Rane
Expanding Horizons

PROPEL

ISSUE 20 | JANUARY 2020

CELEBRATING EXCELLENCE AT MAITHRI 2019

A RANE GROUP PUBLICATION

THE WORLD OF RANE

Rane
Expanding Horizons

Rane Holdings Limited (RHL)

Rane Brake Lining Limited (RBL)

Rane Engine Valve Limited (REVL)

Rane (Madras) Limited (RML)

- Steering & Linkages Division (SLD)

- Diecasting Division (DCD)

- Rane Auto Parts (RAP)

- Rane Precision Die Casting Inc. (RPDC)

Rane NSK Steering Systems Private Limited (RNSS)

Rane TRW Steering Systems Private Limited (RTSS)

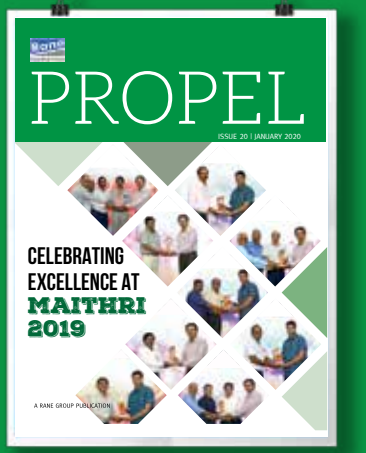
- Occupant Safety Division (OSD)

- Steering Gear Division (SGD)

Rane Holdings America Inc. (RHAI)

Rane Holdings Europe Gmbh (RHEG)

Rane t4u Private Limited

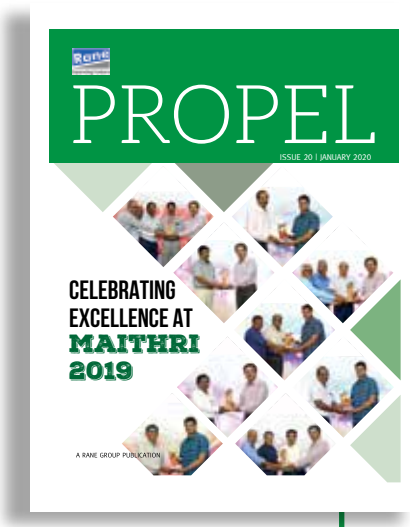


Please send in your feedback to *propel@ranegroup.com*

Copyright 2019 Rane Holdings Limited
All Rights Reserved

Content Partner:
The Smart CEO Media Labs, the content marketing and custom content arm of The Smart CEO Magazine.

For queries:
Please mail:
prem@growthmechanics.in



INSIDE THIS EDITION

'It was the best of times, it was the worst of times,' – begins A *Tale of Two Cities* by Charles Dickens. It can be said of Rane too. For the FY 2018-19, the company touched the Rs 5,000 crore mark. But since then, the industry has slowed down impacting the business.

However, the Rane team has soldiered on true to TQM philosophy to make the most of the hard times. Improving cost efficiency, optimizing plant operations and rationalizing the team sizes have been some of the initiatives introduced by the different companies that helped maintain a healthy balance sheet. *The Chairman's Note* covers this and an industry and company perspective in detail.

Maithri 2019 was not only an occasion for the senior management to meet but also to present excellence awards. Our cover story gives a peek inside the event.

Fuel efficiency and emission reduction norms are driving the evolution of internal combustion engine in the automotive sector. In *Future of Mobility*, we look at the various engine technologies that have evolved over the last decade and speeded up in the current context.

The Marketing and Sales Group (MSG) has been creating a synergy in the marketing efforts of the various Rane companies, leveraging branding strength of each for the greater good of all. In Functional Showcase, we see the purpose and approach of MSG to achieve its goals.

Employee Spotlight showcases the experiences and learnings of three employees from the materials and purchase department.

Don't miss out our other regular features – *Photo Story, Rane for Good, and New@Rane*, among others to keep abreast of the exciting developments in the company.

CONTENTS

RANE PROPEL

RPDC RECOGNIZED FOR INCREASED INVESTMENT AND EMPLOYMENT

The Logan Economic Alliance for Development (LEAD) recently hosted their Annual Business & Industry Appreciation Luncheon, in Ohio, US. Jimmy Kent Wilson, LEAD President, and Tom Harned, LEAD Executive Director, recognized Rane Precision Die Casting for Increased Investment and Employment for the year ending September 30, 2019, by presenting the company with a plaque. Harned also expressed appreciation for Rane's commitment to preserving the die casting facility, which has been a prominent employer in Logan County for over 60 years.

ORGANIZATION DEVELOPMENT EXCELLENCE AWARD AT TRANSCENDENCE 2019

Rane Group has won 'Organization Development Excellence Award' for its exceptional leadership development practices at Transcendence 2019, an annual international conference on organization development (OD), change and leadership organized by the Tata Institute of Social Sciences (TISS), held from December 12-14, 2019, at TISS Convention Centre, Mumbai. The award has been instituted to recognize exceptional cases of OD practice undertaken by organizations in India.

The theme for the conference was Future of Work and Organization Development. As part of the conference, the organizers invited conceptual or empirical papers.

The institute considered 38 cases, of which 21 were shortlisted based on their fulfilment of published criteria. These 21 cases were assessed by an eminent jury, comprising of independent or former Directors on the boards of India's leading companies and selected four winning cases, including Rane Group. Rane Group presented its case on 'leadership development' and the significant drive taken to enhance leadership capability and capacity through its enhanced leadership development initiatives, refreshed organization structure and design, and revamping the key systems and processes to accelerate the development.

PROACTIVE INITIATIVES TO COUNTER SLOWDOWN

Though the slowdown has been prolonged, Rane's cost management initiatives helped us face the worst and produce satisfactory results under the circumstances

I am happy to share that the order pipeline is healthy for steering products, valves and occupant safety products.

Q2-Q3 Update

In the automotive and related industries, we are familiar with the recession- growth cycle, and we at Rane were prepared for the latest slowdown too. However, this time it was different in that it has been a prolonged one that affected all segments. Though there were signs of slowdown last year itself, the industry reacted slowly. As a result, the recent quarters were one the most stressful in about a decade. All segments of auto industry and farm tractors saw significant drop in volumes as the focus was on cutting back on inventory. This impacted all our group companies. The anticipated recovery post elections also did not happen.

From the international standpoint, there was some uncertainty around the trade tensions.

Aftermarket business was also impacted, mainly due to liquidity constraints for distributors. However, the impact was not to the extent of OE business.

Rane Initiatives to Alleviate Impact

I am very happy to say that the group companies handled the difficult conditions very well. We decided that the best way to deal with the slowdown was to go back to the basics and worked on various cost control initiatives. It is heartening to note that these efforts bore fruit, and despite the challenges, managed to sustain a healthy balance sheet.

Some of the operational improvements that we implemented across businesses included reduction in fixed cost on items such as travel and consultancy. Sub-contracting cost was lowered by utilising in-house resources. To save on power cost and employee cost, the plants were shut down on some days.

Progress on International Business

On international business, we continue to see traction for our products. I am happy to share that the order pipeline is healthy for

steering products, valves and occupant safety products.

We have also won some orders for India die casting business. As you may be aware, the US die casting was going through challenging times, but seeing the potential, we have decided to make an additional investment in this business in view of having booked a couple of large volume orders. This provides us visibility for about $35 million revenue in near term. Operational challenges are being addressed. A very senior executive with deep operations and TQM experience has been deputed there to head the operations. Couple of people from Indian operations have been transferred to support the operational improvements.

Maithri

Maithri 2019, the third edition of annual senior management get together, saw the ACE awards getting bigger - nine awards were given as against the five awards last year. We had external jury members evaluate the award presentations. It is a matter of pride that I got a feedback from the jury that some of the High Impact initiatives and HR practices are worth benchmarking.

A sports theme was adopted in Maithri 2019 to enable the employees to reflect on parallels between sports and business. Like in sports you could win some and lose some in short term. The key is to be in the game and win in the long term.

Outlook for Q4 and Next FY

Some believe that the worst is over, and that we are likely to see some recovery in 2020-21, though the pace will differ for each segment. Till the full recovery takes place, some of the factors that will contribute to the current subdued market environment include BS 6 transition as the OEMs are still uncertain about the right product mix for BS 4, to be phased out in March 2020, and BS 6. Dealers will also want to focus on inventory correction. As a result, we will continue to manage plant utilization optimally and drive cost savings.

The passenger vehicles segment is likely to recover in the near. On the back of a reasonably good monsoon, Tractors and Two Wheelers should start gradual improvement.

Commercial vehicle segment recovery may take longer due to various factors. The excess capacity in the industry due to improvement in turnaround times thanks to GST and relaxing of overloading needs to be fully absorbed before the next cycle of growth starts.

There was capacity underutilisation due to better productivity after GST, contrasted with higher carrying capacity with axle norms and also lower freight demand on account of lower economic activity.

But we expect that the government will also announce initiatives to boost the economy and it will pick up. The union budget will hopefully address GDP growth as the key goal. However, we should be cautious till we see full recovery.

CSR Projects

Our CSR activities continue with unwavering commitment and we are happy to share that Rane Vidyalaya has entered its second year with more than 250 students. Rane Polytechnic got the NBA certification till June 2022-23.

Message for Employees

Periodic slowdown is part of our industry experience over the years. We continue to learn from these tough times as well. There is no doubt that every one of you is trying to do your best in handling the current slowdown.

We will continue to focus on fixed cost rationalisation, pursuing business development, strengthen customer relationship and respond with agility, and continue to invest in R&D to drive innovations and build products that add value.

It is a matter of pride that I got a feedback from the jury that some of the High Impact initiatives and HR practices are worth benchmarking

IC ENGINE TECHNOLOGIES

R.Ramanathan, DGM - R&D, REVL, talks about trends in internal combustion engine technologies and its impact on valve train components

The internal combustion engine technology has been constantly evolving over the last century but the last few years, especially, has seen tremendous change from a technology perspective.

The pace of change is much more pronounced in the automotive sector, which is driven by regulatory changes and consumer perceptions, than in the non-automotive sector. The two fundamental drivers for the unprecedented changes in the technology are fuel efficiency norms and emission reduction norms. They still work on the same principle, but where old 4-cylinder engines produced about 20 horsepower, modern ones can generate up to 250 hp while being cleaner and burning less fuel.

Fuel Efficiency Improvements

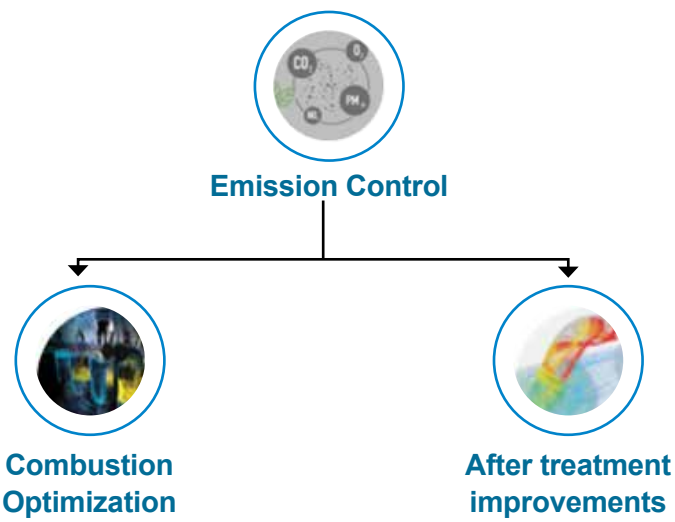
Fuel efficiency improvement is a composite consisting of power train and transmission efficiency improvements. Within the power train, friction reduction is the fundamental technology used for fuel efficiency improvement

Engine friction reduction technologies can be categorized into low friction lubricants and engine friction loss reduction.

Low-friction lubricants include low viscosity and advanced low-friction lubricant oils. Technologies to reduce engine friction losses include low-tension piston rings, roller cam followers, improved material coatings (DLC), more optimal thermal management, piston surface treatments, and other improvements in the design of engine components and subsystems that improve the efficiency of the engine operation.

Emission Reduction/Controls

The biggest change is happening in this field for sustainable growth.
Broadly, emission controls can be classified into two verticals as shown below:



Engine Technologies

In the Venn diagram below, we can see the various engine technologies that have been developed over the last decade and speeded up in the current context. These technologies have a dual role in improving fuel economy and reducing emissions.

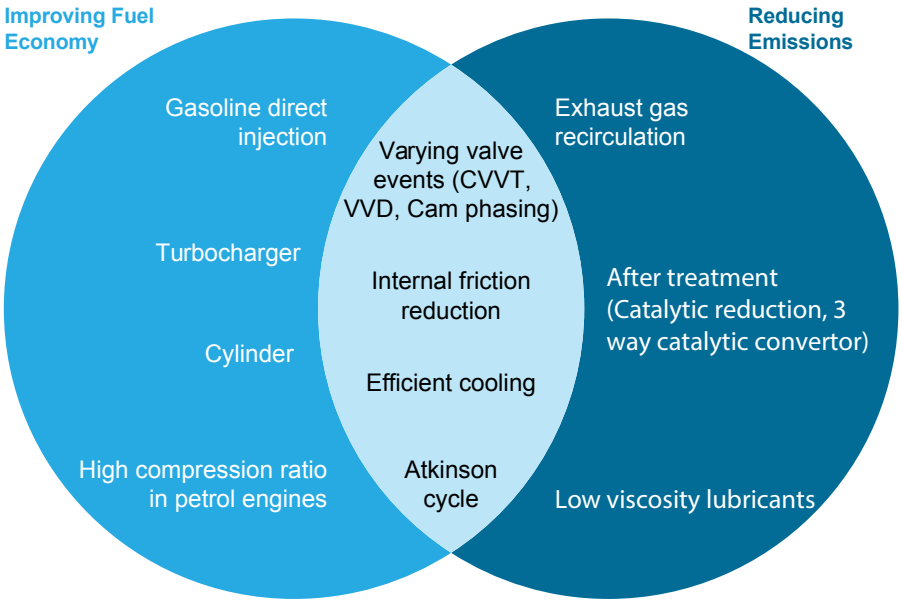
Some critical technologies that influence the valve design are discussed below in the chronological order of their evolution:

Gasoline (Petrol) Direct Injection

Before direct injection, the fuel was mixed with air in the SI (spark ignition) engine's intake manifold. Now, with direct injection, the fuel is mixed with air inside the cylinder, allowing for better control over the amount of fuel used, and variations depending on demand (acceleration vs. cruising). This makes the engine more fuel-efficient.

Variable Valve Events

Valves open and close to allow air and fuel to enter cylinders and for the products of combustion to exit. Different valve timings produce different results (more power, better fuel economy). Traditionally, that timing could not be varied, so the choice had to be made at the time of designing the engine. However, many modern engines can vary valve timing, allowing, for example, the default low RPM range of the engine to have more economical timing, and the higher RPM range to go for max power. This allows a smaller displacement engine to produce more peak power, so it allows for downsizing and fuel savings.



Venn diagram of the various engine technologies

Cam Phasing

Cam phasing is the simplest form of VVT. It varies the valve timing by shifting the phase angle of camshafts. For example, at high speed, the inlet camshaft will be rotated in advance by 30° so as to enable earlier intake. This movement is controlled by the engine management system according to need, and actuated by hydraulic valve gears.

Cooled EGR

Commonly used in diesel engines to reduce emission, cooled exhaust gas recirculation (EGR) has also been found effective in improving fuel efficiency of gasoline engines. EGR systems introduce some of the engine-out exhaust gas into the intake air stream, reducing combustion temperature by increasing the specific heat capacity of the in-cylinder gas. By lowering the combustion temperature and rate, EGR enables higher compression ratios, allows spark advance, reduces heat losses, and therefore reduces fuel consumption of both naturally aspirated and turbocharged engines. Cooling the exhaust before mixing it with the intake stream further exploits this technology's potential for improving engine efficiency. Cooled EGR also reduces fuel consumption by decreasing fuel enrichment, which is used to reduce exhaust gas temperature at high engine loads. On turbocharged engines, the lower combustion temperature also results in higher turbo pressures and higher engine output, enabling further engine downsizing and down speeding. The addition of inert exhaust gas to the intake system means that for a given power output, the throttle needs to be opened further, thereby reducing pumping losses at low engine loads. Various EGR strategies can be applied to the engine at different operating conditions to achieve optimum overall fuel economy.

Turbocharging

The Atkinson cycle delays the intake valve's closing until the piston has completed 20 to 30 percent of its upward travel on the compression stroke. As a result, some of the fresh charge is driven back into the intake manifold by the rising piston so the cylinder is never completely filled (hence the low-speed power reduction). The payoff comes after ignition when the piston begins descending on the expansion (also called power) stroke. Consistent with Atkinson's original thinking, the shortened intake stroke combined with a full-length expansion stroke squeezes more work out of every increment of fuel.

The key advantage is higher efficiency than is achievable in an Otto engine, albeit with some loss of low-speed output. The Atkinson cycle is ideal for hybrids because their electric motor(s) make up for the lost low-speed output.

Cylinder Deactivation

The name says it all. ICEs with this feature can simply deactivate some cylinders when less power is required, temporarily reducing the total volume of the engine cylinders and so burning less fuel. This feature is found in V6 and V8 engines.

Cylinder deactivation (DEAC) keeps valves closed to disable or deactivate cylinders when the load is significantly less than the engine's total torque capability, thus reducing friction, heat losses, and pumping losses. DEAC reduces vehicle fuel consumption without sacrificing maximum power.

HCCI

Homogeneous charge compression ignition (HCCI) is an engine combustion concept that works by using compression, rather than a spark, to ignite a homogeneously premixed air/fuel mixture. This technology promises significant fuel-economy benefits, which come primarily from a combination of highly lean operation and a resulting high specific heat ratio, reduced pumping losses, typically higher compression ratio and shorter combustion duration. Although there is extensive understanding of HCCI combustion, controlling the ignition timing is extremely challenging. It is difficult to prevent explosive combustion at high engine loads due to excessive dense fuel and to prevent misfire at low engine loads. Thus, the operating range of conventional HCCI has been limited to a small region on the engine map.

Increasing the compression ratio is a straightforward way to improve the thermal efficiency of an engine. Variable compression ratio (VCR) systems change the compression ratio of the engine based on the operating condition—increasing it at low engine load to promote thermal efficiency, and decreasing it at high load to reduce knock risk and improve engine performance. VCR has attracted many research and development efforts from both OEMs and suppliers for a long time. Various approaches have been proposed, including moving the cylinder heads, varying the geometry of the connecting rod, moving the crankshaft axis, or changing the piston deck height.

High compression ratio in SI engines

Increasing the compression ratio of naturally aspirated engines improves thermal efficiency. However, doing so also increases the risk of knocking, or the abnormal combustion phenomenon in which the air/fuel mixture ignites before the flame front arrives because of high pressure and temperature. This leads to reduced efficiency and engine power. Manufacturers need to resolve the higher risk of knocking associated with high compression ratios.

Stop-Start

A stop-start system temporarily stops the engine when the vehicle stops and restarts it when acceleration is needed, thus reducing fuel consumption during idling time in urban driving.

To conclude, the IC engine technology changes are both exciting and challenging and we are in close contact with the customers through our “proactive customer engagement” to keep REVL abreast of the technologies and developing our response to the same.

Impact of Engine Technology on Valves

Engine technology	Result	Impact on Valves
Gasoline direct injection	Increase in cylinder temperature and pressure	Material upgradation, feature strengthening & hollow valves required
Variable valve events	Changes in valve duration	No impact on valves
Cooled EGR	Increase in intake temperature	Seat features to be strengthened in intake valves
Turbo-charging	Increase in intake pressure	Seat features to be strengthened in intake valves
Atkinson cycle	Changes in valve duration	Changes in valve duration
Cylinder deactivation	Fuel cut off on cylinders	No impact on valves
HCCI	Increase in cylinder tempera-ture and pressure	Material to be upgraded and hollow valve technology required
High compression ratio in SI engine	Increase in cylinder pressure and temperature	Material to be upgraded
Start stop system	During idle running, entire engine stops	No impact on valves

EXCELLENCE AWARDS AT MAITHRI 2019

On October 18, Maithri 2019, a get together for senior management leaders from across the Rane Group, was held.The event was also used as a forum to present the ACE (Achieving and Celebrating Excellence) Awards for 2018-19. The recipients included:

Excellence in Plant Operations:

Runner-up:
Rane (Madras) – Steering & Linkage Division, Pantnagar

Winners:

- *Rane TRW Steering Systems – Occupant Safety Division – SP Koil*
- *Rane TRW Steering Systems – Steering Gear Division – Pump Plant, Guduvanchery*

Excellence in High Impact Initiatives

- *Rane Holdings – Rane Institute for Employee Development: Rane Manufacturing Systems Professional*
- *Rane Engine Valve: Plant Profitability Improvement of Trichy and Ponneri plants*
- *Rane (Madras) – Die Casting Division: Securing C1 Europe Business*
- *Rane Brake Lining: Collaborative Engagement for Business Growth – Two Wheeler Segment*

Excellence in HR Practices:

Rane (Madras) – Steering & Linkage Division

Excellence in Business Performance:

Rane TRW Steering Systems – Occupant Safety Division


Rane
MAITHRI
2019
GET IT ROLLING
FOOSBALL


Rane
MAITHRI
2019


Rane
MAITHRI
2019


Rane
MAITHRI
2019
Rane


MAITHRI
2019
Rane

Cross-Learning for Better Customer Engagement

S Parthasarathy, Advisor - Business Development & Business Excellence, Rane Holdings Limited shares the vision, the activities and the way forward for MSG in synergizing business development between the group companies

Please take us through the vision and top priorities of the Marketing and Sales Group (MSG).

MSG is a forum of the Group Marketing Heads. This forum is established to create synergy, learning and a common understanding across the Group of what customers expect from us. People often ask the question, who is the customer for MSG? For businesses, our customers are very evident – they are the OEMs, the retailers for the After Market, etc., but for MSG, the customers are the business and the Business Heads of the group companies; MSG should bring value to the business through cross-learning as also put systems that facilitate market understanding, customer engagement and business development in a structured and systematic manner.

For this, one of the top priorities for MSG is forecasting the vehicle industry, which is difficult, at the best of times. Forecasting helps us to understand what needs to be done, which customers to pursue, what models to pursue and how much capacity needs to be created and so on. We call this the “Green Book”, and it is released every year. Last couple of years, we have been doing mid-year forecast as well, due to high market volatility.

One of the key chapters in the Green Book is the new models that OEMs are expected to launch, which acts as a reference for specific programs that companies can pursue.

We also share business performance across the companies to understand if a particular company is doing something better with a customer, which we can all learn quickly. For instance, if someone has entered into a program with one of the OEMs, then all of us try to get on board. We share the details about the RFQs received and make sure the others don’t miss out any opportunity.

Please take us through the functioning of the MSG and its approach to working with various group companies.

MSG meets every two months. We have an agenda on vehicle industry, business outlook and we also discuss specific customer engagement programs. For example, if we want to make a special pitch with one of the OEMs, we do a Tech Day or A-Panel meeting. The top management team, including the Presidents, the Head of Marketing, Engineering Head and sometimes even with the Vice-Chairman – 15 to 18 of us – meet the OEM (Purchase, Engineering, etc.,) and make a big pitch for about half a day. This helps resolve many of the long-pending issues, and opens up new opportunities for the companies. We try to meet major customers over an 18-month period; this is apart from individual companies engaging with the customer. We try to create a ‘wave’ at the OEM level where we also transparently hear the concerns of the OEMs. This way, we try and ensure that we are always sensitive and aligned to the customer.

The OEMs appreciate our efforts and see it as a commitment from the respective companies, and how much we value their business. While price and technology matter to the OEMs, they are looking for committed partners with whom they can work long term. These kinds of Group meets provide that confidence to the OEM.

S Parthasarathy, Advisor - RHL

"While the price and technology matter to the OEM, they are looking for committed partners with the resources required to make their program successful."

The MSG also plays a major role in planning for events such as the Auto Expo (which is a once in two-year affair), and participate in Export Fairs or Exhibitions.

Please share some anecdotes on cross-learning and sharing of experience across group companies.

There are several such examples -- some of our joint venture companies such as Rane NSK, have a strong connect with Japanese OEMs; similarly, Rane TRW has a deep understanding of the Commercial vehicle market, while RML understands the tractor segments well. This understanding allows specific individuals to bring greater knowledge, trends, new models, etc., some time before the formal RFQs received by Companies. There are several instances where the other companies have pursued new opportunities based on such information.

As leader of the MSG, what are the two or three aspects that you constantly measure and monitor?

MSG is a consultative, cooperative group. Collaborative work is always exciting though at times it could be a challenge. Each business has its own challenges. Though all are willing to collaborate, it is important to understand this and realize that MSG should be seen as a Group to facilitate business and not control it. It is also important to encourage and motivate members to share their knowledge for the larger group.

What is the level of harmonization/ standardization of processes?

In terms of processes, we still work as independent companies. It is not through MSG that we are standardizing processes, but through our TQM process -- to learn from each other and deploy the best practices.

Aftermarket is a sizable opportunity. How do you ensure similar Rane brand experience across the Group?

In aftermarket, all the companies are working independently, though the end customers (mechanics) are quite often the same. The retailers are the same. Sometimes even the distributors are the same. Today, the MSG, along with key aftermarket heads have formed a subgroup and a lot of synergizing of projects is already underway. We have a group Mega Meet, monthly, where we call around 150-200 retailers and about 200 mechanics in a major market such as Jaipur, Kanpur, etc. We present the entire Rane Group product range, and by leveraging the Rane Brand, individual companies are able to make a larger impact on these mega markets.

We have also started doing Group Nukkad meetings – road corner meetings. Every week, three to four such Nukkad meetings are happening in specific regions across the country. In these Nukkad meetings, 25 to 30 mechanics of particular (small) area are exposed to all the products of the Rane Group. This allows us to cross sell the Rane Group products.

Rane Group companies are pursuing international opportunity. How is MSG facilitating better exposure for all companies?

There are various ACMA, CII meets, exhibitions, which happen in international locations. We as a Group discuss and decide which meeting or exhibition we should participate. One or two from any one of the companies will attend the meeting and represent the entire Group.

What is the way forward for MSG?

At MSG, our endeavor is for the OEMs to see us as a Customer Centric Group and for us to position our companies as the first choice for OEMs. We also work to help the business, understand the dynamics of the market place, customer expectations and enable the organization to pursue the most profitable opportunities.

EFFICIENCY IN SOURCING

Continuing our focus on Rane employees and their experience working in the company, we talk to three employees from the materials/purchasing team in this issue. They share what it means to be a part of the Rane family, what they have learnt and how they have been able to contribute to the company's growth

Ankit Rastogi

Senior Manager – Corporate Purchasing
Rane NSK Steering Systems Private Limited

Memorable Experiences

In my last four years serving in the Rane Group, my observation is that it is a very culturally rich and ethical organization. Being an MNC, we can find a mix of Indian regional and Japanese cultures, encouraging employees to learn and apply the best in both professional and personnel fronts.

Team and leadership building are an inherent trait of the organization.

Greatest Learning

The transparent assessment method (360 Degree) to judge traits of every individual helps us know our strengths and weaknesses and improve to achieve the organizational goal.

Key Contribution to Rane

I have been involved in building cross function teams and imparting technical/ commercial knowledge to meet organizational goals.

Keeping Pace

Market behavior and expectation are communicated to employees in several events that impart knowledge and enable employees to maintain the pace to meet customer targets. Rane has a focused approach to identify the gaps

and impart training and leadership programs. Such events programs help in the development of the employees.

Rane Way of Working

Following the SDCA (Sustain, Do, Check & Act) cycle as specified in the TQM approach is a unique method that we at Rane use to execute plans in the right manner, at the right time in the right order.

One word to describe Rane Experience: Best Place to work.

Guruprasad A

Deputy General Manager – Materials
Rane TRW – Occupant Safety Division

Memorable Experiences

I am associated with Rane TRW for 17 years and my greatest experience is continuous learning. Learning gives confidence to handle difficult situations and challenges that transform into winning moments. Working with peers is really a pleasure, and all are aligned with organizational goals and achieving the targets every time. Continuous guidance and direction by top management under difficult situations gives confidence to overcome the crisis and perform better. Individual development plan and identifying next leadership team is really motivating the young leaders with lot of opportunities.

My achievements include developing a specific tooling (60+ tools) for first export seat belt program on time with high level of localization.

I also learnt Korean customers' way of working, and represented and created good impression on RTSS-OSD.

Learning Experience

I am able to work under pressure and deliver results by building strong relationship with peers, TRW Global Teams and Suppliers. Localization of parts enables us to learn how to prove the part, process, know how etc.

Key Contributions

Achieved material cost reduction through localization for new programs. It was taken up as a major initiative to support and sustain the target material cost percentage.

Handled airbags, seat belts & cushion exports and learnt from the experience.

With localization of airbag parts, increased the local material content.

Supplier Development Program (SDP), a unique program to enhance the supplier performance, was conducted for two years with a targeted number of 18 suppliers, out of which 15 suppliers graduated.

Keeping Pace

Received exposure through JV partner to the technology products such as inflators, fabrics & threads and gained knowledge for localization. Rane has identified me as a potential leadership team member and I have undergone HPLD program. Periodic discussions with peers and HPLD team on the latest trends and updates on materials also keep me up to date.

Case Example

In RTSS-OSD, the management felt the need for a separate new product development team six years back and created "Sourcing" function. I feel proud to be the first person in the department which has expanded today to a team of eight. Five of these members handle sourcing for seat belt, airbag, cushion projects and three members are dedicated for supplier development program. This helps motivate the team to look for new opportunities.

One word to describe my experience: Continuous learning.

Navin Alocius J

Deputy General Manager – Materials

Rane Engine Valve Limited

Memorable Experiences

After joining REVL in Jan 2010, my first assignment was handling imported material planning and procurement for all the plants.

Some of the memorable experiences are:

- Nearly 50 % of the volume was being imported from a highly dependable supplier from Japan. In March 2011, there was a severe Tsunami in Japan, which disrupted the supplies for two months. There was serious concern from major customers on the RM availability. I coordinated with domestic sources and ensured higher allocation of capacity, ensuring that there was no production stoppage during the constraint period.
- Identified a new medium nickel material for export application and coordinated with supplier and our R&D, which led to our winning a major business.
- Established a new supplier for two-wheeler AM parts exclusively and increased volumes supporting marketing team to increase the sales.

Greatest Learning

Much importance is given across the board for establishing processes and continuous improvement for better results using the TQM approach.

Key Contribution

- Improved the localization of valve steel from 50% to 80%.
- Identified alternate sources for cobalt based hard facing powders, reducing the risk in supply chain.

Keeping Pace

Continuous opportunity and charted learning program helped us improve our capabilities. Key initiatives in L&D like RAMP & HPLD enabled us to learn and adapt to the changing industry requirements.

Case Example

During new supplier development for AM parts, we struggled to establish on time delivery. We taught the supplier to follow TQM principles such as establishing the process, putting SOP in place and doing PDCA whenever not meeting the target. It took us two years to establish these and now the supplier needs no intervention in meeting our requirement, even developing new parts as per our requirements.

One word to describe experience at Rane: Pride

Sports Day at Rane Vidyalaya

Rane Vidyalaya celebrated its Sports Day with much fanfare on Nov 23, 2019. Students and teachers who were engaged in month-long preparations waited with anxiety as the day arrived. The heats and semi-finals of various competitions had left the score board in a perfect yo-yo, with intense competition between the various houses, and no one able to predict who will romp home with the shield.

Competitions were both traditional and imaginative. While the tracks saw the usual 100 metres dash and 4 x 50 metres relay, the fun events included 'Swach bharat', 'Get ready to school', three-legged race, sack race, frog race, etc. Teachers and other helpers too had their bit of fun with skipping and innovative team games.

Elangovan, HOD, Basic Engineering, RPTC (Rane Polytechnic College), and Kamalakannan, Physical Education Director, RPTC, were the Chief Guest and Guest of Honour, respectively. The day started with taking of the oath by Dharun Balaji, School Pupil Leader, repeated by the House Captains. A colourful drill by students from KG sections to the V standard followed. The ground sizzled with the pompoms. The human pyramid drew a huge round of applause from the parents and the visitors.

What is in just winning? It is the spirit of participation and cheering friends that won the day ultimately as winners decorated the podium!

Rane Polytechnic Gets Reaccreditation

The Diploma in Mechanical Engineering program of Rane Polytechnic was reaccredited for the NBA for another period of three years. In 2016, RPTC was one of the youngest polytechnics to be accredited by NBA for its DME program for two years. Following the inspection on October 14, 2019, the reaccreditation was awarded till 2022. The NBA conducts evaluation of programs of technical institutes based on laid down norms. This may include, but is not limited to, institutional missions and objectives, organization and governance, infrastructure facilities, quality of teaching and learning, curriculum design and review, support services (library, laboratory, instrumentation, computer facilities, etc.) and any other aspect as decided by the General Council and/or Executive Committee of NBA, which will help the graduates produced by the institutions as per industry requirements.

Over the period of its existence, the NBA has introduced new processes, parameters and criteria for accreditation that are in line with the best international practices and oriented to assess the outcomes of the programme. RPTC was able to showcase its industry-institute interactions with good Industrial Visits, In-plant trainings, Internships, Projects etc. Emerging as one of the prominent campuses amongst Polytechnics in Trichy, RPTC is slowly but surely marching towards its leadership position as the No.1 Polytechnic in its programs.

PHOTO STORY

Manufacturing Process of Rack & Pinion Steering Gear Assembly

Steering gear is a safety critical product. The rack & pinion steering gear converts the rotary motion of the steering wheel into linear motion, so that the vehicle turns based on rotation. In this issue, we take a tour of Rane (Madras)'s Puducherry plant, established in 1996 for manual steering gear & ball joints. It was expanded in 2011 for mechanical steering gear for EPS. The plant produces rack & pinion steering gear for PC / SCV & ATV segments.

1. Housing Sub-Assembly (Rack bush & NRB Pressing): In this Pre-Assembly Process, rack bush & needle roller bearing is pressed in aluminum housing.

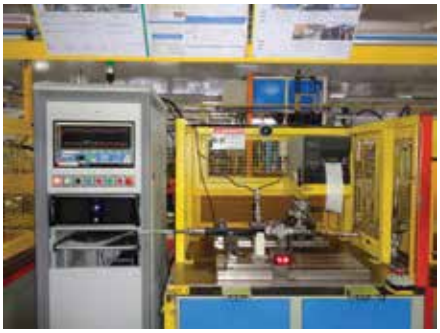
2. Pinion Sub-Assembly (Bearing Pressing & Retainer Ring Assembly): This is a sub-assembly process in which bearing pressed in pinion & retainer ring is assembled

3. Rack & Pinion Insertion: In this process, pinion sub-assembly & rack inserted in housing sub-assembly is done using a semi-automated process

4. Pinion Cover Tightening: Pinion cover is used to lock the rack & pinion to avoid detachment while operation.

5. Yoke Setting: Clearance between rack & pinion is set by adjusting the yoke

6. Free Pinion Torque Checking: After yoke setting, a performance test is carried out to find out the force required to rotate the pinion. This process is called free pinion torque checking.



7. IBJ Tightening: Inner ball joint is assembled on both sides of the rack by a semi-automated process

8. Final Assembly: All the final components such as bellow, clip, strap, and lock nuts are assembled in the final assembly

9. Final Inspection & Traceability: Customer Fit & Function parameters are 100% inspected with interlinked inspection control. Part traceability label is pasted and scanned data stored in internal server.

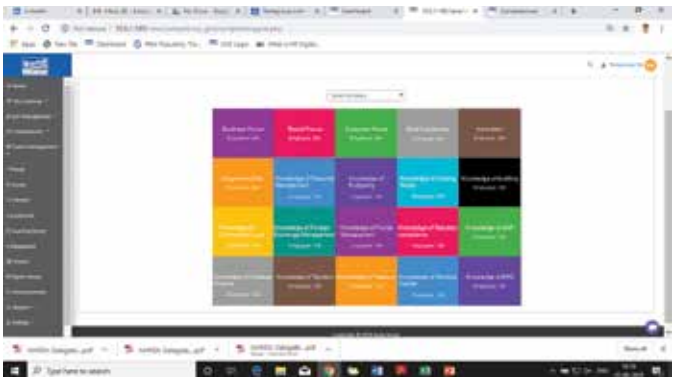
10. Packing: The final product is packed in a reusable box with protection measures for damage and corrosion.

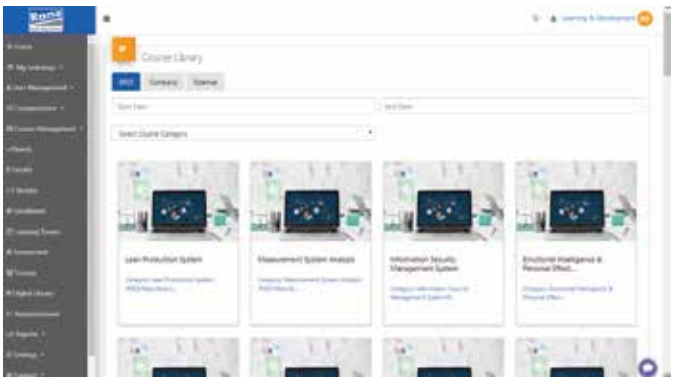
Rane Group Launches Learning Management System

The learning landscape in organizations is changing at a rapid pace. With plethora of technologies and multi-generational workforce coming in and shifting the entire business scenario, it is imperative for businesses to leverage the disruption, remain dynamic and stay relevant.

To address these challenges and further enhance the learning experience of employees, Rane Group has taken a step into the digital space by rolling out a Learning Management System (LMS). LMS is a digital learning environment that will assist the employees to manage their learning cycle. With the help of LMS, they will be able to -

- Learn through multiple learning methods (Online, Classroom and Virtual learning)
- Learn anytime and anywhere flexibly
- Manage competencies and learning plan
- Identify and track their developmental needs
- Self-nominate for the library of courses
- Access the digital library for self-learning





ISQ honors G. Parthipan with Ashoka Award

Indian Society for Quality (ISQ) honored Mr. G. Parthipan, CEO - Rane TRW Steering Systems in the 16th Annual Conference held at Pune on 12-13 December, 2019. Ashoka Award is given to management professionals who have led their organizations and guided others, making exceptional contribution through the practice and promotion of quality management of sustainable results, with humility, industry and passion. Mr. Venu Srinivasan, Chairman TVS Motor Company & Managing Director - Sundaram Clayton presented the Award to Mr. Parthipan.

> **Excellence is never an accident. It is always the result of high intention, sincere effort, and intelligent execution; it represents the wise choice of many alternatives – choice, not chance, determines your destiny.**
>
> *Aristotle*

Rane
Expanding Horizons

Rane Corporate Centre
"Maithri" 132, Cathedral Road, Chennai - 600 086. India. Phone : +91-44-28112472 / 73 | Fax : +91-44-28112449