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**GUJARAT RECLAIM & RUBBER PRODUCTS LTD**  
**PIONEERING A GREEN FUTURE**

TYRE ASIA / FEBRUARY/MARCH 2010

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Mumbai-based Gujarat Reclaim & Rubber Products Ltd (GRRP), the world's third largest manufacturer of reclaim rubber, is using cutting edge technology and innovative processes to manufacture products for its growing customers globally. By creating win-win business solutions, GRRP has become the favourite vendor of top tyre and non-tyre end-users. Despite rising competition, it is steadily garnering more market share by supplying quality reclaim rubber at competitive prices. It is also contributing to global sustainability by helping conserve natural resources and at the same time meet customers' exacting technical requirements

## GUJARAT RECLAIM & RUBBER PRODUCTS LTD

# PIONEERING A GREEN FUTURE

By KSNayar

**G**ujarat Reclaim's journey so far has been full of challenges since its founding in 1974, says Managing Director Rajendra V Gandhi, a veteran rubber technologist and entrepreneur with a graduate degree from the prestigious Indian Institute of Technology.

Being one of the early pioneers in the reclaim rubber industry, Gandhi recalled the tough work in the formative years of the company in finding skilled engineers and workers and putting together a team with a mission to drive innovation and product development.

Right from its inception, GRRP was determined to build trust among its stakeholders – customers, suppliers, employees, financial institutions, shareholders, investors and civic society

in general. "Each action, big or small, taken by every member of the Gujarat Reclaim family has helped in building this trust," he said proudly.

"It is through these conscious efforts that GRRP has emerged today as a trust-worthy supplier of reclaim rubber and machinery. It is this commitment to customers that has given the company its reputation not only in India but the world over. The trust was built over time," he told **Tyre Asia**.

Within India and abroad GRRP's reputation has grown manifold as a reliable supplier of quality rubber reclaim. It is an approved vendor at major tyre and non-tyre companies globally.

GRRP products are approved at seven of the 12 top 20 tyre companies in the

world and four of the top 10 non-tyre rubber makers in India, the United States, Australia, France, Japan, Korea, Spain, and United Kingdom, among others.

GRRP produces reclaim rubber from scrap of whole tyres, tread peelings, natural rubber tubes, butyl tubes, moulded rubber products etc. Its reclaim rubber is used for different applications in both, tyre and non-tyre rubber products. It has emerged as India's largest manufacturer and exporter of reclaim rubber.

Through planned growth and a strong corporate vision, it has also forayed into synthetic rubber reclaims which now find more uses compared to natural rubber-based reclaims. The demand in the near future for these synthetic reclaim could far exceed the growth in NR reclaims.

**Today within India and abroad GRRP's reputation has grown manifold as a reliable supplier of quality rubber reclaim. GRRP products are approved at seven of the 12 top 20 tyre companies in the world and four of the top 10 non-tyre rubber makers in India, the US, Australia, France, Japan, Korea, Spain, and UK, among others**

The company was able to achieve enviable reputation for product excellence and market leadership because of its carefully planned strategy focussing on stability and sustainability of the business. Despite growing competition, the customers' trust is taking the company to higher growth path continually.

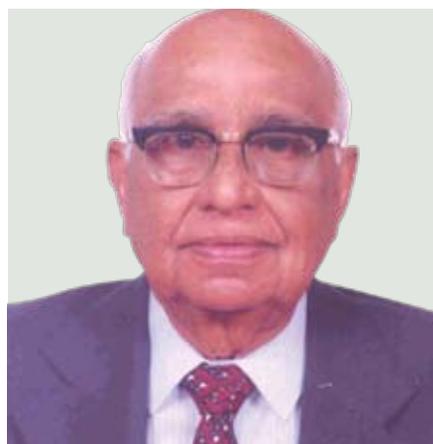
"In today's competitive world, reputation matters a lot," said Gandhi. There is a leap of faith in our company. This is reflected in a slew of new customers, suppliers and investors. This trend is also helping existing associates feel assured and comfortable that they have made the right decision to partner with Gujarat Reclaim, which is a listed company on the Bombay Stock Exchange.

The collective action of all employees has helped build an unassailable reputation not only in India but also among stakeholders in over 45 countries. What's more, the employees also feel the pride and joy of working for GRRP. "As Gujarat Reclaim continues its journey ahead, the

process of consolidating this reputation also continues," Gandhi said.

### Visionary leadership

GRRP Chairman KM Philip is a visionary leader, a company official said. He is a mentor and helps formulate corporate strategy. He has a unique and unequivocal role in the running of the company. He identifies and prioritises standards



GRRP Chairman KM Philip

against which the organisation gets judged.

These standards range widely from financial growth plans, socio-welfare responsibilities to environmental and market values of the organisation. The vision and judgement brought about by Philip provides the greatest added-value to GRRP. "He truly is a philosopher, guide, critic, and sounding board of the organisation," the official said.

In recent times several top class managers, engineers and researchers have joined the growing family of Gujarat Reclaim. They come from different backgrounds and brought along varied experiences. They blend with GRRP's corporate "culture" and make notable contributions to enhance the reputation

and trustworthiness it has been enjoying from the inception.

### Challenges ahead

"When you've got something to prove, there's nothing greater than a challenge," Gandhi said adding that the new challenge before GRRP is to maintain annual growth in excess of 30% and at the same time not waver from its path of building and consolidating trust among its growing number of stakeholders.

Exports constitute around 55% by value and 50% in terms of volumes of its total turnover. It plans to maintain an equal proportion of the turnover coming from domestic and export markets.

Latest figures show that exports are growing at 30-35% clip over the past three years, said GRRP's young Director Harsh Gandhi. This is in addition to the robust growth in the domestic market, he said. It is this reputation for customer service and steady growth that Harsh has taken as his single-minded mission. He is driving GRRP's market reach globally while at the same time consolidating the domestic market.

Besides ISO 9001-2000 and ISO 14000 certifications, GRRP has a vigorous information technology policy. It has adopted IT solutions such as SAP and ERP packages. In recognition of its IT achievements it won the Best IT Implementation of The Year 2009 award. The switch to IT application was decided following the implementation of ISO 14001 and adoption of eco-friendly practices. This has thrown up the need to create linkages with suppliers and customers across the globe. The resulting efficiency in business process earned it the reputation as a company that is easy to do business with.

This IT-enabled management paradigm has helped it adhere to delivery dates for products as well as control costs of freights and packing, a company official said. It allowed GRRP to offer flexible pricing that further helped it garner a larger size of the world market.

Commenting on SAP implementation Rajendra Gandhi said it enabled his company to stay ahead of the technology curve as it could adapt to evolving customer requirements.

### Global footprint

When GRRP began to expand its global footprint, it was necessary to adopt not only new technology but also dynamic



**CORPORATE CULTURE:** Gujarat Reclaim has developed a corporate culture that has attracted eminent management experts such as Ganesh Ghangurde (Company Vice President & Chief Financial Officer) and Shyam Awadhani (General Manager, Operations).



**Exports are growing significantly, and currently these constitute around 55% by value and 50% in terms of volumes of the total turnover of the company. GRRP plans to maintain an equal proportion of the turnover coming from domestic and export markets**

marketing practices. "As we started expanding our footprint in global markets competing against international players, we realised that faster availability of information and adherence to benchmarked industry standard practices would help make a difference in the highly unorganised business of the reclaim rubber industry," he said.

GRRP started with a capacity of around 2,400 metric tonnes per annum. Current figures show the capacity has gone up from 18,000 MT a year to 40,000 MT over the past three years on the back of auto sector boom in the domestic market.

"We intend to expand into value added products and processes like compounding and other downstream processes," Gandhi explained. GRRP is also looking to expand its user industry base. The new customers include those in the sealing, adhesives and roof manufacturing industries. Traditional rubber reclaim user industries like tyres, mats, automotive hoses, foot pedals, battery boxes for commercial vehicles, panels and profiles manufacturers are also growing on the back of auto industry growth.

This has encouraged GRRP to develop technologies for wider application of reclaimed rubber such as under-body coating in automobiles. Reclaim rubber has very good sound dampening and

absorption qualities. Its application is critical for passenger cars for quieter cabins and protection against braking.

Emboldened by the success of a clutch of new products, GRRP has invested in the manufacture of nylon fibres. It has started supplying these products to customers. But this is being done only on a case-to-case basis.

### Product mix

Elaborating on the evolving global market trends, Harsh Gandhi said that natural rubber use generally forms about 40% and synthetic 55% and reclaim rubber 5%. Compared to this, in India the NR use comes to about 70% and reclaim rubber around 8%, with the latter showing an increasing growth of 2% compared to a few years ago.

Harsh says that there is acute awareness about the use of reclaim. The demand for it is inversely proportional to the prices of natural rubber and synthetic rubber. As NR prices are going up, the demand for reclaim rubber is also set to go up steadily as well in the years to come. The percentage use of reclaim by the tyre industry is also accelerating.

Compared to the global usage of reclaim rubber, the average in India is 8%-10% of new rubber, partly because of the types of reclaim rubber products made locally.

Bicycle tyre, for e.g., is the single largest user of reclaim rubber in the country.

"Apart from it, the auto tyre industry has shown creditable success in the higher percentage in the use of reclaim rubber in tyre formulations compared to their global peers. By far China continues to be the largest consumer of reclaim rubber followed by India, which is a close second," Harsh said.

When asked how much rubber could be reclaimed from processing used tyres and other rubber goods, he said that a typical discarded truck tyre made of cross ply nylon weights 42 kg excluding the bead. "Theoretically the entire quantity can be reclaimed without process loss."

The exact recovery of rubber in reclaim form depends on the technology adopted and on the processors' ability and desire to separate the nylon or steel. Reclaim rubber has been found to be used in several rubber compound formulations for different component of tyres.

### Optimum recovery

Reclaim rubber produced in India is unique as it is mostly from truck and bus tyres, which have almost 70% natural rubber in it. Typically a tyre would have 50-55% rubber content and it would also have 30% carbon black, eight to 10% oils. Various other chemicals constitute the remaining 6 to 8% of a tyre.

Similarly, a channel or a profile in a passenger car would have 30% rubber and an equal amount of carbon black, a higher 25% composition of oils and chemicals would also constitute around 12 to 15%.

As the pioneer in reclaim rubber, GRRP is driven by the 'green' commitment even before environmental protection became a public issue. As the founder of the company Rajendra Gandhi had a vision that manufacturing is not only aimed at making money, but also to generate wealth that should be used for the overall economic and social growth of the society and the country.

In spite of its stupendous achievements of the past three decades, the only constant in GRRP's corporate mission is its social commitment and building of trust among stakeholders. This philosophy has paid off well as reflected in GRRP's corporate bottom lines as it prospers and expands its footprint globally as a quality manufacturer of reclaim rubber known for ethical business practices with customer trust as its guiding principle.



**CORE TEAM:** GRRP's top managers include (sitting from left to right) Shilpa (Senior Manager/Finance) and Sunil Dolia (General Manager/Marketing). Standing (left to right) Nayan Shah (General Manager/Procurement), Harsh Gandhi (Director), Hemal Gandhi (Public Relations Executive) and Ajay Gandhi (Senior Manager Marketing)



Rajendra V Gandhi

### Tyre Asia News Bureau

*You are a pioneer in reclaim rubber industry in India. As you look back over the past several decades, what are the main trends which have had a defining impact on GRRP's development?*

When we started, the automotive industry had just begun to take roots in India. There was a general shortage of virgin materials, and therefore reclaim rubber was found to be attractive. The market for reclaim rubber was very price-sensitive. Its prices fluctuated according to demand and supply of natural and synthetic rubber. In the early years, the percentage of reclaim rubber use to new rubbers was low. The advancements in tyre technology were slow. Non-tyre products have been using latex rubber and synthetic rubber. The percentage of reclaim rubber in new rubber products has been on the decline. With the opening up of the Indian economy in 1990's, the reclaim industry began to witness several challenges. The industry came under pressure to produce reclaim rubber with higher physical

**Apart from the raw material's cost advantage, reclaim rubber offers many significant process benefits. Depending on the extent of usage and application, it could generate process cost savings ranging from 5-15%**

# COMPETITIVE AND GREEN

**Gujarat Reclaim & Rubber Products Ltd (GRRP) has grown to serve industries in over 45 countries. Its founder and Managing Director Rajendra V Gandhi is an engineering graduate from the prestigious Indian Institute of Technology, Mumbai. The veteran rubber technologist and his dynamic son, GRRP Director Harsh Gandhi, a finance graduate from Purdue University (USA), share their views on reclaim rubber usage. They say the rising demand in the domestic and international markets for GRRP products is due to better pricing, consistent quality and the wide range of eco-friendly uses for their products. Excerpts from the interview**

properties as per requirements of the tyre industry. It was compelled to comply with environmental norms by adopting technology that would not adversely impact the environment. The industry took initiatives to ensure proper segregation of scrap rubber coming from diverse streams so as to produce larger consistent finished goods. The reclaim industry was encouraged to explore export possibilities of reclaim rubber. The opportunities that came following the opening of the economy included production of reclaim rubber from wider available scrap rubber such as inner tubes of natural and butyl rubber, latex scrap and other synthetic rubber.

*At a time when the 'green' theme and conservation of natural resources have become key factors impacting company bottom lines, how have you leveraged these issues to develop markets in India and abroad?*



Harsh Gandhi

When GRRP was set up, I wanted to start a company of my own not depending on the legacy of my father's businesses. At that time I chanced upon a study by the World Bank which emphasised the need for reclaim industry in developing countries with a view to augmenting virgin resources and provide employment to a much larger force of unskilled workers as recycling was considered labour intensive. Thus GRRP was promoted considering these two aspects in early 1970s when nobody talked of a 'green' theme. In recent times, with increasing awareness of global warming and impact on the population, the green theme is gaining prominence. GRRP continues to reiterate the fact that recycling or reclaiming is the answer to reducing the gap between demand and supply of virgin rubbers. GRRP continues to promote environmental practices and is determined to encourage customers – both new and existing – to use reclaim rubber because it makes economic sense as well as provides the right answer to environmental and social issues.

*Do you think the demand for reclaim rubber is proportional to the rising price of both domestic and imported rubber?*

The demand is not directly proportionate to rise in demand for reclaim rubber. Historically reclaim rubber is found to be economical when its prices are around 30-40% of virgin rubbers. Having said that, reclaim rubber is becoming an inherent component of formulations and hence it is relatively price inelastic.



*Do you think there is enough recycled rubber capacity within India to meet domestic and export demand at a time when the automobile industry is scaling new heights?*

The current installed capacity of reclaim rubber is estimated to be 150,000 tonnes, of which nearly 60% is manufactured by small scale industrial units, many of them maybe having obsolete machinery and processes. With rising capacity of tyre production, there will be more demand for reclaim rubber. Those companies having access to modern technology and processes will be able to meet the requirements of tyre companies in the years ahead.

*What are the major sectors where you notice a surge in demand for reclaim rubber?*

The tyre sector is witnessing a surge in demand for reclaim rubber and they are boldly experimenting with an increased dose in compound formulations. Among the non-tyre sectors, the non-conventional industries like profile manufacturing, adhesive and sealant manufacturing are growing users of reclaim rubber. Traditional consumers, like manufacturers of conveyor belt, cycle tyres, and moulded products, continue to follow similar patterns as before.

*Do you think it is cost-effective and technically acceptable to use reclaim rubber as a substitute for natural rubber in tyre making?*

**Depending on the tyre type, reclaim rubber in a tyre can be as low as 0.5% to total polymer (in case of high performance PCRs) to as high as 12% to total polymer (in case of OTRs) and a further high of 35% (in case of cycle tyres)**

Reclaim rubber is an inherent raw material in the manufacturing of tyre and non-tyre rubber goods. Apart from the raw material's cost advantage, it offers many significant process benefits. Depending on the extent of usage and application, it could generate process cost savings ranging from 5-15%.

*In one of your recent statements you said that reclaim rubber is a global industry. Why do you think so?*

The generation of scrap tyres and other waste tyres is a global phenomenon. Whichever country or region that has sufficient volumes of such scrap generation has an opportunity to have a reclaim industry. However, the consumption and market for reclaim rubber will depend upon where the production of reclaim rubber is. The global reclaim rubber industry has grown from being 2% of total polymer consumption

in early part of this decade to close to 5% currently. China leads the way with the largest base for reclaim rubber manufacturing and also the highest consumption as proportion to virgin polymers.

*In view of the growing switch to green products by the automobile industry, do you think reclaim rubber stands a chance to replace synthetic rubber in tyre making?*

There is a need for close cooperation between rubber technologists working in developing compounds for tyres and reclaim rubber manufacturers for finding out how more reclaim rubber can be leveraged or incorporated in tyre formulations without adversely affecting the performance of tyres. There is a need for a change in mindset: Instead of treating reclaim rubber as a cheap inferior material, it should be looked upon as a third source of rubber hydrocarbon after natural and synthetic rubber. On the other hand, the reclaim rubber industry will also need technological upgradation to meet the growing stringent needs of the tyre industry. With increased radialisation, higher speed ratings, the need for improved rolling resistance etc, the reclaim rubber manufacturers will need to build their skill-sets too.

*Do you think there is still reservation among tyre makers in the large scale use of reclaim rubber?*

This is true because of the mindset. One

# TREADING NEW PATH

**The business model of Gujarat Reclaim & Rubber Products Ltd (GRRP) has many unique features. Besides developing a nation-wide network of collection centres for end-of-life tyres, the company's focus on developing green technologies has contributed to greater sustainability. It is also committed to corporate civic responsibility and contributes to the welfare of weaker sections of the society, including women and children**

## **Tyre Asia News Bureau**

One of the key strengths of Reclaim & Rubber Products Ltd (GRRP) is that it has developed a wide network for raw material procurement. Over the years it has built an extensive chain of raw material suppliers.

They are supported in procuring waste tyres from various state transport companies and other local collection sources. The suppliers act as agents of

the company in reaching out across cities they operate in, to district and village level centres gathering the 45,000 tones of materials required at GRRP factories.

This network of agents directly and indirectly employs about 250,000 people across the India. GRRP generates employment by recruiting illiterate people to procure scrap rubber from their localities and regions. They supply

the end-of-life tyres to the appointed dealers. It discourages people from burning tyres as it results in pollution and environmental damage. The GRRP effort is to create a clean image, and this has succeeded to a large measure.

## **Developing trust**

GRRP has won customer trust through heightened service and through R&D. By

thing is clear that reclaim rubber is not a complete substitute for natural rubber or synthetic rubber. Having said that, if rubber technologists look at reclaim rubber apart from being the third source of rubber hydrocarbon as also a process aid and rubber carbon, they will be able to leverage the unique features of reclaim rubber and incorporate a much higher percentage in different rubber formulations without adversely affecting performance. There is also a need for increasing the levels of awareness of its usage. Tyre companies are reluctant to discuss openly the extent of usage. Hence I urge that there is a need to change the mindset and look deeply into the reclaim rubber's advantages.

*What kind of value addition can be gained by reclaiming used rubber products?*

*What is its impact in reducing rolling resistance of tyres?*

Reclaiming waste rubber products makes economic sense and social and environment sense. Therefore, it must be encouraged. The use of reclaim rubber in premium and high performances tyres will be governed by issues such as to what extent higher physical properties are retained in the rubber; to what extent rubber technologists are ready to reclaim it with better physical properties; and what economic and social advantages tyre companies see in using a higher percentage of reclaim rubber. GRRP has

been into research work in modifying the reclaim rubber with a view to improving the rolling resistance of tyres while incorporating reclaims rubber

*Generally what is the proportion of reclaim rubber usage in the manufacture of tyres?*

There is no single formula used by the tyre industry. Depending on the tyre type, reclaim rubber in a tyre can be as low as 0.5% to total polymer (in case of high performance PCRs) to as high as 12% to total polymer (in case of OTRs) and a further high of 35% (in case of cycle tyres). The Indian tyre industry as a whole consumes 4% reclaim rubber of total polymer. But individually, certain companies are also experimenting at levels of 6-7%.

*What are the R&D and innovations that GRRP has accomplished in the past few years?*

GRRP has the distinction of designing its own equipment for manufacturing of reclaim rubber. We design and build equipment from the concept stage. Being a socially conscious company, we have invested heavily in R&D and equipment to ensure that our processes have minimum negative impact on the environment. While we process waste, we ensure that we do not generate any waste in the process. Our manufacturing units are certified for ISO 9001, 14001, OSHAS

18000. We also practice 5S management system for plant operations. Having designed our equipment, it gives us the edge in being able to produce the widest range of reclaim rubbers from diverse types of rubber scrap.

*What are the most important viable reprocessing methods for the reclamation of rubber through green technologies?*

Different companies have developed clean green processes for reclaiming rubber. No one has yet come up with a complete and economically viable and sustainable project. We at GRRP also continue to invest in R&D to evolve new processes which are not only green but economically viable.

*What are the industry trends that you foresee in the coming years in the reclaim rubber sector?*

We see change in the technology for producing reclaim rubber. This will be able to address the issue of environmental emissions. We will also see new types of reclaim rubber with improved physicalities. We see closer cooperation between tyre companies and reclaim rubber producers for better value added products and services. This will result in a win-win situation for both. Hopefully transparent government legislation will come into being for controlling the indiscriminate burning of waste tyres, which causes environmental and health hazards.

company has built a strong goodwill in the industry with its product and service. Its network of dealers in India and elsewhere in the world is well positioned to cater to the growing demands of the rubber industry.

Through continuous education and awareness, GRRP has been successful in penetrating geographies and applications that hadn't used reclaim rubber in the past. Today the company supplies to some of the largest tyre and non-tyre rubber manufacturing companies in the world.

Its presence spans more than 45 countries across large and small manufacturers. With consistent collaborative initiatives, GRRP has successfully been able to increase the use of reclaim rubber in tyre compounds without compromising on product quality. This has helped in significantly improving the bottom lines of its customers.

The company's share in the tyre industry in India is a commanding 35%, while its

share of exports accounts for more than 50% of the total reclaimed rubber exports from the country. GRRP has been able to help the rubber industry in saving raw material, and its initiatives in research of the end-user's product lends it the edge over its competitors.

### **Innovation thrust**

GRRP has also been a pioneer in the manufacture of reclaimed rubber from synthetic rubbers such as butyl, EPDM, nitrile, etc. With increasing emphasis in the use of virgin synthetic rubbers for rubber compounds the world over, the future holds immense potential for the consumption of synthetic reclaim rubber, mainly in the non-tyre rubber goods manufacturing.

The synthetic rubber reclaims business has grown significantly over the last few years and contributes approximately 45% of GRRP's total revenues.

The company is aware that to advance its

market advantage it has to invest in R&D, which it has done with a slew of research and product development initiatives. It has started production of thermoplastic elastomer (TPE) using proprietary blends of the elastomers and polymer for use in the automotive and industrial applications.

GRRP has also achieved breakthroughs in nylon compounds based on waste nylon recovered for use in the consumer and automotive sectors.

### **Social responsibilities**

GRRP seeks to establish a global footprint while endeavouring to maintain high standards of accountability, transparency, trust and integrity, openness and commitment to the society. As part of this it has taken initiative on corporate governance practice by adopting a Code of Conduct for Directors and senior management. It aims to promote ethical and responsible decision-making.



adopting the right corporate social responsibility practices, GRRP hopes to bolster its image with key stakeholders, and that in turn results in good corporate financial performance as well.

In line with the doctrine of emancipation of women for the social and economic progress proposed by India's first Prime Minister Jawaharlal Nehru, GRRP encourages and supports women who are trying to stand up on their own feet.

GRRP has also joined hands with the Initiatives of Change Centre for Governance to undertake projects to study and report on the best practices of woman leaders in local governance. Such women are honoured with the Vadilal Gandhi Puraskar.

Gujarat Reclaim has been a catalyst in starting several institutions in the fields of education, healthcare and poverty alleviation in India's Gujarat and Maharashtra states. It has been at the forefront, mobilising resources for relief and rehabilitation during natural calamities.

It has been supporting projects aimed at enhancing the level of women's education and vocational training. GRRP team ran the Mumbai Marathon 2010 to support the cause of the girl child. It sponsored the education and well-being of girls, a part of the KC Mahindra Trust

The company has adopted Navi Divi village, in its Ankleshwar factory locality, to ensure the well-being of workers' families by providing education, and health services

GRRP strongly believes in the saying "creating social surplus is good for corporate bottom-line."

### Greening initiative

While the green nature of rubber reclaim industry is evident, GRRP ensures that all its processes are clean and non-intrusive to the environment. Its plants are certified for ISO 14001 and there is no waste generated from the process.

While reclaim rubber usage helps conserve natural resources, including oil, the process employed is extremely energy-efficient. GRRP generates 3.6 MW of captive green energy through use of wind turbines and natural gas.

All these initiatives reflect GRRP's corporate philosophy of giving back something tangible to the society. It keeps spreading the message of goodwill and harmony.

Besides building 'philanthropy' as an integral part of company philosophy, GRRP's corporate social responsibility has become a benchmark in India. Today GRRP is cited as an example to be emulated for its numerous socio-welfare activities.

## ADVANTAGE OF RECLAIM RUBBER

There is a difference between recycling and reclaiming. While recycling includes any form of reuse of waste rubber, reclaim involves de-polymerisation. In recycling, the vulcanised rubber is ground either by cryogenic or ambient grinding process. In reclaim the ground rubber is treated with heat and chemicals.

The reclaimed rubber is processed from used tyres and waste rubber. It is considered the third source of rubber after natural and synthetic rubber. However, reclaim rubber is not equivalent to virgin rubber, but it still has use in the making of tyre compounds and for the manufacture of a wide range of rubber products.

The use of reclaim rubber enhances process speed and cuts down on mixing times thereby pushing up productivity. The use of reclaim rubber saves on energy and compounding costs.

Presently reclaim rubber is used in the manufacture of tyres, butyl tubes, cycle tyres and tubes, battery containers, tread rubber, belts and hoses, moulded and extruded products.

### Company Profile

**Gujarat Reclaim & Rubber Products Ltd (GRRP) is the frontrunner in India's rubber reclaim sector. It was the first Indian company to design and fabricate its own machinery and equipment for reclaim manufacturing and processing**

#### Tyre Asia News Bureau

Gujarat Reclaim & Rubber Products Ltd, which is listed on the Bombay Stock Exchange, has emerged as the largest manufacturer of rubber reclaim products among the world's top three. Established with an initial capacity of 2400 metric ton, it now produces 45,000 metric ton per annum.

GRRP operates in three locations in India's north-west (Ankleshwar, Panoli) and south-west (Solapur). Besides its process capability and strength in designing its own machinery, GRRP has exported its technology and machinery. It has put up units for the manufacture of crumb rubber from rubber waste, surface

treated crumbs and for the manufacture of commodities punched and split from tyres.

GRRP's efforts in creating a complete rubber recycler are aligned with its philosophy of saving valuable raw materials for the global rubber industry.

### Key performance indicators

PARTICULARS	2000-01	2004-05	2008-09
Production (TPA)	9,703	19,669	39,578
Revenue (Rs million)	138.2	408.3	1333.9
EBIDTA (Rs million)	15.8	90.3	266.7
Export revenue (Rs million)	53.2	232.2	736.2
Net Worth (Rs million)	48.8	117.9	w445.2