SEW EURODRIVE

Drive India

The SEW-EURODRIVE Customer Magazine

Eco-friendly, economical waste management solutions.

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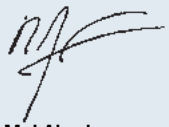
Dear Reader

Another challenging financial year has come to an end with some positive numbers on both global and domestic fronts, but no signs yet of an unambiguous industrial recovery. Domestic inflation is still under control and the central government remains strong and committed to fiscal consolidation as evidenced by the budget. In developed markets, zero interest rates and quantitative easing has finally turned the tide against deflation and anemic GDP growth. However, there is still a long way to go to deal with global and local over-capacity before a new capex cycle can start. Worryingly, India's overall bank NPAs continue to deteriorate quarter by quarter with no clear roadmap to a final resolution.

Inequality (especially of access to opportunity) and climate change caused by environmental degradation are two key challenges the world faces today. In this edition of DriveIndia we look at both these issues from the perspective of what we can do in our own way. For our cover article we showcase one of our customers, Smart Enviro Systems, who specializes in manufacturing equipment to handle solid waste, especially organic waste. And for our feature article we highlight the CSR work we have done, in partnership with Akshara, to bring computer literacy to a cluster of villages near Pune.

In our product section we feature a special gearbox from our latest X series range, specially targeted at belt conveyors for bulk material handling applications in rugged, low-maintenance environments.

I wish you happy reading!



M J Abraham
Managing Director
SEW-EURODRIVE India

Eco-friendly, economical waste management solutions.

The engineers at SEW-EURODRIVE recently teamed up with their counterparts at Smart Enviro Systems, a company that manufactures solid waste management equipment, to create tailor-made solutions for diverse industry segments. SEW's expertise helped in the methodical selection of energy-efficient gear units, quick installation and now, their robust after-sales support team services these machines in multiple locations across India.

Smart Enviro Systems is a well-diversified engineering group that specializes in the management of solid waste, organic waste, municipal waste and biodegradable waste. An OEM with an extensive operational facility of 40,000 sq.ft. in Pune, the company manufactures Organic Waste Composting Machines, Briquetting Machines, Waste Shredders, De-watering Press and Garbage Compactors.

The equipment.

The machine accelerates the breakdown of complex biodegradable waste into simpler components and deodorizes waste stock, which is then cured for a 3 to 4 day cycle to finally give out organic compost as its end-product. This compost is directly usable for field application.

The machine handles both shredding and composting by using thermophilic microorganisms to convert the shredded organic waste into compost. For the thermophilic process a temperature of 50°C - 55°C is achieved using a heating mechanism that uniformly maintains this heat throughout the mass. All the wet parts are in SS 304 stainless steel to give the machine longevity. An activated carbon filter is used to remove any foul smell. SEW gear motors are used right from the initial design stages of the system for efficient performance of mixing and shredding operations.

The challenge.

Being a new market for India and a price-sensitive one, Smart Enviro Systems wished to optimize selection without compromising on the quality of gear units, which are at the heart of the machines. Since it is equally meant for organized and unorganized sectors, the system had to be designed to sustain even the harshest user conditions.

The SEW solution.

The challenge was successfully tackled through in-depth analysis, extensive teamwork and an innovative approach.

1. SEW engineers, after detailed discussions with their colleagues at Smart Enviro Systems, used cutting-edge project planning software to optimize and select energy-efficient gear units.
2. Rigorous trials were undertaken with 100% load and the SEW installations passed every test.
3. SEW's cost-effective and rugged R-type Helical inline type gear motor units were employed. The machines have used R37, R47, R57, R67, R77 and R97 with various motor power and gear ratio combinations.

Benefits that make it unique.

- Optimized, energy-efficient, robust solution.
- For multiple applications, from house to industrial waste.
- Reliable SEW delivery enables delivery to end-users in shorter times.
- Service support from SEW-EURODRIVE in over 17 locations across India.
- Specifically designed for the Indian market, where the moisture content of the food waste is different from that in developed markets like US and Europe.

Post-installation support.

Thanks to the team effort between engineers at SEW and Smart Enviro Systems, the latter is now one of the most preferred options for waste management equipment in India. Smart Enviro Systems is known for its low-maintenance and low-breakdown machines. With constant support from SEW extending across the country, prompt post-sales service has also become a reality.

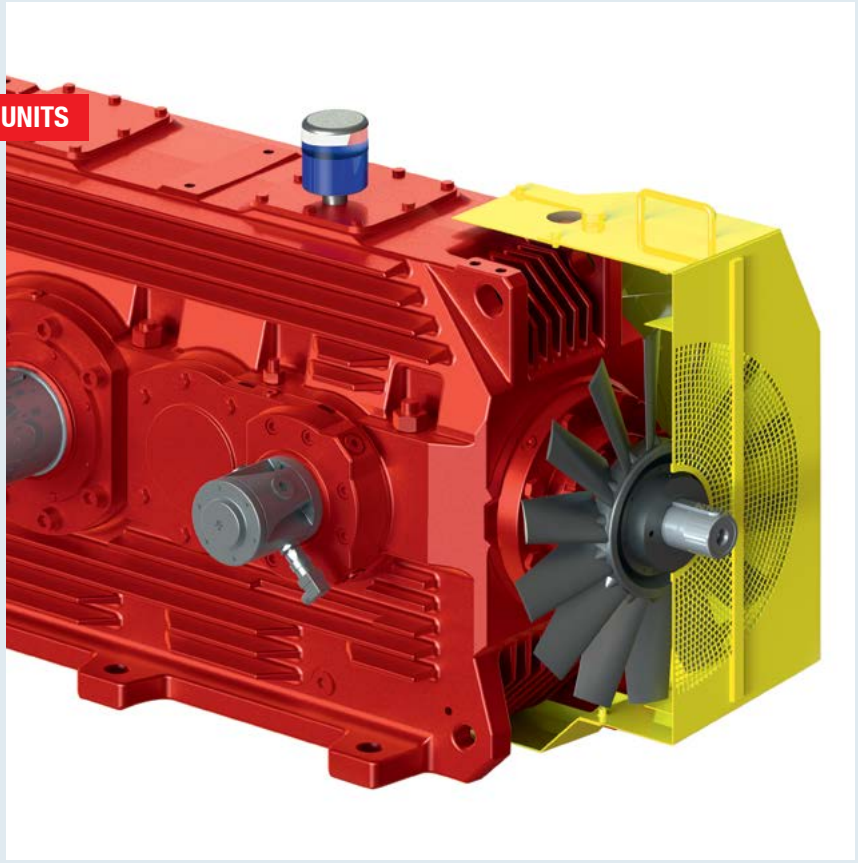
> "Smart Enviro Systems has a 40-year history of quality and service – we design and manufacture machines that work 24 x 7. SEW, a global company, helped us select proper drives and gives us valuable support for our products all over the country. We are proud to be associated with SEW."
>
> **- Dinesh Ganeshwade**
> Director, Smart Enviro Systems

To know more about these products, please visit the company website at: http://www.smartenvirosystems.co.in

SEW's drive systems for conveying applications keep industries rolling.

For several decades now SEW-EURODRIVE has been one of the leading drive technology companies in the world. SEW is trusted worldwide and in India for providing complete drive systems for conveying applications, keeping the total cost of ownership at the lowest possible levels.

INDUSTRIAL GEAR UNITS



SEW has developed a new housing concept within the X Series product platform for conveyor drives called thermal housing. The special surface structure of such housings permits a larger heat transfer area, thus satisfying the thermal rating need for BMH conveyor applications installed outdoors without forced cooling. This is achieved by specially designed ribs on the housing of the gearbox and also optimizing the housing dimensions. In comparison to the standard universal housing, the thermal rating for this housing is much higher.The unique design of this housing structure doesn't allow dust to get accumulated in the housing which further favours the thermal rating of the gearbox.

Solutions for belt conveyors.

For belt conveying systems needing high torque ratings, SEW offers modular design gear units with a specific housing concept.

Features:

- Made of proven components of X series products.
- 3-stage bevel gear unit with dedicated horizontal housing for extended heat dissipation.
- Enhanced cooling capacity with efficient fan concept.
- Wide range of available accessories from the standard X series.

Benefits:

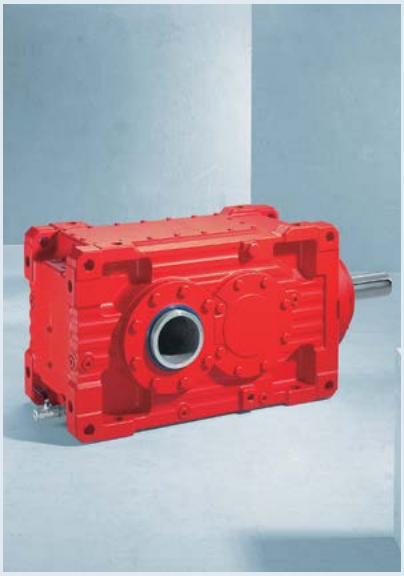
- No need for external cooling devices or bigger gear unit.
- Reliable solution for rough environments.

Designs specific to Indian needs.

In India, SEW's power transmission products have been extensively used for bulk material handling (BMH) applications, mainly in raw material production and in mining applications. In most BMH conveyors, the requirement is for 3-stage bevel helical gear boxes. For this, SEW offers the X3K type gear box.

Most BMH conveyors are installed outdoors where the ambient conditions are quite dusty. Outside temperatures can go up to 50°C and this application demands high input power and output speed. Due to these requirements the thermal rating becomes a critical issue to maintain optimum oil bath temperature. Customers prefer not to use forced cooling options since the installation condition is not suitable to maintain the external lubrication system.

This new X series gear unit with thermal housing has better thermal rating than conventional ones in conveyor applications. This enables selection of a smaller IG for the same application, saving costs significantly.



SEW expands CSR initiative with e-learning centre near Pune.

As part of its vision for a robust Corporate Social Responsibility (CSR) program, SEW-EURODRIVE India recently launched an e-learning centre at Asade Village, Mulshi Taluka Gram Panchayat School, about 40 kilometres from Pune. For this project, SEW India has partnered with Mahindra United World College and their Outreach programme Akshara. The latter works closely with about 2,000 residents in over six villages in Mulshi Taluka, empowering the rural communities here towards a brighter future with a host of community specific initiatives.

Community engagement.

The decision to launch an e-learning centre was arrived at after a detailed need-assessment study done jointly with the village community. The centre is aimed to benefit students, teachers, women entrepreneurs and farmers in the surrounding communities. A series of e-learning modules are being conceived, developed and imparted to students by the Akshara team, keeping in consideration the specific needs of each segment, to be rolled out in phases.

Highlights of the initiative.

- Computer lab operational from 20th June, 2016.
- Classes begun for 5th to 10th standard students, college students, women entrepreneurs and villagers.
- Excellent response and spectacular participation from each of the beneficiary groups.
- Theoretical and practical training being given to participants. Over 130 classroom sessions conducted so far.
- Activities completed as per shared curriculum: Basics of MS-Office, Introduction to MS-Word 2016, Basics of PowerPoint, Effects and Applications of Paint.
- Ongoing activities as per shared curriculum: Keyboard typing course and Basics of MS-Excel
- Future plans: Excel in detail, Typing course, Certificate distribution and motivation for more people to join.

SEW's CSR program.

SEW is committed to giving back to society through planned and structured CSR initiatives. Our vision is to focus on projects in the areas of skill development, learning and training, in keeping with the basic tenets of our brand.

We aim to identify and partner with organizations that have a proven track record in social entrepreneurship; as well as engineering colleges that would benefit from our engagement.

The CSR initiative is driven by a small group of passionate individuals and extensively supported all across the company. Beyond just financing such initiatives, the teams get fully involved in projects, from setup to ongoing operations, offering in-depth support and expertise on a consistent basis.

> "Spandan Computer Centre, supported by SEW-EURODRIVE, has become an instrument to bridge the gap between rural parts and technologies. This centre not only helps students and the community learn computing skills but also opens up a new world before them which they would have never dreamed of exploring. Further, this brings significant qualitative changes in their personality with enhanced self confidence through computer literacy."
>
> - **Dr. Harsha Joshi**, Director, Akshara

DID YOU KNOW?

A bubbly idea whose time finally came.

1957 was a very imaginative year, you could say. Two New Jersey engineers, Al Fielding and Marc Chavannes, set out to invent a three-dimensional wallpaper concept. They sealed two shower curtains together, trapping a smattering of air-bubbles in between. This gave them 3D wallpaper for sure, but it found no buyers. Being very inventive, Al and Marc then tried to market their idea as greenhouse insulation. This found no takers either.

Three years later Frederick Bowers, a marketer at Sealed Air, finally found the perfect use for the invention. When IBM launched their new 1401 series, Bowers had the idea that Bubble Wrap will prove excellent packaging material for the computers! And that's the day our two inventors' crazy idea finally came to revolutionize the packaging industry.