency of molds and dies made of steel, copper, brass, aluminum and other metals exposed to high temperatures.

2004

Mars Rover Lands

Magnaplates coatings play a critical role in the Mars Rover's descent rate limiter.

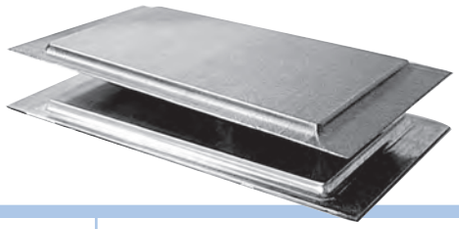
2003

Magnaplate is awarded ISO 9000.

1998

Magnaplate CMPT® Process Invented

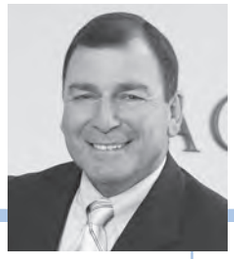
CMPT is a breakthrough development by General Magnaplate in layup molding technology to save time and money for fabricators of parts constructed of composite materials.



2006

Candida Aversenti named CEO and Board Chair.

Edmund Aversenti named President and COO.



2012

Magnaplate Celebrates its 60th Anniversary

SpaceX and NASA

Magnaplate plays a mission-critical role coating parts for SpaceX's Dragon capsule and NASA's Curiosity Mars rover.

10's

00's

1999

CMPT wins New Jersey Research & Design Council Patent of Year Award.

German licensee appointed: Nussbaum Bodycote.

Hank Levin retires from Board Of Directors after 40 years of service.

General Magnaplate Corp. voted into NJ's Inventor's Hall of Fame.

Doc Covino retires as CEO; Candida Aversenti appointed CEO.

1996

Magnaplate.com Goes Live

General Magnaplate grasps the cyber age firmly and offers customers a wealth of information about its coatings, and their applications, on www.magnaplate.com.

Goldenedge® Invented

Goldenedge is an ultra-hard, micro-thin coating for use on the cutting edges of blades, knives, slicers and other sharp-edged devices.

2007

A Great Loss – Doc Covino

Dr. Charles P. Covino, Magnaplate's founder and a coatings industry innovator, sadly passes away at age 82.

2008

ISO 9001: 2008

Magnaplate upgrades its quality status.

2010

NADCAP Accredited.

Australian licensee appointed: SEC Plating

2011

A Banner Year for Magnaplate

The Company launches three new coatings: 10K™ series, MAGnanoSHIELD® and Magnamax-HT™.

Indian licensee appointed: Electrochem.

Canadian licensees appointed: Aluminum Surface Technology and Precision Surface Technology.

Far left: Candi Aversenti celebrates 30 years at General Magnaplate.

Left: Remembering Dr. Charles P. Covino, General Magnaplate's founding father.

Congratulations Candi

Candi Aversenti and General Magnaplate Celebrate Milestones Together

General Magnaplate's staff, customers and vendors would like to take this opportunity to congratulate Candi Aversenti, CEO of General Magnaplate, on her 30 years of service at the Company and also to mark the celebration of her 60th birthday!

Dr. Covino established General Magnaplate the year that Candi was born. After joining the company in 1982, she took over the reins from her father as CEO in 1999. Dr. Covino sadly left us in 2007 at the age of 82 but his spirit of invention and pushing the boundaries of coatings technology remains strong at the Company.

MAGNAPLATE CELEBRATES 60 YEARS

Continued from front page.

they have proven their ability to perform in mission-critical situations such as space flight."

SpaceX holds a $1.6 billion contract with NASA to fly 12 unmanned supply missions to the space station, and the Dragon is the first privately developed spacecraft to visit the International Space Station. Dragon is not only the first privately developed spacecraft to successfully return from Earth orbit, but it is also the only reusable spacecraft in operation today.

Aversenti continues, "We understand that space travel is one of the most exciting yet most difficult of all human endeavors. General Magnaplate is constantly innovating and developing new coating technologies and are proud that our coatings are playing a part in the dawn of a new age of space travel. This is another momentous step in the 60 year history of our company."

MORE NEW COATING TECHNOLOGIES

While General Magnaplate is proud to celebrate a milestone this year, the Company has certainly not been resting on its laurels. In fact, the R&D department has been busier than ever developing new coatings, one of which is Magnamax-HT™, a new solid lubricant coating that offers low friction properties to metal parts for lubricity and release at extremely high temperatures.

Magnamax-HT can be designed into many of General Magnaplate's existing, industry-tested coatings (including Nedox® and Plasmadize®) to enable them to withstand continuous operating temperatures of up to 850°C* (or 1400°C in vacuum and 1800°C in inert gas) where conventional dry-film lubricants/polymers fail to perform.

Magnamax-HT delivers friction properties as low as 0.168 (static) and 0.179 (dynamic) at room temperature and as low as 0.266 at 800°C. Suited to tribological applications, the new coating technology meets the demand for lubricity with higher temperature stability. As well as offering thermal conductivity and low thermal expansion, the coating also resists oxidization.

Edmund Aversenti, COO/President of General Magnaplate, comments, "We are proud that this highly innovative coating technology is environmentally friendly and non-toxic too because it does not contain any fluorocarbons or graphite. Environmentally-conscious manufacturers will also be pleased to know that Magnamax-HT can substantially reduce friction and wear which directly reduces energy consumption when used in combination with some of Magnaplate's existing technology."

In addition, General Magnaplate has also announced the launch of its new MAGnanoSHIELD® coating technology which provides antimicrobial protection for metal parts while delivering a low coefficient of friction, water-resistance, wear and corrosion resistance, and release properties. This coating technology protects

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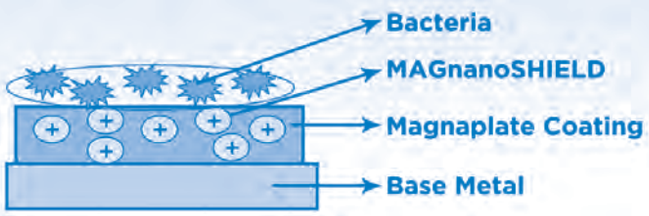
MORE NEW COATING TECHNOLOGIES *Continued from page 5.*



against the risk for contamination to equipment during the manufacturing process that can lead to food borne diseases.

Offering a bacterial reduction of greater than 99.9999 percent*, MAGnanoSHIELD can augment many of General Magnaplate's industry-tested, FDA-compliant protective coatings. The combination of MAGnanoSHIELD with these coatings (including Nedox® and Tufram®) offers tremendous functionality to design engineers, while improving corporate sanitation and health programs. MAGnanoSHIELD does not change the visual appearance of the coating.

Applications for the new coatings technology include food processing and packaging equipment, pharmaceutical and nutraceutical packaging, medical devices and cookware manufacturing.

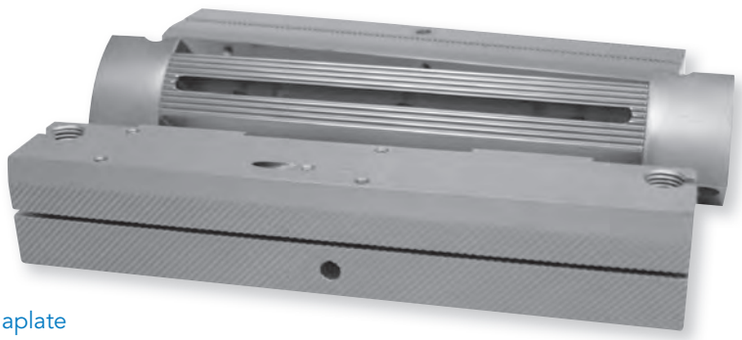
Depending on the requirement of the application, the coating prolongs part life by protecting it against wear and abrasion. Additionally, the low coefficient of friction also ensures an easy-to-clean surface which reduces the need for caustic and acidic chemical wash-down solutions. Corrosion resistance will protect against wash-down solutions, where required.

Finally, General Magnaplate has also introduced its new Magnaplate 10K™ series of high-performance coatings developed to deliver outstanding release properties to ferrous and non-ferrous parts exposed to continuous temperatures of up to 900°F, or intermittent temperatures of 1000°F.

Ideal for use in food processing and packaging applications, which often require the use of high-temperature baking ovens, the FDA-compliant series of water-based coatings provides parts with a low coefficient of friction, low surface energy and high water repellency. The 10K series coatings also protect the substrate from oxidation at high temperatures.

In addition to providing the release properties required for these types of applications, the low coefficient of friction delivered by the 10K series also ensures an easy-to-clean surface which reduces the need for caustic and acidic chemical wash-down solutions. The coatings deliver abrasion resistance, for longer part lifetime, and corrosion resistance to protect against wash-down solutions, where required.

According to Edmund Aversenti, COO/President of General Magnaplate, until now coatings have typically struggled to perform under these types of elevated temperatures, including fluoropolymer coatings. "The extremely high temperature tolerance of the 10K series of coatings opens new possibilities for the food processing and packaging industries, where coatings have failed to beat the heat. For example, packaging throughput can be increased by using higher temperatures to increase the speed of sealing operations."



Seal jaws treated with Magnaplate 10K Series coatings enable quick release at temperatures up to 1,000° F.

*Independent test data available directly from General Magnaplate

For more information, or to request literature on any of our "synergistic" surface enhancement coatings, contact:

General Magnaplate

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