

360° Perfektion

 SYNERGIES CASTINGS LIMITED

A window into our World !!

Greetings! We hope you liked the first edition of our newsletter... much has happened since then and you will be hearing all about it in our forthcoming issues.

Customer requirements have become even more stringent over time. Toyota nearly doubled their strength requirement in 2007, compelling us to innovate further. The article describes our journey to meet their special requirements. In TEK TALK you will read about Helium Leak testing and how we integrated it into our process.

The recent riots / turmoil in our state (related to Telangana) have highlighted the challenges in ensuring JIT delivery regardless of external challenges. Once again SYNERGIES delivered on its promise despite strike calls, disruptions, transporters issues; we never defaulted on our deliveries to our Customers. As the saying goes, **'Come hell or high water, we Deliver!'**

This time Vizag Beat highlights the industries of Vizag.

As always we invite your comments, criticisms and suggestions to improve this newsletter better.

Thank you

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The coming year bodes well...

The global business environment has been steadily improving... international trade and global industrial production has increased noticeably; while recovery may be uneven and global growth may remain below normal, it will be significantly higher than the past year.

The Indian economy, particularly the auto sector is on a tear. 'Torrid' is the word; spurred by increased agricultural, commercial and passenger car demand, driven by a benign monetary policy. While the pace seems unsustainable, the direction is clear; the Indian auto segment will continue to grow steadily next year, and the year beyond.

The US auto industry has shown signs of recovery. The US market for 2009 closed at 10.5 million vehicles, way below normal, but better than the previous years numbers. The year ahead is expected to be marginally better.

One of my favorite phrases, 'Don't wait for the storms to pass, learn to dance in the rain' most aptly describes our efforts this past year. While affected by the global auto sector turmoil, we have successfully and positively weathered the storm and emerged stronger. We are investing in capacities, in new technologies, techniques and equipment, and are preparing to serve our customers even better in times to come. All of our Customers have aggressive plans for launching new programs, models and variants, and as always, we will be there to support them, every which way they want us to.

And finally, as we celebrate the culmination of 10 years of our commercial production, with the blessings and support of our Customers and other stakeholders, we promise to leave behind many more milestones in the years to come.

Thank you again, and Wish you all a great 2010 !!

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Happy New Year

Indica
Vista
CHANGES EVERYTHING

Fashion Street ...

TATA Indica Vista Limited Edition is celebrating one year having accomplished many milestones; changing the way you look at technology, style and comfort. The 14" street face machined, black matt, 8 spoke elegant alloy wheels with a face matching treatment rewrite the appearance of this car.



**FRESH FROM
THE GYM**



The new Scorpio Special edition is deceptively gentle with curvaceous 15" CHROME alloys.



GRANDE MK II
More than meets the eye

If you think you've seen all that there is to the new Grande MK II, think again! There are secrets that only reveal themselves as you get closer. Don't miss the 15" alloy wheels.



Silverado

Chevy Silverado, the heavy duty pick-up truck sports 20-inch Chrome Wheels with a full bodied 6 spoke design.



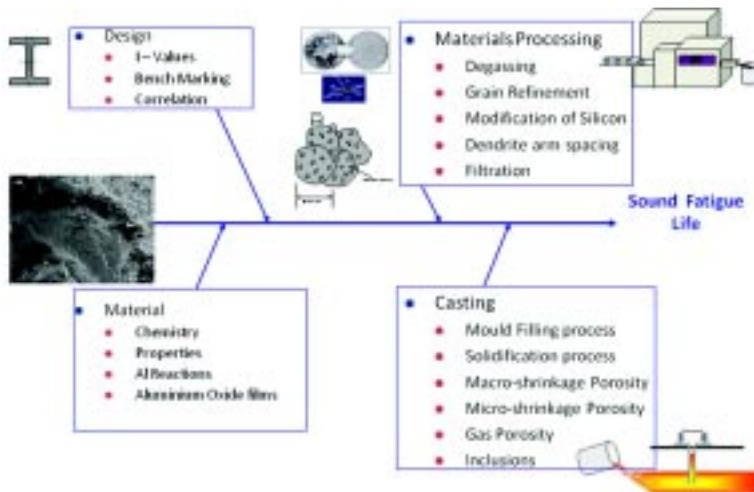
Innova: 'Innovating to provide all you desire'

Our association with Toyota as a supplier partner for 'Alloy' wheels dates back a decade. The challenge commenced with 'Qualis' - the first SUV with an alloy wheel option followed by 'Corolla' - the first vehicle fitted 100% with alloy wheels, and moved on to 'Innova' - the innovative machine with a unique 'street side machine finish' alloy wheels... striking looks, a head turner; a very demanding load bearing requirement, and special requirements for the finish.

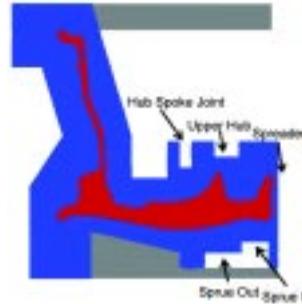
Killer loads and Killer looks too ...

Demanding fatigue and impact performance compliances, coupled with an optimized mass target is always a challenge, especially when the load increased by almost 200% compared to normal loads for this size wheel. We had to innovate at each and every stage - design, material and process.

How we did it . . .

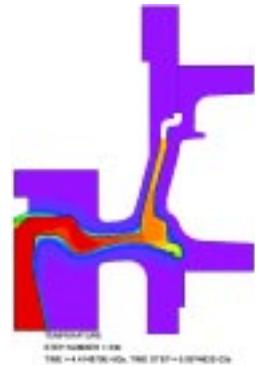


reduction in porosity, thereby improving fatigue performance. This was simulated virtually to validate the result and improve casting solidification.



Solidification: In theory, it is possible to control the cooling rate during solidification of cast structures, and it is possible to control the micro-structural constituent sizes; in particular the secondary dendrite arm spacing. Precise solidification flow analysis

was carried out to understand the behaviour of the molten metal. Real-time execution of the simulated data was implemented by re-designing the tool to attain the desired cooling cycle.

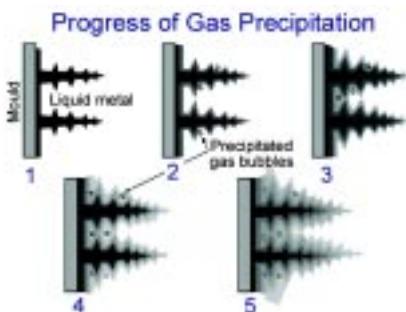


Result: Overall improvement in all the areas right from design to process ensured wheel compliance to the desired load requirement.

Validation: Our track record with Toyota over the past 12 months - zero ppm, 100% delivery...

We learn and grow while engaging with each of our Customers, and apply this learning to enhance our products.

Adding Intelligent thought to metal: Intense studies were carried out to optimize fatigue life and failure. The 'S-N' Life curve of the wheel material was further optimized to predict precise functioning; a joint effort with a research university. These studies were further confirmed with a Solidification analysis study in collaboration with Auckland University to virtually optimize the flow conditions.



Process Improvement:

Metal treatment - Numerous studies were carried out to understand the consequences of dissolved hydrogen gas in the alloy. Hot spots in casting showed pockets of higher concentration of hydrogen pores in the solidified structure. The studies helped optimize

Beyond TECHNIK: our COMMITMENT !!



Building Bridges

'Health is Wealth' is an oft heard cliché but a very valid one. We take health for granted and do nothing to maintain it. We also know that exercise is an integral activity for maintaining good health, but simply make excuses by saying we do not have the time to exercise. To inculcate the importance of exercise for good health, a 'Run for Health' program was organized by the SHE Team.



The Run was flagged off at the VSEZ circle and concluded at the SYNERGIES main gate with refreshments, prizes and gifts for all participants. Why did we choose running? Because it is the simplest, fastest, most accessible way to fitness and good health; you don't need a partner; you don't need equipment, a court, or a gym; and you don't need much time. A mere 20 minutes three or four times a week is enough to make you fit.



Medical Camp

'SEVA - Make a Difference' initiative conducted a free Eye Camp - a gift of sight for the members of Team SYNERGIES and their family members. The Free Eye camp



covered all Eye related problems and diseases... and that was not all, for the initial treatment free medication too was given for these ailments

Family Entertainment

A fun filled event was planned for the whole family... an opportunity to interact with the spouses and children of our members, to know more about them and in general just



have fun together. It was a memorable day, packed with games and cultural activities for each and every one of us. A wonderful team building opportunity.



Visitor's Gallery



Superior Industries International



TATA Motors



Premier Limited



Director General Naval Project

We go the Extra mile for our Customers...

We do not merely endeavour to be the best... going beyond Customer service we strive to 'delight' our Customers and this difference has been our 'guiding principle.' It is something we do each and every day, every moment... And the SYNERGIES track record highlights just this difference.

SYNERGIES...

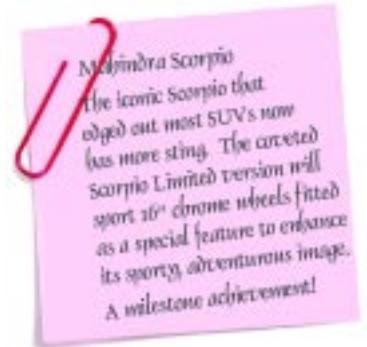
For more than 4 years in a row SYNERGIES has had an enviable track record of Zero PPM with most customers and acceptable target levels of <30 PPM or <100 PPM with all others; a creditable performance given the extraordinarily stringent requirements from all our customers on both performance and aesthetics; and 100% delivery record with all of them.

To achieve this result, the best of TS 16949, 5S, Kanban, Kaizens as well as the best practices from our customers, have been integrated into our systems and processes; and are part of our everyday operational process / practice on the shop floor. We speak the same language as our Customers. Our products go through nearly 30 quality tests before passing the final inspection for aesthetics and functionality, apart from the many off-line tests at various stages of production.

While we use the best in men, material and machines, we

understand there are no short cuts to success and certainly no free lunches! The name of the game is obviously doing things right... over and over and over again, every single step, every single time! Care is taken to train all the members continuously, both on-the-job as well as in the training room; every member of Team SYNERGIES is a Quality inspector. Control plans, work instructions, customer standards, are meticulously followed to enable us to maintain our enviable record with the customer. And then comes the delivery.

We all know that Murphy's Law is always active! Our counter - we strive to pro-actively anticipate everything that can go wrong and be ready with a plan B. Being alert, a system that raises alarms timely, helps us overcome delays in container improvement / vessel schedules / bad weather / political disruptions / vehicle accidents / the tsunami and all other obstacles created by man and nature! Our 24 hour tracking of all products in transit is another secret. And, each member of our team stands up for our customer.



Come hell or high water...

DELIVERY

guaranteed.

100% delivery → 'Easy to say but difficult to do'; it takes extra-ordinary effort, consistency and dedication... but 'customer delight' is just reward for each and every one of us at Team SYNERGIES !!!

Did You Know. . .

"I am." is the shortest complete sentence in the English language.

Volkswagen is a leading car manufacturer in Germany. Its most popular car, the Beetle, was created on direction of Adolph Hitler who wanted a car that practically any German could afford. Ironically, the car subsequently became a favorite of the hippie generation.



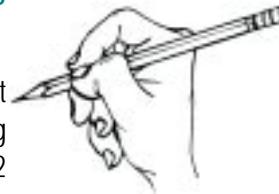
Meditation... Towards a Stress Free Life

An ordinary person may consider meditation as a worship or prayer. But it is not so. Meditation means awareness. Whatever you do with awareness is meditation. "Watching your breath" is meditation; listening to the birds is meditation. As long as these activities are free from any other distraction to the mind, it is effective meditation.

Meditation is not a technique but a way of life. Meditation means 'a cessation of the thought process'. It describes a state of consciousness, when the mind is free of scattered thoughts and various patterns. The observer (one who is doing meditation) realizes that all the activity of the mind is reduced to one.

The Difference between Focusing on Problems and Focusing on Solutions

When NASA began the launch of astronauts into space, they found out that pens wouldn't work at zero gravity (ink wouldn't flow to the writing surface). To solve this problem, it took them one decade and \$12 million. They developed a pen that worked at zero gravity, upside down, underwater, on practically any surface including crystal and in a temperature range from below freezing to over 300 deg C.



And what did the Russians do...?? They used a Pencil!!!
And If you've seen 3 Idiots - you know why a PENCIL cannot be used in space !



Health @ Work

Wash Your Hands. Often

This means every time you use the restroom, before you eat, after you sneeze or cough and any other time your hands feel dirty.



Use a handkerchief when you sneeze

Use a handkerchief every time you sneeze, make sure you cover your nose to prevent spreading of germs



Keep your workspace clean

Clean your phone, computer keyboard and anything else that you use frequently.



Attitude

Keep your attitude positive, smile more and have fun!! Stay productive, happy and healthy.



tek talk - synergies ensures a Safer Ride with Helium Leak detection

Air pressure and tyre condition play a significant role in the quality of the ride. More often than not, tubeless tyres are used on alloy wheels... In such cases the minutest of leaks in the alloy wheels cause major problems in the field. The customer could be inconvenienced due to loss of air pressure and damage to the tyres in the process.

Air leaks are typically detected using a high pressure water bath, but depend on the observation and skills of the operator. It is a visual test and at times wheels with 'undetected minute' leaks could pass into the assembly line. Overcoming this calls for an absolute error-free detection technology.

The most sophisticated 'helium leak test' detects the minutest of air leaks. Air is evacuated from the alloy wheel, which is then filled with helium. Helium escapes from the alloy wheel through the minutest leaks if any, and this is registered automatically by the helium leak detector. This method also allows the overall leakage rates to be determined by the Helium mass spectrometer, thus quantifying the leak rate.

Every small perfection contributes to your superior ride... and SYNERGIES with its helium leak detector machine & systems, ensures complete air leak free alloy wheels, ensuring a safe ride every single time... SYNERGIES wheels for that superior riding comfort; yet another drive towards 360° perfektion !!



SYNERGIES bags major order from Chrysler

In arguably one of the largest orders secured by an Indian auto component Company from the Big 3, SYNERGIES has secured an order (in excess of \$100 million) to service Chrysler's flagship vehicles: the DODGE Charger and the Chrysler LE 300. Both vehicles, very critical elements of Chrysler's 2011 line-up are scheduled for production at the Brampton plant.

The Chrysler 300 flagship sedan was one of the most exciting things seen on American roads in a long time. With a look that somehow blended the stocky, brash presence of a muscle car with the elegance of classic luxury sedans, it was a modern take on the classics of an era when a huge American sedan was the ultimate symbol of success. The Dodge Charger is a modern muscle that is 'best-in-class', has loyal following and makes a strong impression with its presence, performance and attitude.

While these were always popular, the new re-designed launches slated for 2011 promise to be super hits!! Automotive magazine executive editor Joe DeMatio was gaga when he saw the next-generation Chrysler 300 and Dodge Charger: "No automaker in the world has come

close to designing a mainstream, full-size sedan as beautiful, as stunning, as gorgeous as these two cars," he reported.



We look forward to these platforms being super hits, and we will be there to support them. The program development is on schedule and we are fully ready to support these programs from late 2010 - 2011.

Do You Know

- In Europe, the Dodge Neon is being sold under what brand name?
a) Pontiac b) Dodge c) Chrysler d) Plymouth
- Which company originally manufactured airplanes?
a) Volvo b) Saab c) Fiat d) Alfa-Romeo
- The manufacturer with the most Grand Prix race wins is:
a) Ferrari b) McLaren-Mercedes c) Williams-BMW d) Renault
- In the BMW logo, what do the white and blue fields symbolize?
a) The state colors of Bavaria.
b) A rotating propeller.
c) Two of the four cardinal elements: air and water.
d) The four fields symbolize the company's different makes.
- Who developed the Volkswagen logo in the form we know today?
a) Adolf Hitler, who took a tremendous personal interest in the development of the "people's car".
b) Ferdinand Porsche, who developed a wide variety of small cars in his design office in Stuttgart.
c) Franz Xaver Reimspieß, an engineer at Porsche.
d) Heinrich Nordhoff, who set up a sales and service organization.



Answers

1. C 2. B 3. A 4. B 5. C

VIZAG - The Home of SYNERGIES...

Industrial Hub of AP

Visakhapatnam, the booming industrial 'City of Destiny' on the east coast of India, is rated as one of the fastest developing cities in the world. Burgeoning from being a small fishing village in the twentieth century into a mega industrial hub, its saga began with the quest of the British to find a suitable port that could serve the hinterland possessing rich mineral wealth. Their quest ended with Visakhapatnam, the most protected natural harbour in Asia. They started building the harbour in 1927 and in 1933 it was opened to traffic. Described as the 'Brightest Jewel' of all ports in India today, this all weather sea port



serves as a catalyst in connecting Visakhapatnam to the world. Another important milestone was the setting up of the Scindia Steam Navigation Co., later known as Hindustan Shipyard Ltd in 1940. The city was so important during times of war that the Indian Government decided to set up the Eastern Naval Command here overlooking other major cities. The establishment of the Eastern Naval Command soon after the construction of the ship building yard firmly secured Vizag's place in the annals of the Indian Navy.



KENKEN

Rules

- Fill in each box in the puzzle with a number from 1 to 6
- Do not repeat a number in any row or column.
- The numbers in each heavily outlined set of squares, called cages, must combine (in any order) to produce the target number in the top corner using the mathematical operation indicated.

3	2+	16x		9+	
5-			6		15x
	2+		4-		
2+		2-		24x	
100x		6x		5-	
	3+		4+		4

Answers to the last issue's KENKEN

3+	5+	3-	
2	3	4	1
		5+	4
1	2	3	4
3-			1-
4	1	2	3
3	3-		
3	4	1	2

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