THE IMPREGNATOR

IN THIS ISSUE

Superior Sealing Solutions

Sen Group unveils its Corporate Logo

Metal Impregnations India Private Limited (ImpregSeal), was established in the year 1990 as an Indo German joint venture between Sen Family and IMP Germany. In March 2019, the Sen Family completed the takeover of 24% shares held by IMP Germany in ImpregSeal.

Speaking on this occasion Mr. Saibal Sen and Mr. Probal Sen, on behalf of the Sen Family highlighted that ImpregSeal today is truly a Proudly Indian company, wholly owned by the Sen Family. Further elaborating they said, "With this acquisition ImpregSeal is a truly Make In India manufacturing company keeping in line with the focus of our honorable Prime Minister Shri. Narenda Modi".

Spanning over three decades ImpregSeal today has installed and provided impregnation services to 15 countries across the globe, and is expanding its horizons further. On this occasion the group released its new brand identity by unveiling their corporate logo.

HOMAGE

Manash Sen

Industrialist & pioneer par excellence

Shri. Manash Sen, covers his faculties as a pioneer of vacuum impregnation technology in India, as a visionary founder of Sen group of companies, and as a patriarch who imparted the right mindset to his next generation to take his legacy forward. Mr. Manash Sen will always remain an inspiration to countless many through his life and works.

Manash Sen, one of the pioneering Indian foundryman par excellence with more than 50 years of total experience, was also unparalleled, for his knowledge of non-ferrous metal castings and associated industries. (Continued Page No: 2)

Sen Family acquires the Share holding from Internationale Metall Impraegnier GmbH to wholly own Metal Impregnations India Pvt Ltd

(Continued from Page 1)

The Sen Brothers high lighted that the logo depicts the ability of the Sen Group to cater to the Superior Sealing Solutions for casting porosities to the global industry based on the fundamental principles of being organic and environment friendly.

The Sen Group is comprised of ImpregSeal, TeknoSeal and VacSeal with ImpregSeal providing impregnation systems, TeknoSeal providing the full range of the globally approved TSP Impregnation sealants, and VacSeal providing customers with doorstep impregnation.

"With this acquisition ImpregSeal is a truly Make In India manufacturing company keeping in line with the focus of our honorable Prime Minister Shri. Narenda Modi".

Saibal Sen
& Probal Sen

Manash Sen pioneered the first low pressure die-casting foundry in India

(Continued from Page 1)

Mr. Sen, born on 26 January, 1933, had a privileged education: he passed Senior Cambridge from the University of Cambridge in 1950, and Intermediate Science from La Martinere College, Lucknow two years later. In 1954, he graduated in Science from the University of Lucknow. Three years, he was among the second batch that graduated in Mechanical Engineering from BITS Pilani.

He later undertook a number of specialized trainings. From 1967-68, he was with Kolben Schmidt in Germany, where he trained in designing dies, core-making, fettling, inspection and machine design for LDC, HPDC and GDC processes.

In 1983, he went to Bulgaria to learn counter-pressure die-casting technology for aluminium wheels, specializing in counter-pressure processes for introduction as an advancement to low pressure technology. He also completed an assignment as part of a joint project with the Government of Bulgaria.

Mr Sen began his career as an engineer. From 1958 to 1961, he worked with Union Carbide in the tool room, and then in aluminium extrusion die designing with Eveready. He also worked in their tool room for a manufacturing plant for torches.

From 1962 to 1967, he worked as the manager of tool room and die design in Binani Metal Works Limited, Kolkata, a non-ferrous die-casting foundry for aluminium and brass castings. He spent the next 30 years as general manager in Atlas Automotive Components Private Limited. Mr Sen was the first employee of Atlas. He established the company, taking over from Greenfield stage. He also pioneered the first low pressure die-casting foundry in India. With German collaboration, Atlas began commercial production in 1969.

It would go on to become the largest aluminium foundry in western India. From March 1997 onwards, he acted as Chairman of Sen group of companies, the leading conglomerate in India for vacuum impregnation of castings and manufacture and impregnation machines and sealants.

Global Auto Major relies on **ImpregSeal** for its **Smart Manufacturing Process**

ImpregSeal have successfully commissioned a state of the art Next-Gen Industry4.0 compliant Robotic Impregnation Line to process fully machined cylinder blocks and other engine parts. Powered by the Impregmax software the ImpregSeal vacuum impregnation systems are trusted and sought after by most modern automotive project engineers worldwide for their impregnation requirements. From component traceability to complete statistical process control of all parameters – the machine does it all!

More than a buzz word, Industry4.0 and Smart Factory is becoming an important part of the manufacturing process globally. Industry4.0 is more about customer oriented manufacturing, each processes becoming flexible, answerable, and intelligent and all in all bring great savings.

Due to the advent of Artificial Intelligence (AI) and Internet of Things (IoT), the demands for stringent process quality control and complete traceability of every production process the component been subjected during its manufacturing has made it mandatory for all production equipments to give complete data. This has resulted in production processes becoming independent of human intervention and control. This process monitoring and control coupled with reliable and trusted automation together makes the perfect package for any smart manufacturing facility.

“The ImpregSeal Robotic Impregnation machine is perhaps today the ultimate solution for efficienty impregnation coupled with extremely low cycle times”, says Suryakant Jadhav, General Manager Production of ImpregSeal, possessing

"Impregseal always enjoyed its technological leadership in the impregnation market for adapting latest manufacturing techniques in our machines"

Suryakant Jadhav
General Manager, ImpregSeal

global experience of over three decades in impregnation technology.

Recently ImpregSeal executed an Industry4.0 compliant fully automated impregnation line to a global automajor, being a preferred supplier.

"Thanks to the digitization of manufacturing, the entire process of impregnation is also required to be digitized for capturing real time data", added Mr. Jadhav.

The new impregnation line equipped with the ImpregMax software can capture real time data during the whole impregnation process. The customer can find out which component is loaded, what are the process parameters followed during the impregnation process of that component, all real time data will be stored and integrated with the customer's MES system.

ImpregSeal is on the path of innovating newer technologies for porosity sealing and has established itself as a leader developing its machines to be more efficient and reliable with least downtime. "Impregseal always enjoyed its technological leadership in the impregnation market for adapting latest manufacturing techniques in our machines", says Mr. Jadhav.

ImpregSeal - Metal Impregnations India established in the year of 1989 is a global leader in manufacturing fully and semi-automatic systems, and the factory is located in Pune. All ImpregSeal machines use the TSP range of impregnation sealants, a proudly Indian brand, manufactured by Teknoseal Engineering Solutions, one of the group company, used by most global automotive and their component manufacturers. For more details do visit www.impregseal.com

Moresco Corporation opens its Indian Manufaturing facility at Ahmedabad

From right: Yasuo Sakane, CTO, Director, SEO, MORESCO Corporation, Motohisa Morozumi, COO, Representative Director, President, MORESCO Corporation, B.G. Kulkarni, Managing Director, JFE Engineering India, Junichi Iwaki, MEO, Division Director, Global Division, SUMITOMO MITSUI CONSTRUCTION CO., LTD., Tamio Akada, CEO, Representative Director, Chairman, MORESCO Corporation, Takashi Takeuchi, CFO, Director, Senior Managing Executive Officer, MORESCO Corporation

MORESCO the Japanese global manufactuer of one-of-a-kind products, such as specialty lubricants, hotmelt adhesives recently opened their Indian manufacturing facility located at Ahmedabad, Gujarat.

The plant is owned and operated by MORESCO HM & LUB India Pvt Ltd, which was established in India by the MORESCO Corporation. The plant will produce special lubricating oils used in the manufacture of automotive parts, and hot melt adhesive for assembling paper diapers. With world class technology MORESCO DIE CASTING LUBRICANTS have long been recognized as industry leaders. Coupled with their commitment to customer satisfaction of die casters who seek to improve their quality, productivity and profitability. Since then MORESCO have continually developed innovative solutions.

VacSeal, the Sen Group company is represenditng MORESCO Die Lubricants in India.

TeknoSeal makes its presence felt at GIFA 2019

TeknoSeal Engineering Solution, the global leader in impregnation sealant technology visited GIFA 2019, the globally renowned trade fair for the metals and allied industry, as part of its global outreach initiative, held from June 25 to 29 at Dusseldorf, Germany.

In the four successful technology trade fairs GIFA, METEC, THERMPROCESS and NEWCAST impregnation process finds its applications mostly in automotive, aerospace, engineering, and electrical sectors.

TeknoSeal, represented by its Chief Executive Officer Rajendra Newadkar's visit was aimed at leveraging this global platform to strengthen ties with its existing customers and global associates, build new relationships with potential customers, and exploring partners.

It was an excellent opportunity to assess global competitiveness in the sealant industry and also interact with the customers about the new development made by TeknoSeal in India.

TeknoSeal witnessed some of the new technological developments such as 3D printing for cars and moulds. It also helped TeknoSeal make its presence felt among many die castings manufacturers from the Asian region specially India and China.

Mr. Newadkar sounded optimistic about the future of impregnation process as he says, "We are moving ahead for BHARAT VI norms and also the focus is on electrical vehicles, so people will switch to lighter castings. Hence impregnation process industry will be on an accelerated path."

For more details visit www.teknoseal.com

TeknoSeal Secures NSF approval for ANSI 61

NSF, a partner of World Health Organization (WHO) for Food and Water Safety and Indoor Envi-ronment certifies TeknoSeal products, pioneer in manufacturing vacuum impregnation sealant from India. NSF/ANSI 61 testing covers all products with drinking water contact from source to tap, and determines what contaminants may migrate or leach from your product into drinking water. It also confirms if they are below the maximum levels allowed to be considered safe. The certifications are recognition of TeknoSeal's reliability and consistency in stringent applica-tions, maintaining quality standards across industries.

NSF approval will benefit all our customers who are catering to the drinking water and food applications. Now with the NSF approvals TeknoSeal products are having the assurance of total consistency in product quality. Teknoseal Products comes with world class accredition, peace of mind to its customers.

Our machines and sealants are manufactured to world class standards and our clients get the benefit of our accreditations with UL - USA, NSF - USA, Lloyds Register Shipping, ARAI, General Motors and many more. This ensures rigorous and detailed yearly and quarterly audits to ensure compliance.

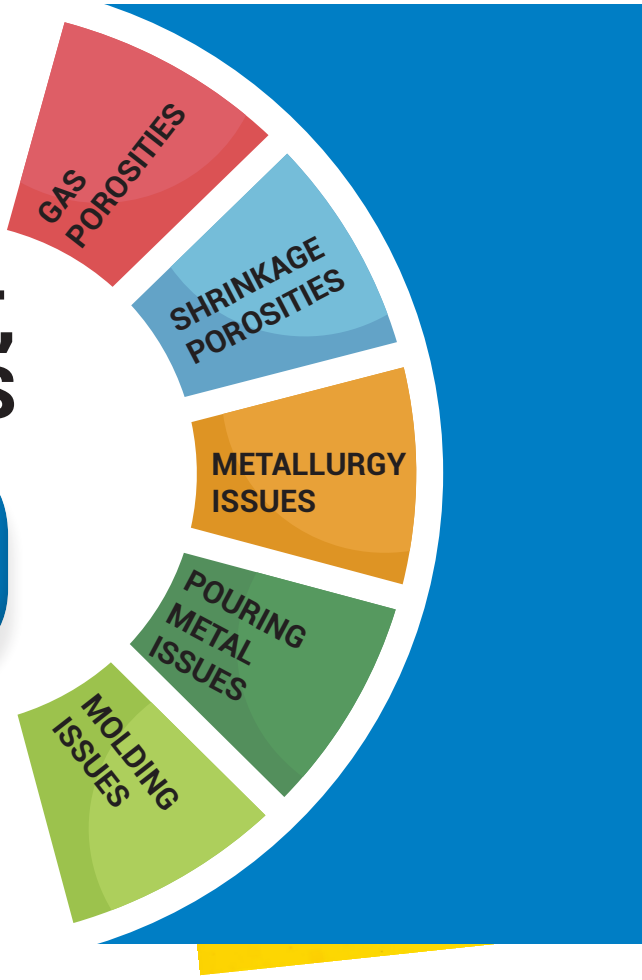
All batches manufactured are ensured of consistency in quality. Rigorous and detailed thermal and environmental and chemical resistance testing conducted as per international standards viz:USMIL 17563B & C. Our products are validated and approved by most auto majors worldwide.

OUR ACCREDITATIONS

UL | NSF | Lloyd's Register | ISO 9001:2015 CERTIFIED

ONE SEALANT, MANY SOLUTIONS

TSP99



Selecting the right Casting . Sealant can be as much intrig. problem of porosity is for metal c. manufacturers across industries.

In metal castings, porosity is typically considered any void found in the casting. Casting porosity can be caused by gas formation or solidification while the metal is moved from a liquid state to a solid state, affecting the component's structural integrity, creating a failure point.

Metal casting porosities can come in different size and shapes from sub-micron to voids greater than 10 mm to types such as gas porosity, shrinkage defects, molding defects, pouring metal defects, and metallurgical defects.

Hence, choosing a sealant is tricky until we have a thorough knowledge of the porosity type.

Vacuum Impregnation is a flexible process that seals metal casting porosity of all types. Specifically, it seals the internal, interconnecting path of porosity, which breaches the casting wall.

There are many options to choose from for different porosity types, but Teknoseal's impregnation sealants range TSP 99 is known as the customized solution provider for all porosity type, thus ensuring flexibility in using one sealant for many solutions.

Gas porosities:

Gas porosity usually occurs when the gas in molten metal or liquids gets trapped while the liquid is still pouring into the casting. The formations of small bubbles within the casting surface are gas porosities. They are categorized into blowholes and pinholes.

Teknoseal's Impregnation sealant is the best selling product which complements the vacuum impregnation technology. TSP 99 has the perfect balance of viscosity for Effective Penetration Of Porosities, and achieve excellence in sealing performance.

Shrinkage porosities:

It usually occurs in the drag portion of the casting in metals, when the liquid is solidifying in the process of casting. The defects will have a lined appearance.

Teknoseal's TSP 99 Sealant can seal the open as well as the closed shrinkage cavities.

Molding defects:

There are many reasons due to which molding defect in casting takes place, such as metal penetration, fusion and many more. These are the defect which appears as rough spots and gap grains that leads into rough casting surfaces.

Teknoseal is the leader in offering a wide range of sealants for impregnation processes to various industries and porosity defects. TSP 99 is a one-stop solution provider for Vacuum Impregnation With Innovative Solutions for many industries.

Teknoseal, the Leader In Vacuum Impregnation Technology, brings in flexibility in choosing the right sealant with its TSP 99 as "One Sealant, Many Solutions!"

Shradhanjali

LATE **MANASH MRINAL SEN**

26.01.1934 - 08.03.2019

He was an incredible person and a fabulous parent who achieved the most important thing in life before he left for his heavenly abode- 'His wonderful family'. On behalf of the whole Sen family, we thank you all for the support and wishes we have been receiving during our toughest time. May God bless him and rest his soul.

Management & Staff

Tekno Seal

Worried what to do with
POROSITY AND LEAK PATHS
formed During **CASTING PROCESS?**

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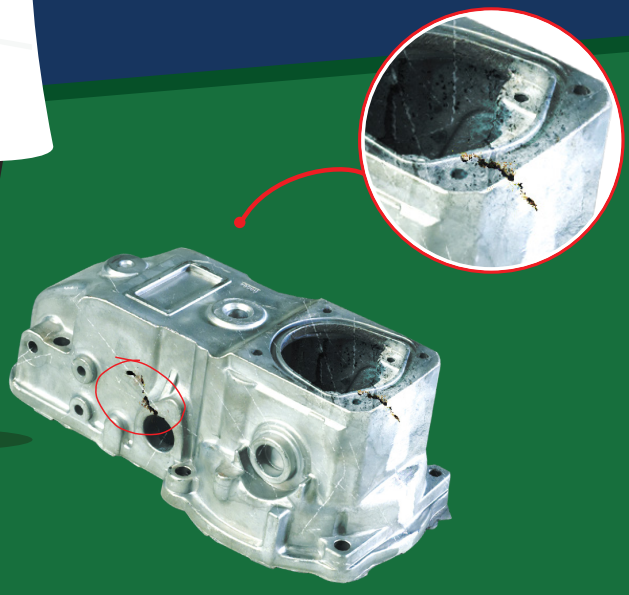

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