RANE (MADRAS) I **WIDENING SCOPE OF GROWTH WITH ITS OWN CAPABILITIES**

One of the most important aspects of an automobile is the way in which it rides and handles, and this is greatly achieved by the suspension and steering systems. Rane (Madras) Ltd (RML), global supplier of steering and linkage systems, as well as diecast components, is one of the largest players of these products in the country. We recently spoke to **S Parthasarathy, CEO, RML, and Gowri Kailasam, President, Steering and Linkage Division, RML** on the market trends, recent products and development activities of the company.

RECENT TRENDS

Rane (Madras) Ltd is structured into two business divisions – Steering and Linkage Products Division, which accounts for 85 % of the company's business, and Diecasting Products Division contributing the rest. Over the next five years, Parthasarathy expects the diecasting business to increase its share to a fourth of the total business.

The advent of hydraulic power steering systems has helped the automotive industry move away from manual steering systems. However, passenger vehicle makers are mostly offering electric power steering (EPS), causing a recovery of the market for mechanical steering systems globally. "This move is opening up tremendous opportunity for RML both within India and globally," Parthasarathy said. The main challenge in the development of mechanical steering systems in current times has been the reduction of vibrations put out by the system, which translates into noise. Once vibrations are identified, product-specific design changes are made to reduce such noise. These design changes are patented and proprietary in nature, Kailasam noted.

The housing for mechanical steering is a complicated design, which requires very high porosity and accuracy levels, and this housing is manufactured by the company's diecasting division. Although no real technological advancement has been made in the method of diecasting, a fair amount of work is being carried out for die design, Parthasarathy said.

The company is working on mould-flow analysis of dies, to ensure controlled levels of porosity on diecast components. RML uses computer-aided engineering (CAE) to make parts, which is not very common in the diecasting industry, he added.

Another important area that the company is working on is the production of low-weight components that assist in increasing the efficiency of vehicles. RML is considering different process technologies, as well as supplementing certain steel components with plastic to achieve weight reduction of products, Kailasam said. For example, certain housing covers that were traditionally made of steel were later manufactured out of aluminium, and are currently made of plastic. Process technology changes include the shift to manufacture products by cold forging from hot forging, and change from gravity diecasting to high pressure diecasting.

NEW PRODUCTS & R&D

RML entered the hydraulics segment with the development of hydraulic steering systems, valves and cylinders for the farm tractor segment. The hydraulic steering systems for farm tractors are known as hydro-static steering units. This is a nascent business for RML, but Kailasam is positive about its growth prospects. A separate facility has been set-up in Mysore for this sector, while the engineering team has also been strengthened. The company has been working on hydraulic systems over past three to five years, and is said to have a fair customer base in India for hydro-static units and cylinders.

With regards to the diecasting division, RML has begun developing timing case and timing covers, which are expected to be another significant product line for the company. These timing case and covers are high-precision and accurate components, for which the company has won business with Indian customers, Parthasarathy said. These new products are largely used in the passenger car and utility vehicle segments, he noted.

RML carries out all product design, development and testing in-house, with no external partnerships. At times partnerships limit both markets and product access, and RML does not have this problem, thereby widening the company's scope significantly. Parthasarathy added that the complete internal development capabilities of the company, which are of global standards, are one of its core strengths. The company has steadily invested in CAE over the years to assist in the early analysis of failure to ensure products are made right the first time itself.

A team of about 50 engineers constitute RML's R&D department, which is spread across the company's facilities in Velachery, Pondicherry and Mysore. The Pondicherry facility carries out testing of mechanical rack and pinions for the passenger car segment and the Velachery test facility conducts common testing for linkages. Meanwhile, the Mysore facility houses the hydraulics test laboratory of RML. On an average, RML invests between 1.5 % and 2 % of its revenues into R&D.

EXPORTS AND OUTLOOK

Currently, 15-17 % of RML's business comes from exports, and plans are to expand exports to about 25-30 % in the next few years. Parthasarathy said the focus on exports will be much higher now than seen in the past. Nearly 80 % of its products from the diecasting division are exported, and RML is also looking at beginning exports of its hydraulic products in the near future, with the export of cylinders to Thailand being the first in this direction. RML is also considering setting-up manufacturing plants overseas to expand its footprint, with likely locations being Europe and North America.

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