

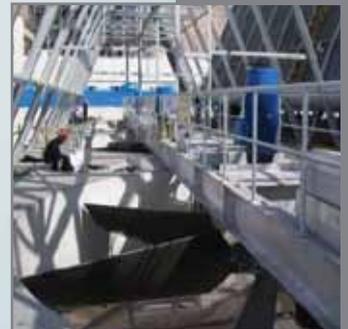
SEW
EURODRIVE

Drive *India*

The SEW-EURODRIVE Customer Magazine



MACC GEARBOX.
Read more on Page 2.





Dear customers

I am pretty sure relief is a widely shared sentiment at finally seeing light at the end of the seemingly never-ending tunnel of industrial slowdown, idle capacity and stalled projects. Every major slowdown transforms the business landscape in some significant way and the challenge for all of us now is to see where the new opportunities lie in this emerging recovery. Here at SEW India, we have used the previous slowdown to add an assembly plant in Chennai and we have used this slowdown to add one in Pune, because we see speed, local knowledge and high quality support becoming increasingly relevant to you, our customers, as we all gear up for growth again.

As labour costs head inexorably upwards - slowdown or no slowdown - and budgets remain tight, reliable automation projects done by in-house engineering teams with a responsive and responsible technology partner is one way to go. In this issue, we cover one such project done by Leyland-Deere in their plant near Chennai.

Apart from being THE dominant gear-motor supplier worldwide, SEW is now the second largest manufacturer of industrial gearboxes, covering the entire range of products save for wind and VRM applications. In this issue we cover our MACC solution for Cooling Tower applications from our gearbox product range.

In our third main article Jan Repplinger, who co-ordinates emerging markets and central functions for SEW worldwide, shares his thoughts on the global business and on India.

I wish you happy reading!

M J Abraham

Managing Director
SEW-EURODRIVE India

SEW leads the way in customization with Leyland-Deere.

A recent partnership between SEW-EURODRIVE and Leyland-Deere is a great example of a problem-solution model that can be applied to all industries, however diverse. The dynamic, reliable and user-friendly Welding Positioner Application that was installed at the premises of Leyland-Deere saw the perfect co-ordination, team-spirit and technical prowess of the project teams of both companies.

With very strong internal expertise in mechanical engineering, Leyland-Deere needed a partner with a team that was equally strong in drive and automation technology. An in-house automation project requirement was necessitated by the many problems with the conventional welding positioner technology that was in place.

The story so far.

The conventional system at Leyland-Deere comes with two chief components – those for the welding fixture that are used to arrange and hold the metal plates, and those for the welding positioner that are used to rotate the welding fixture to facilitate the welding process. The fixture rotates 360-degrees and the operator has to move it forward and reverse for easy access to the welding area. A hydraulic system is used to hold and lock the plates.

Disadvantages of the conventional system.

- The cycle time is a slow 120 minutes
- For each operation the side table needs to be removed and fixed
- The operator has to move up and down for each position
- In some positions the welding operator needs to go inside the fixture
- Restriction – The welding fixture must not touch the floor at any index angle position

Why SEW?

The engineering team at Leyland-Deere found that

a readymade solution would not meet their needs. What was required was a Drive and Automation technology partner who could work with them to find a tailor-made solution together. SEW was the perfect choice thanks to four key parameters: Product range, local competence, willingness to work closely with end-users and strong after-sales support.

The new solution.

The basic tenet of the new application is that it converts the conventional type positioner to the elevated type positioner. Both the head and the tail stock are made with a lifting mechanism. Indexing mechanics is employed to rotate the welding fixture and both index and hoist axes run with position interpolation.

"The SEW Team displayed a comprehensive understanding of our application requirements. Due to the interweaving of Technological Intelligence from both teams, the 10 T Mass moves, revolves and positions itself just the way it is needed. Thanks to the SEW team for their wholehearted support in the entire project and more specifically their efforts to stay within budget."

B. Saravana Kumar
Sr. Manager – Manufacturing, Leyland-Deere

The new system offers benefits like reduced cycle time, easy and safe operation, robotic integration and a single source for all components.

The components for this solution.

1. Asynchronous Servo motor with helical bevel gearbox and absolute encoder for index axis	01
2. Asynchronous Servo motor with helical bevel gearbox and absolute encoder for hoist axis	02
3. 2.2 Kw MOVDRIVE with technology function for index axis	01
4. 7.5 Kw MOVDRIVE with technology function for hoist axis	02
5. Advance MOVIPLC with housing	01
6. 7-inches color touch-screen HMI	01
7. Control panel	01

Benefits of the solution.

Cycle time:

- Reduced from 120 mins to 75 mins
- Production significantly increased to 125%

Easy operation:

- Can be moved directly to any position from the current position
- No side-table required for the operator
- High-speed operation

Safe operation:

- Exact positioning
- Both axes interpolation
- Safety lock

Technological superiority:

- Robot integration possible
- Single source for all components

DID YOU KNOW?**From World War I to your kitchen.**

After World War I, electronics genius Percy Spencer thought his role as an inventor was over. After all he had done his bit in contributing to instruments of war. Then in 1945 Spencer was fiddling with a magnetron when he felt a strange sensation along his legs and near the pockets of his pants. It was a sizzle. Spencer dipped his arms into his pocket and discovered that a bar of chocolate there had started to melt!

"Damn," he said at the sticky chocolate, then "Wow!" at the possibility. It was the microwave-emitting magnetron used in the guts of radar arrays. And it was the original genius of a man who could turn accident into invention. Spencer realized the culinary potential of the microwaves. The microwave oven sits in your kitchen today, an efficient reminder that a true inventor never really retires.

**The coolest accessories for air-cooled condensers.**

With its wide manufacturing, assembly, sales and service network across the globe, SEW-EURODRIVE presents its dedicated 2-stage Gear Unit Series for Air-Cooled Condensers. These MACC Gearboxes are conceived with design principles based on experience and a well proven existing industrial gear unit series.

SEW's MACC Gearbox is reliable, powerful, quiet and efficient with high-quality internals, rigid housing and bearing arrangement. It caters to an exceptionally large variety of application demands, ranging from high torque to fan impeller loads, extensive speed range including wind-milling, low noise level and support of motor weight. The Gearbox has a high thermal capacity, thanks to its large housing, cooling ribs, optimized oil level and oil circulation. It offers a low-noise axial cooling fan as an option for increased thermal capacity. For aggressive ambient conditions, SEW offers reliable surface treatment too. Furthermore, all necessary optional accessories are provided in a maintenance-friendly manner, accessible from the walkway on the fan bridge.

Why MACC?

SEW's MACC Gearboxes have a lot to recommend them over anything the market can offer. Some significant selling points of this product are listed below.

1. Dedicated Housing for ACC application with:
 - Increased thermal ratings
 - Static brake system for maintenance
 - Increased housing stiffness (larger housing and weight)
 - Large mounting foot surface for optional vibration dampers
 - No outside oil piping
 - Full range of accessories' options
 - Proven gearing (hundreds of references worldwide)
 - High fan thrust load carrying capacity on LSS
2. Production in Finland and China, including dedicated sales support.
3. SEW's global support is another definite cut above the rest.

Standard features

- Special housing with dry well on LSS
- Enhanced motor lantern
- Elastic coupling on HSS to accommodate manual brake
- Internal lubrication pipes with internal shaft end pump
- Shaft end pump operating on both rotating directions
- Oil filter
- Pressure switch
- Breather silicagel, anti-humidity air filter
- Dipstick

Accessories

- Axial cooling fan on HSS with air-flow guards
- Static holding brake system with safety control
- Junction box for electric control device connections
- Special painting

- Backstop, internal design
- PT 100 with thermowell
- Oil heater with thermowell
- Central bolt & retainer washer on LSS
- Assembly of customer fan coupling hub on LSS by SEW-EURODRIVE
- Magnetic drain plug
- Oil drain valve

Product designation

- SF = 2 on motor power (AGMA or DIN)
- Bearing calculated modified lifetime: 50,000 hours; 100,000 hours on LSS
- Special ratios available
- Housing material; GG20/25
- Gears; state-of-the-art case carburizing steels
- LSS; state-of-the-art quenched and tempered steel
- Bearings; state-of-the-art high-quality brands

THUS QUOTH

The true sign of intelligence is not knowledge but imagination.

-- Albert Einstein, Physicist

India - A cornerstone in SEW's growth strategy.

The path towards the tomorrow of manufacturing automation leads right through India, reveals **Jan Reppinger**, Head of Central Functions Sales at SEW-EURODRIVE, in an exclusive chat with **Madhura Krishnaswamy**.



How have you seen India's business climate change in the last decade or so?

India is a market that is characterized by high volatility, even by Emerging Market standards. We have seen times of huge growth and even bigger aspirations, as well as periods of depression with pretty much no growth at all. Like in the last two years. This cyclical volatility is unique to India in my experience; there were two downturns in India ever since I started on this role, whereas China had one and then the market more or less steadily went up. Brazil and Russia also went only up. But in India, you have these development waves - they go down, then they go up rapidly and then down again.

How is India perceived globally as a manufacturing hub, compared to other developing economies like China and Brazil?

The development of the Chinese market in manufacturing was unparalleled in the last 10 to 15 years. China literally became the workshop of the world, with massive production capacities. Naturally this leads to high dependencies on both sides. Nowadays, with rising wage costs and an imminent demography issue, many companies start to look for alternatives. The Indian market, that developed far less dynamically but is probably much more sustainable, will be definitely considered by them.

Which way do you see Indian industry moving in the future? Which Indian industries do you think have what it takes to compete globally?

Indian companies are in a lucky situation to have a very large domestic market. If you are successful here, you easily can reach the critical size to compete abroad also. My guess is that – besides software services and business process outsourcing, which India is already widely reputed for – we will also see global success in lighter-manufacturing industries such as automotive components, two-wheelers or textile production. Basically we could see any industry rise that can cash in on the availability of skilled workforce at highly competitive costs.

Which are the countries that are leading-edge when it comes to innovation? Where does India fit in?

In our industry, i.e. manufacturing automation, I would say Germany is still in a leading position, followed at some distance by Italy and Japan. However, the introduction of the

Tata Nano – even though it turned out to be not so successful initially – made even the last European company, and that not just in the automotive industry, realize the innovation potential of India. The buzz around frugal innovation and products that are not top-end but good enough, robust and that catered to a mass market did not stop since then. It is no wonder that more and more multinationals open up big engineering centers in India. I am convinced that in the long run it will not be countries but brands that stand for innovation. And the successful ones will definitely make use of Indian brain-ware.

You work across multiple countries and industries. What are some of the big emerging trends that you see?

In the past Emerging Markets were generally characterized by the need for robust down-to-earth products focusing on quality and durability as their main purchasing criteria. You could be successful by offering the value-proposition that you offered ten years ago in Established Markets. Nowadays the adoption speed is much faster. For example we see the need for cutting-edge mechatronic solutions in India at the same time

that we see it in Germany. And not only are similar requirements adopted faster, they are in fact enriched with specific local demands. Luckily, we do have the products and the local expertise to offer fitting solutions to this.

Where does India fit into SEW-EURODRIVE's global strategy?

India is a cornerstone in SEW-EURODRIVE's growth strategy. We firmly believe in the potential of this market. When we invested in our second plant in Chennai in February 2009, we were in a slowdown. Two years later we could grow by over 70%. Now, despite the economic situation of the last two years, we recently opened our third assembly plant in Pune. And again we will see the market pick up. Our aspiration is not

only to be a reliable partner to the industry but also to be a technological ambassador that helps to successfully

transform Indian manufacturing as a whole.

What are some of the new innovations and applications that Indian customers can expect from SEW in the next couple of years?

We supply an entire range, from energy efficient power drive systems to complete solutions for factory automations. For our customers Industry 4.0 will not be just a buzzword, but can be broken down towards measurable effects, like significant reduction of energy consumption and higher productivity in operations. For both key drivers we do have some really promising products and solutions in the pipeline.

Work apart, what are the things that you look forward to when in India?

First of all I enjoy the warm and friendly atmosphere in our Indian subsidiary. Generally it seems that despite numerous challenges, everyone seems to be positive and focused on opportunities. This attitude, together with the unique diversity (offering endless adventures and experiences for a foreigner), is what I am thrilled about. One of my traits is that I am curious, and India really gives me a lot to be curious about.

"In the long run it will not be countries but brands that stand for innovation. And the successful ones will definitely make use of Indian brain-ware."