INDIAN RUBBER MANUFACTURERS RESEARCH ASSOCIATION

QUALITY POLICY

- **To provide Timely, Innovative & World Class services by systematically adhering to Quality Management Systems and Procedures.**
- **To design, develop and validate the Rubber Products as per requirement of our customers.**
- **To provide Reliable, Dependable and Traceable testing & evaluation services to our customers.**
- **To enhance the Technical Competency of rubber and allied products manufacturers and end users by imparting training.**
- **To strive to continuously improve Safety, Morale and Work Environment of all our stake holders by implementing pertaining international standards like QMS, EMS, OSHAS including ISO 17025 – 2005.**

Dr.P.Thavamani
Director

Indian Rubber Manufacturers Research Association

MEMBERS OF THE GOVERNING COUNCIL: 2010-11

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Mr.Onkar S. Kanwar
Chairman & Managing Director,
Apollo Tyres Limited
7, Institutional Area,
Sector 32, Gurgaon-122001

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Joint Secretary
Ministry of Commerce & Industry
Dept. of Indl. Policy & Promotion
Udyog Bhavan, New Delhi – 110 011.

Mr.Babu Lal
Dy .Secretary
Ministry of Commerce & Industry
Dept. of Indl. Policy & Promotion
Udyog Bhavan, New Delhi – 110 011.

Mr.B.K.Pati
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Ministry of Commerce & Industry
Dept. of Indl. Policy & Promotion
Udyog Bhavan, New Delhi – 110 011.

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Joint Director of Industries
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Konkan Division, Wagle Industrial Estate
Thane – 400 604.

COUNCIL OF SCIENTIFIC & INDUSTRIAL RESEARCH

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Head, Polymer Science
& Engg. Unit, National Chemical Laboratory
Pune – 411 008.

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Scientist E & Head PCD
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Alternate Member

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Sr. Dy. Director,
NATRIP Implementation Society (NATIS),
Indore, Madhya Pradesh

CENTRAL INSTITUTE OF ROAD TRANSPORT (CIRT)

Mr. R. Balasubramanian
Director,
Central Institute of Road Transport (CIRT),
Pune - 411 026.

ALL INDIA RUBBER INDUSTRIES ASSOCIATION (AIRIA)

Mr Yogen S Lathia
Director
Lathia Rubber Mfg. Co. Pvt. Ltd.
Saki-Naka, Mumbai 400 072

Dr. R. K. Matthan
KA Prevulcanised Latex Pvt. Ltd.
3-A, Regent Place, 20,
T. Nagar, Chennai 600 017

AUTOMOTIVE TYRE MFRS. ASSOCIATION (ATMA)

Mr Rajiv Budhraja
Director General (ATMA)
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4/2, Siri Institutional Area,
New Delhi 110 016
Principal Member

Mr. T. Chakravarty
Secretary General
Indian Tyre Technical Advisory
Committee (ITTAC), New Delhi
Alternate Member

PAID MEMBERS FROM INDUSTRY:

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Kwality Polymers Pvt. Ltd.
Wagle Industrial Estate
Thane – 400 604.

Mr Niraj Thakkar
Precision Rubber Industries
Pvt. Ltd. Thane-400 604

IRMRA'S DIRECTOR (EX-OFFICIO)

Dr.P. Thavamani
Director, IRMRA, Thane – 400 604.

INVITEES FOR RESEARCH & DEVELOPMENT:

Prof. A. K. Bhowmick
Director,
Indian Institute of Technology,
Patna

Dr. D. K. Setua
Additional Director
Defence R & D Organization,
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INVITEES FOR INDUSTRY LIAISON

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Khopat, Thane – 400 601.

Mr.R.V.Gandhi
Gujarat Reclaim & Rubber
Products Ltd
Ashok Silk Mills Compound
Ghatkopar (West), Mumbai – 400 086.

Mr.D.J.Bharucha
Bhimrajka Impex Limited
184-B, Maker Tower 'E', Mumbai – 400 005

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Status of Institute:
Registered under the Societies
Registration Act XXI of 1860
Regn. No.S.1199, Dt. 13.1.1958

Bankers:
State Bank of India
Wagle Industrial Estate Branch
Thane – 400 604

Axis Bank Ltd.
Dhiraj Baug, LBS Marg,
Near Hariniwas Circle
Thane (W) – 400 602

Auditors:
M.M.Nissim & Co.,
Chartered Accountants
Barodawala Mansion,
Dr.A.B.Road, Worli
Mumbai – 400 018

Vision :

To be a committed world class rubber and allied material research, development, testing and training centre with innovative & value added service to customers

Mission :

To serve the rubber & allied industries to fulfill their scientific & technological requirements in order to improve their global competitiveness.

Values:

- Fairness
- Integrity
- Reliability
- Excellence

PRESIDENT'S MESSAGE

Good Morning Ladies and Gentlemen!

I welcome you all to the 52nd Annual General Meeting of Indian Rubber Manufacturers Research Association (IRMRA). The Annual Report containing Director's Report and the Auditor's Annual Account Report for the financial year ending March 31, 2011 has been circulated to you and with member's permission, I shall consider the same as read.

During the financial year 2010-11 the government stipulated global economical recovery has hit a snag and almost every country in the developing world is trying to cope with general slowdown attributed to high input cost, a higher cost of borrowing, spiralling inflation and tightening of money supplies by increasing the interest rate and cash reserves. The European Union is struggling with sovereign debt crisis and fiscal austerity. The United States with the debt and unemployment, Japan has been hit hard by natural calamity and faces a daunting task of rebuilding a disturbed supply chain.

The Indian economy recorded a high GDP growth driven by the strong revival in automotive demand, particularly in the passenger vehicle and two-wheeler segments and export demand for tyres, the Indian tyre industry reported a healthy revenue growth of over 25% during fiscal 2010-11. However, surge in input costs especially that of natural rubber (NR) and some rubber chemicals negated any scale benefits, and resulted in a contraction of industry-wide operating margins. While tyre industries and certain organized non-tyre products manufacturers could pass on the impact of spiraling input cost by marginally increasing their product price, the unorganized non-tyre rubber products manufacturing small and medium size manufacturers were unable to sustain the spiraling input cost and even some of them shut down their operations.

In tandum with GDP growth, IRMRA also recorded the highest revenue growth in every area of its operation and services. The Centre of Excellence for tyre testing and certification extended full support to the tyre manufacturers by timely testing and issuing the test report so that they could get the ISI marking license from Bureau of Indian Standards as mandated by the Quality Order issued by Department of Industrial Policy and Promotion (DIPP), Ministry of Commerce and Industry, Government of India.

During this period IRMRA team has done a wonderful job of supporting the rubber industries by testing and certification, training, consultancy and also taken up research and development activities from sponsoring agencies like Defence, Bhabha Atomic Research Centre, Nuclear Power Corporation, Railways and other public sector organizations.

I would like to end on a thankful note and put on record my sincere appreciation for all our Governing Council Members, Government Nominees and Officials from the Ministry of Commerce & Industry for their valuable contribution to IRMRA's success over the years.

Wishing you all the very best.

Onkar S Kanwar
President
Indian Rubber Manufacturers Research Association

Chairman
Apollo Tyres Ltd

DIRECTOR'S ANNUAL REPORT 2010-11

Dear Members,

We are pleased to present Indian Rubber Manufacturers Research Association's (IRMRA) 52nd Annual Report for the year 2010-11.

IRMRA established in 1959 as a scientific and industrial research organization for promoting basic and applied research & development activities for rubber and allied materials in our Country, registered under the Societies Registration Act 1860 and governed by a Governing Council consisting of representatives from Rubber Industry, Central and State Govts., Rubber Board, prominent research and development (R & D) establishment, academic institutes, etc., is functioning under the administrative control of Ministry of Commerce & Industry, Govt. of India, New Delhi.

Over the last 50 years, IRMRA has expanded and diversified its activities in both tyre and non-tyre sectors and has become a unique R&D 'Centre of Excellence' at par with any internationally renowned Institute of repute in the World.

The state of the art facilities created by IRMRA over the years and the expertise developed by its scientists are being utilized by the industries such as rubber, polymer, paints, chemicals and textile to name a few .

Apart from its main expertise in the fields of testing and certification (Tyre & Non Tyre Testing) customers training, research and product development, consultancy and sponsored research, IRMRA has diversified its activities in different areas to cater to the needs of the rubber and allied industries.

Some of the main activities undertaken by IRMRA are as under:

- Process and Product Development
- Material Selection / Specialization and Development
- Reverse Engineering / Compound Development
- Rubber Engineering and Finite Element Analysis (FEA)
- Quality Audit and GMP services
- Consultancy services on Rubber Technology & Laboratory Management System (LMS)
- Storage and Service Life Prediction

- Quality Control / Assurance
- Process Improvement / Trouble Shooting
- Failure Analysis
- Forensic Investigation

IRMRA has been recognized by the Dept. of Scientific and Industrial Research (DSIR), Govt. of India, New Delhi. It is also recipient of many accreditations / recognitions and certifications from many national and international agencies of repute such as NABL, Underwriters Laboratories (USA), ISO, CEMILAC, DGMS etc.

IRMRA's clientele includes Govt. / Semi Govt. organizations such as Defence Sector (Indian Navy, Air Force and Ordnance Factories), BARC, RITES, SRTCs, Mazgaon Docks, BPCL, HPCL and also reputed private sector companies such as GE (USA), L&T, Kirloskar Group, Bajaj Auto, Tata Group, Mahindra & Mahindra to name a few.

IRMRA has won the confidence of these reputed clients by rendering dedicated, reliable and timely service over the years. It has successfully indigenized and developed through reverse engineering and continuous research & development many critical rubber components required by the industries.

The main activities and achievements are presented with more details for your perusal.

SEMINARS, WORKSHOPS, CONFERENCES AND EXHIBITIONS ORGANISED / ATTENDED BY THE EMPLOYEES DURING THE YEAR-

IRMRA's scientists have participated in many national and international seminars, workshops, conferences and exhibitions and made a presentation about the facilities created by IRMRA, expertise developed by its scientists for the benefit of the industries and latest trends in rubber technology etc. Similarly, IRMRA's scientists regularly interacted with their counterparts in other similar institutes such as BARC, NMRL, IIT's, CVRDE, DRDO, DMDE for mutual benefits.

Similarly, with a view to extend its technological support to small scale industries, IRMRA's officials delivered lectures in many programmes organized by TISSA, COSIA, MSME, SIDBI for budding small scale entrepreneurs in our Country.

Mr.P.Roy Choudhury-Joint Director attended the following seminars / workshops and gave the presentation as under:

- One day annual workshop of NAIP held in May'2010 at CIAE, Bhopal and gave a presentation on status of Rubber Dam Project.
- Two days national meet on Technological Innovations in Agriculture in May'2010 at NASC complex, New Delhi organized by Indian Council of Agricultural Research, Ministry of Agriculture, Govt. of India, New Delhi.
- One day seminar organized by Panchayat and Rural Development Dept., Rajiv Gandhi Mission for Watershed Management in May'2010 and gave a presentation on Flexible Rubber Check Dams developed by IRMRA and other consortium partners under NAIP.
- One day NAIP (ICAR) Thematic Annual Workshop in Feb'2011 at Central Institute of Subtropical Horticulture, Lucknow.
- Two days Project Review Workshop on NAIP Project in Feb'2011 at G.B.Pant University of Agriculture, Pant Nagar (UP).

Mr.K.Rajkumar-Dy.Director attended the following seminars / workshops and gave the presentation as under:

- Two days seminar on “Recent trends on automotive rubber components for modern vehicles” at Chennai, jointly with MIT, Chennai, during April'2010.

- One day Rubber Chemist meet – Jointly with AIRIA [WR] – at Pune, Maharashtra.
- One day workshop on "Recent developments on automotive and industrial Rubber components" at Coimbatore, Tamil Nadu, during August'2010.
- One day workshop on "Recent developments on automotive and industrial Rubber components" at Madurai, Tamil Nadu, during August'2010.
- Two days workshop on "Uncertainty Measurement – Principle & Practice" at ARAIL, Ankleshwar.
- Three days course on "Laboratory Management Systems as per ISO 17025: 2005 & Internal Audit" at ARAIL, Ankleshwar.
- Two days customized Training course on "Internal Auditor course as per NABL for Torrent Pharma group, at Ahemedabad, Gujarat.
- Attended national workshop organized by NAIP, at Coimbatore.
- CIC / CAC meeting on Coir Project organized by NIRJAFT, in Kolkatta.
- Attended national workshop organized by NAIP, at Dharwad.
- CIC / CAC meeting on Coir Project organized by NIRJAFT, Kolkatta in Chennai during Jan'2011.
- CIC/CAC meeting on Rubber Dam project organized by IRMRA

PARTICIPATION OF IRMRA'S OFFICIALS IN TECHYARD-2010 ORGANISED BY NAVAL DOCKYARD, MUMBAI -

Naval Dockyard organized a two days International Technical Exhibition (TECHYARD-2010) on 7th and 8th Oct 2010 at Nehru Science Centre, Worli, Mumbai.

IRMRA displayed the following items in the stall:

1. Acoustic rubber tiles for submarine applications
2. Pneumatic Fenders
3. Seals for Doors and Hatches for the ships
4. O-rings , Gaskets and Staves for critical applications

Techyard – 2010 - Dr.P.Thavamani ,Director ,Mr.Prabir Roy Choudhury ,Joint Director ,Mr.M.Anis, Sr. Scientific Officer Mr.N.A.Phondke, Officer represented IRMRA in TECHYARD 2010 and interacted with Mr.Palam Raju ,Minister of State for Defence,Govt Of India ,New Delhi and the Senior Indian Navy Officers .

Mr, K, Rajkumar and Mr. Niteesh Shukla have visited one the world leading Tyre company " M/s Goodyear Tire & Company, Akron, Ohio, USA and interacted with their scientists with respect to possible business on Testing and R&D collaboration between IRMRA & Goodyear Tire & Co.

They also visited M/s General Cable Corporations [GCC] , Indianapolis, USA towards business discussion development of rubber compounds and testing requirements of GCC. During this visit, Mr. Rajkumar, made a presentation to Mr. Vijay Mhetar, Director [R&D] and other Technical persons of GCC, about Various R&D & testing facilities available at IRMRA for mutual business opportunities.

They also made a visit to University of Akron to interact with Professor and Chair of Polymer Science & engineering Dept. and discussion were made on latest happening in the field of polymer Science including nano technology.

Director & Dy. Director of IRMRA have participated and delivered lectures on IRMRA R&D facilities for use of Rubber Industries in Rubber Chemist Meet in Pune and Mumbai organized by AIRIA.

PUBLICITY TO IRMRA'S ACTIVITIES:

IRMRA gave due publicity to its activities and important events in local news papers and leading rubber journals as well as through its website which displays among other things, testing and other facilities available in IRMRA, major projects, current events and its senior officer profile.

Similarly, IRMRA's scientists were deputed to various institutes as faculty members to deliver lectures about the facilities available at IRMRA and the expertise developed by scientists for the benefit of the rubber and allied industries.

TRAINING AND KNOWLEDGE UPGRADATION FOR IRMRA's EMPLOYEES:

IRMRA's scientists and senior officials organized Internal Training Programmes for its employees on various scientific / technical and managerial subjects such as latest trends in Rubber Technology, ISO / NABL Quality Systems, Communication Skills, Leadership Qualities, computer skills etc.

IRMRA's employees were nominated for various training programmes organized by IDEMI, QCI, Bombay Chamber of Commerce & Industry, Bombay Productivity Council, Employers Federation of India etc.

HUMAN RESOURCES DEVELOPMENT PROGRAMMES FOR THE EMPLOYEES WORKING IN RUBBER AND ALLIED INDUSTRIES:

IRMRA conducted regular training programmes for the employees in rubber & allied industries on latest trends in rubber technology consisting of theoretical inputs and practical demonstration in their laboratories.

For this purpose, IRMRA has created excellent in-house training facilities as well as hostel facilities at subsidized rates for the participants especially from small scale industries. The hostel facilities were inaugurated by Mr.O.S.Kanwar, President-IRMRA in presence of Governing Council members.

During the year under review, IRMRA conducted 14 training programmes on and off the campus and 3 workshops at various places so that the participants from industries could get benefited from the rich experience and knowledge available with IRMRA's scientists and engineers.

Some of the main training programmes conducted by IRMRA were as under:

- Introduction to Rubber Technology
- Rubber compounding and Testing of Rubber Products
- Advanced Analytical Instrumental Testing of Rubber and allied Products
- Advance course on Reverse Engineering and Life prediction of Rubber Products
- Design and Development of Rubber Products

The employees from Govt. / Semi Govt. sectors such as BARC, BPCL, HPCL, ONGC, State Road Transport Corporations and Defence Sectors as well as from private sector such as Larsen and Toubro Ltd., Kirloskar and Bajaj Group of companies, Mahindra & Mahindra Ltd., who participated in these training programmes appreciated the same very much.

IRMRA has also designed long term courses as requested by All India Rubber Industries Association (AIRIA) for six weeks entitled “Rubber Technology for Non Rubber Technologists”, mainly to promote awareness and skill development programme for rubber industries especially for new entrepreneurs and students community. IRMRA is supporting the M.Tech Programme in Rubber Technology conducted by Anna University. The students avail the IRMRA's R&D infrastructure for carrying out their projects as part of their M.Tech Programme.

Academic Research work program on Rubber Technology availed by Academic Institutes

There are 9 B. Tech students from various academic institutes like Birla Institute of Technlogy, Misra, Ranchi Madras Institute of Technology, Anna University, Chennai, MG University, Kerala, Data Maghe College of Engineering, Mumbai and 1 M.E student from Vishwakarma Institute of Technology, Bibwewadi, Pune have under taken their academic projects at IRMRA. All students have successfully competed their academic programs. The faculties from respective Institution have appreciated the training program and Research work carried out by their students.

For the first time in IRMRA, one of the Management Institute have sent their students to IRMRA for internship as a part of their Academic activities under HRD Programs. 3 nos of Final year MBA students, from IBSAR, Mumbai have availed their internship project under marketing, HRD area of specialization.

Similarly, IRMRA conducted customized training programmes for our customers employees in their premises provided consultancy in order to solve their technical problems and also helped them to get the ISO / NABL accreditation for their testing laboratories.

IRMRA also supported many events / training programmes conducted by AIRIA and IRI. Mr.P.Roy Choudhury (Joint Director), organized a four days training programme on "Testing and Development of Composite Materials" at CNAI (Controllate of Naval Armaments Inspection) Vizag, in January'2011 which was appreciated by all the participants.

Mr.K.Rajkumar (Dy. Director) organized many training programmes on "Laboratory Management System as per ISO 17005:2005" at ARAIL, Ankleshwar (Gujarat). The employees of many laboratories located in that area participated in these training programmes and appreciated the efforts taken by IRMRA. Similarly, training programmes on "Measurement of Uncertainty – Principles and Practice" were also organized for our customers

FULFILMENT OF SOCAL OBLIGATIONS TOWARDS THE COMMUNITY:

As a part of our social obligations towards the community, IRMRA has supported the education institutes such as Govt. Polytechnic-Mumbai, UDCT-Jalgaon, Anna University-Chennai, M.G. University- Kerala, IBSAR Institute of Management-Navi Mumbai, Madras Institute of Technology-Tamil Nadu and Birla Institute of Technology-Ranchi, by allowing free on the job training to their students in our Institute. The students from these institutes are also encouraged to complete their project in IRMRA as a part of their curriculum. During the last year, more than 100 students completed their training / project work in IRMRA as a part of their curriculum.

IRMRA's scientists also visited these Institutes as faculty members, examiners and paper setters.

ON GOING PRESTIGIOUS PROJECTS:

1) Design and Development of Rubber Dam for Watersheds (Rubber Dam Project):

This important & prestigious Project, awarded to IRMRA by NAIP under Indian Council of Agricultural Research (ICAR), funded by World Bank, is being executed by IRMRA, as the Consortium Leader, jointly with Central Institute for Research on Cotton Technology (CIRCOT), Mumbai, Directorate of Water Management (DWM) Bhubaneshwar and Kusamgar Corporate, Mumbai.

The prototype rubber dam has been subjected to extensive testing for its material characteristics to qualify its ability with standard various adverse service conditions. Finally the prototype dam has been subjected to field simulation study in Civil Engineering Department of Indian Institute of Technology (IIT), Mumbai for proving its design suitability at different velocity and pressure of water stream.

MRDP – Evolution at IIT, Bombay

Based on successful laboratory trail with prototype dam, seven rubber dams have been installed at different places in and around Bhubaneshwar for field evaluation, and they have been found to perform well during the last monsoons and as a result of which the average productivity of paddy crop has increased considerably. The state Govt. of Orissa is keen to install 10 more dams for trial purpose.

The visit of senior officers from IRMRA and other consortium partners at Baghamari, Bhubaneshwar for field validation

We are sure the concept of rubber dams will prove to be revolutionary, in maximum utilization of scarce water resources in our Country and it will be a service to the mankind also.

2) A value Chain for coconut, fibre and its by-products: Manufacture of diversified products of higher value and better marketability to enhance the economic returns of farmers (Coir Project):

IRMRA has been awarded this prestigious Project sponsored under NAIP by Indian Council of Agricultural Research (ICAR) Govt. Of India and funded by World Bank. Mr. K.Rajkumar (Deputy Director IRMRA) is the CCPI of this Project.

National Institute for Research on Jute and Allied Fibres Technology (NIRJAFT) is the consortium leader and IRMRA along with CIRCOT, Mumbai, Rubber Park India Pvt.Ltd., Ernakulum and TMNRRDC, Trivendrum are the consortium partners.

IRMRA is proud in executing this Project in which, IRMRA is carrying out intensive research on modifying the Coir Pith and coir fibre as the low cost value added filler for rubber and allied products. Being a major organic content in its chemical composition, it has added advantage of biodegradability along with light weight characteristics, which can be used as low cost filler in automotive and industrial rubber components.

The results are quite encouraging and we have also identified various diversified products which are currently under development using modified coir pith /fibre incorporated rubber composites.








We are sure this Project will prove to be beneficial to rubber & allied industries as well as the farmers to a great extent.

IMPORTANT PROJECTS AWARDED TO / EXECUTED BY IRMRA:

During the year, IRMRA has taken up many important projects. Some of them worth mentioning are as under:

- Development of Acoustic Rubber Tiles for HQ-ATVP, Navy, Govt. of India.
- Development of Viton Rubber Seals and O-Rings for nuclear application for BARC (Mysore).
- Development of Rubber Compound sample having chemical resistance for IGCAR (DAE), Govt. of India.
- Development of special Elastomeric Compound Material suitable for Nuclear Power Plants.
- Development of Master Slave Manipulator (M8).
- Development of gauntlets for BARC and IGCAR.
- Development of arming device holders for Defence Sector.
- Development of metal rubber bonded rim for Ordnance Factory, Ambajhari.
- EPDM rubber seals for nuclear applications for BARC, Mumbai.
- Indigenization of critical rubber components like oil seals, gaskets, diaphragms (fabric inserted), Rubber Bellows (Fabric Reinforced) metal rubber bonded components for different Naval organizations like NAD (Mumbai and Vizag), MOMB and MOV etc.
- Development of shock mounts for MOV and MOMB.
- Development of room temperature curable adhesive (cured rubber to metal and cured rubber to cured rubber) for submarine application for Indian Navy.
- Development of specification for high pressure seals for CVRDE, DRDO (Defence Sector)
- Development of critical rubber metal bonded items, microcellular gaskets, O-Rings for Defence applications for Ordnance Factory-Ambajari, Nagpur.
- Development of critical rubber components based on Silicone Rubber and HNBR for Defence applications for TBRL, Chandigarh.
- Development of Butyl Rubber Tiles for BEL, Mysore.
- Development of double diaphragm rubber bellows for pressure chamber for BARC, Mumbai.
- Evaluation of thermal black in FKM & NBR based compound for a private sector company.
- Development of ECDE resistant compound using thermal black for a private sector company.
- Synthesis and application of nano white filler for environment friendly rubber products for Dept. of Science and Technology (DST), Govt. of India.
- Development of composition of rubber lining for FGD Tank and Chimney Tower for Transport Technologies Private Ltd., Pune.
- Development of speciality rubber compound for Indian Air Force, Indian Navy and other Defence Sectors.
- Indigenization of shock absorbers.
- Indigenization of radiation resistant booting.
- Application of electron beam radiation in tyre curing.
- Development of nano composites.
- Design and Development of Rubber Dams for Water Shed by NAIP, ICAR, Govt. of India
- A value chain on coconut fibre and its by products by NAIP, ICAR, Govt. of India.

MAJOR PRODUCTS DEVELOPED FOR DEFENCE SECTOR

Similarly following products were developed by IRMRA mainly for Defence Sector, BARC and other Govt. / Semi Govt. organizations:

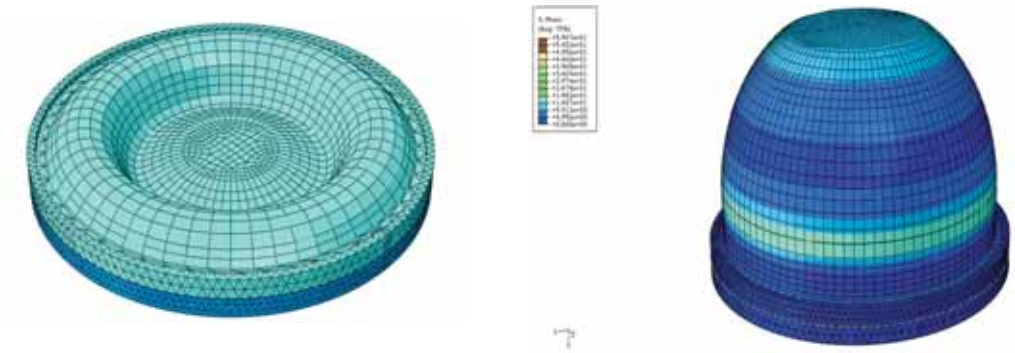
- Diaphragms & Collars
- Rubber Bearings & Gaskets
- Suction & discharge compensator
- Long Manipulators
- Rubber Gauntlets for nuclear research applications
- High temperature and radiation resistance compound
- Hypalon coated PU booting for manipulators
- Pneumatic fenders

Product Design and Development activities:

IRMRA has developed many functionally critical products for Indian Navy and the Material Superintendent (MS) who visited IRMRA appreciated our efforts and assured us to extent full support and co-operation not only in product development, testing but also in manpower development.

Dr.P.Thavamani, IRMRA's Director along with MS and other senior officers from Indian Navy

Rubber Engineering - Design Optimization:



FE Modelling and Simulation of Diaphragm

Our rubber engineering division has developed a state of the art FE Modelling and Simulation technique for design optimization and validation so that the total lead time required for design and development of critical products like Diaphragm for the nuclear reactors of Bhabha Atomic Research Centre could be significantly reduced.

PUBLICATION AND PRESENTATION OF TECHNICAL PAPERS BY OUR SCIENTISTS:

IRMRA's scientists published scientific / technical papers in rubber journals and also presented the same during the respective seminars / workshops as under:

- An article on "Technical textiles for Rubber Dam applications – Bonding Evaluation and Strength Characterization" published and presented in national seminar on Polymeric Materials in Defence Applications (POMADE-2011) at NMRL, Mumbai in Feb'2011 by Mr.P.Roy Choudhury, Dr.P.Thavamani and Mr.Pankaj Regar.
- An article on "Flexible Checkdam for Watershed Management – An Innovative Application of Technical Textile" published and presented in international conference on Technical Textile and Non-Woven Fabric held in IIT, Delhi in November'2010 by Mr.P.Roy Choudhury, Dr.S.K.Chattopadhyay, Dr.M.K.Talukdar and Dr.N.Sahoo.
- An article on "Modified Coconut pith–a novel Rubber Additive for Rubber Industry" published and presented in Rubberchem Review in July-August'2010 issue by Mr.K.Rajkumar.
- An article on "Radiation effects on styrene–butadiene– ethylene–propylene diene monomer-multiple walled carbon nanotube Nano composites: vulcanization and characterization, Polym. Adv. Technol" published and presented by Mr.K.Rajkumar in January'2010.
- An article on "Mechanical and Thermal properties of Treated Coir pith Rubber Composites" in RubberChem Review in Jan–Feb'2011 issue by Mr.K.Rajkumar.
- A paper on "High Temperature Resistance Properties of NBR Based Polymer Nano Composites", International conference on nanotechnology : Nanocon-2010 in Oct'2010 at Pune by Mr. K.Rajkumar and Dr. P.Thavamani
- Invited talk on "Role of Analytical instruments in reverse engineering of Rubber products Conference & Workshop, India Rubber Expo- 2011, Chennai by Mr. K.Rajkumar.
- Presented a paper on "Preparation of Acrylonitrile Rubber based polymer Nanographite composites – using Liquid NBR –NG dispersions" in International conference on APSRT, IIT, Kharagpur from 3rd to 5th March 2011 by Mr. K.Rajkumar and Dr. P.Thavamani
- Presented paper on "Mechanical and Thermal Properties of Treated Coir Pith-Rubber Composites" in International Rubber Conference–IRC-2010 in October'2010, Mumbai by Mr. K.Rajkumar, Mr. Ranjith P. and Dr. P.Thavamani

STATUS OF IRMRA'S 11TH FIVE YEAR PLAN SCHEMES:

Under the 11th Five Year Plan (2007-2012) Ministry of Commerce & Industry, Govt. of India, New Delhi granted financial assistance (Plan Fund) to the extend of Rs.22.50 crores for implementing the following three Projects:

1) Centre of Excellence in Tyre Research and Testing:

IRMRA has set up a Centre of Excellence for Tyre Research and Testing which was inaugurated in the month of February'2010 by our President Mr.O.S.Kanwar, Chairman and Managing Director of Apollo Tyres Ltd. The Centre which is equipped with state of the art infrastructural facilities, has become the first R&D Institute in our Country to get NABL accreditation and BIS recognition for both tyre and tube testing as per the quality order notified by Govt. of India.

The following state of the art testing facilities are available in our Centre of Excellence for Tyre Research, Testing and Certification.

(I) Endurance Testing Machine for 2 wheeler passenger car and truck tyres.

Endurance Testing Machine

(ii) Universal Tensile Machine (UTM) for tyre, plunger, bead unseating footprint.

(iii) Shearography is used to map the tyre so that if there is any manufacturing / design defect, the same can be detected without destroying the tyre.

Shereography

(iv) Noise Vibration Harshness (NVH) is used to study the noise generating behaviour of tyres.

(v) Dynamic Growth (Tyre Profilometer) Machine: This machine is used to generate the tyre profile using laser camera under dynamic conditions.

Dynamic Growth (Tyre Profilometer) Machine

The centre is being extensively used for testing and certification and so far more than 350 types of tyres from various manufacturers have been tested so that BIS can issue licence as per the quality order.

These facilities are being extensively used by the major Indian tyre companies such as Apollo Tyres Ltd., MRF Ltd., Ceat Ltd., and also by the globally leading tyre manufacturers like Michelin, Bridgestone, Goodyear, Yokohama, Pirelli, Cooper etc. Many overseas tyre manufacturers have shown their interest to avail our tyre / tube testing and certifications facilities for getting BIS licence.

2) HRD – Entrepreneurship Development Programme:

IRMRA has created hostel facilities, modernized training centre along with supporting facilities for organizing short term as well as long term training courses in rubber technology and quality management training courses. The hostel facilities were inaugurated by Mr.O.S.Kanwar, President of IRMRA in the presence of Governing Council Members. The training participants have availed the benefits of these facilities. IRMRA has designed long term courses as requested by All India Rubber Industries Association (AIRIA) for six weeks entitled "Rubber Technology for Non Rubber Technologists", mainly to promote awareness and skill development programme for rubber industries, especially for new entrepreneurs and students community. IRMRA is supporting the M.Tech Programme in Rubber Technology conducted by Anna University. The students avail the IRMRA's R&D infrastructure for carrying out their projects as part of their M.Tech Programme.

Dr. P. Thavamani, Director and Mr. K .Rajkumar, Dy. Director, IRMRA during 2 days seminar organized by IRMRA & MIT, Anna University

Similarly, more than 100 students have come from management institutes for an industrial visit to IRMRA as a part of their curriculum. Many students from academic colleges / universities such as Birla Institute of Technology, Ranchi, MIT-Chennai, M.G.University, Kerala, Datta Meghe College of Engineering-Mumbai and College of Engineering, Pune, have undertaken their project work / implant training at IRMRA as a part of their curriculum. Similarly, management students (MBA) from IBSAR Institute of Management, Mumbai completed their internship training in IRMRA.

3) Outreach Programme:

IRMRA's scientists participated in many national and international seminars and conferences and made technical presentation about latest trends in Rubber Technology.

IRMRA has conducted 14 training Programmes on and off the campus and 3 workshops at various places so that the participants from industries could get benefited from the rich experience and knowledge available with IRMRA scientists and engineers.

Similar programmes are scheduled in Pune, Ahmedabad, Ludhiana, Baroda, and Hyderabad for the rest of the year. IRMRA participated in BARC Workshops and exhibitions organised by BARC, Tarapur

IRMRA jointly with AIRIA (SR) organized one day Workshop at Coimbatore and Madurai

OTHER IMPORTANT EVENTS (IRMRA'S RUBBER CONFERENCE – JANUARY'2012):

One of the most important events in IRMRA is its 21st Rubber Conference.

IRMRA's 21st Rubber Conference will be held on 20th and 21st January 2012 ,in Hotel Imperial Palace at 169,Aarey Milk Colony, Goregaon (East) Mumbai-400 605.

The theme of the Rubber Conference selected this time is "Emerging trends in developing eco-friendly and energy efficient electrometric material and processing technology"

The objective of this Conference is to provide a common platform for the scientists, rubber technologists industrialists and academicians to exchange ideas and disseminate the knowledge in the areas of natural and synthetic rubbers ,chemicals and plasticizers ,reinforcing fillers and nano composites in the context of the global warming taking place due to emission of green house gasses ,the emerging environmental regulations ,fuel efficiency, spiraling cost of materials and dwindling resources etc. .

The Conference will highlight, apart from the eco friendly materials, the improvements and innovations being made in the processing conditions, equipments, test methods and the validation processes.

During the Conference, specific technical sessions will be held to discuss important subjects like rubber, polymeric materials , rubber chemicals and compounding ingredients ,fillers and reinforcing materials, nano materials and composites ,rubber processing and equipments ,testing and characterization of materials ,recycling and waste utilization , to name a few.

Similarly, scientific/technical papers on the original and innovative work are also invited from the scientists and the best technical paper will be suitably awarded.

The key note address will be delivered by an eminent scientist followed by the speeches by the distinguished guests specialized in various fields.

We expect about 350 delegates from India and abroad including scientists, technicians, industrialists and senior officials from Govt. / Semi Govt. organizations and national and international companies to participate and deliberate on various subjects of mutual interest.

The Conference offers many opportunities for companies to display their banners for the products and services and also advertise in the souvenir which will be released on this occasion.

(For the convenience of the outstation delegates, IRMRA can offer accommodation at subsidized rates in our Guest House at Thane.)

We expect a whole hearted participation and active support from all the stakeholders in rubber and allied industries in India and abroad to make this Conference a grand success.

OUR GRATITUDE AND APPRECIATION:

We are grateful to the Ministry of Commerce & Industry, Govt. of India for its generous financial assistance for creating state-of-the art facilities and modern infrastructure especially Centre for Tyre Research and Testing, which has made IRMRA as one of the most prominent R&D Institutes in the World for both tyre and non tyre sectors.

We would like to convey our sincere thanks to our President Mr.Onkar S. Kanwar, Chairman and Managing Director, Apollo Tyres Ltd., for his guidance and support to IRMRA, inspite of his busy schedule.

Our sincere thanks also to all our Governing Council Members for their advice and guidance, our customers and members for their valuable patronage and supporting institutes like Rubber Board, AIRIA, ATMA, IRI, ARAI, CIRT, BIS, TSSIA, COSIA and last but not the least, to all our employees, without whose support, IRMRA would not have progressed to such an extent.

We solicit sincere co-operation and support from all concerned to make IRMRA, as one of the best R&D Institutes in the World.

Thanking you,

Yours sincerely,

Dr.P.Thavamani
Director

OUR EMPLOYEES : OUR ASSETS

Scientific & Technical Staff

Dr.P.Thavamani	Director
Dr.S.K.Chakraborty	Addl. Director
Mr.Prabir Roy Choudhury	Joint Director
Mr.P.K.Das	Deputy Director
Mr.K.Rajkumar	Deputy Director
MR.K.R.Krishnan	Sr. Asst. Director
Mr.Mohammed Anis	Sr.Scientific Officer
Mr. N. K. Shukla	Sr.Scientific Officer
Mr.N.A.Phondke	Officer, CSC
Mr.Manohar Nawale	Jr. Scientific Officer
Mr.B.S.Yadav	Jr. Officer
Mr.B.R.Arote	Sr. Scientific Assistant
Mr.S.P.Patel	Sr. Scientific Assistant
Mr.Sriram Iyer	Sr. Scientific Assistant
Mr.Chandan Chowdhury	Sr. Scientific Assistant
Mr.Bhaskar R.Dumbre	Sr. Scientific Assistant
Mrs.Suhasini Katke	Jr. Scientific Assistant
Mr.Saburaj	Jr. Scientific Assistant
Mr.Samji Victor	Jr. Scientific Assistant
Mr.Bhagaban Panda	Jr. Scientific Assistant
Mr.D. J. Maurya	Jr. Scientific Assistant
Mr.M.N.Sharma	Sr. Technical Assistant-D
Mr.Santosh Jagdale	Sr.Laboratory Assistant-B
Mrs.Jyoti P. Chaudhari	Sr.Laboratory Assistant-B
Mr.Jayaram Shetty	Sr.Laboratory Assistant-B
Mr.Raju S.Shetty	Sr.Laboratory Assistant-A
Mr.Shantaram K. Naik	Sr.Laboratory Assistant-A
Mr.Nilesh N. Jadhav	Jr.Laboratory Assistant
Ms.Ujwala Phutak	Jr.Laboratory Assistant
Ms.Priti Rasam	Jr.Laboratory Assistant
Mr.Vivek Acholkar	Electrical Maint. Assistant
Mr.Rajendra More	CNC Machine Operator

ADMINISTRATIVE STAFF

Mr.D.R.Haibat	Sr. Asst. Director (HRD & Admn)
Mr.P.A.Kothandaraman	Asst. Director
Mr.Sandeep Narvekar	Assistant Officer (F&A)
Mr.N.P.Dileep Kumar	Senior Commerical Assistant-D
Mr.Narayanan Kutty	Senior Commerical Assistant-C
Mr.K.S.Shankar	Senior Commerical Assistant-B
Ms.Sonali Wadkar	Sr. Receptionist / Tel. Operator
Mrs.Minal Patil	Sr.Com.Asstt. - A
Mrs.Rajakantam Iyappan Das	Sr. Secretarial Asst. - B
Mrs.Vidya S. Jadhav	Accounts Assistant
Ms.Vaishali Hodavdekar	Steno-cum-General Assistant

IRMRA: SENIOR STAFF MEMBERS

Front Row (From Left): Mr. P. K. Das, Dy.Director; Dr.S. K. Chakraborty, Addl.Director; Dr. P. Thavamani, Director; Mr. P. Roy Choudhuri, Joint Director; Mr. K. Rajkumar, Deputy Director.
Second Row (From Left): Mr.P.A.K. Raman, Asst.Director; Mr.S. Narvekar, Asst.Finance Officer; Mr.NK Shukla ,Sr. Scientific Officer; Mr.M Anis, Sr. Scientific Officer; Mr.N. A. Phondke, Officer, CSC;
Third Row (From Left): Mr.R. P. Das, Mktg Officer; Mr. M. Navale, Jr. Scientific Officer; Mr.B. S. Yadav, Jr. Officer; Mr. D. R. Haibat, Sr.Asst. Director.

AUDITOR'S REPORT

M. M. NISSIM AND CO. (Regd.)
CHARTERED ACCOUNTANTS

Barodawala Mansion,
B-Wing, 3rd Floor,81, Dr. Annie Besant Road,
Worli, Mumbai – 400 018.
Tel. : 2494 9991 Fax : 2494 9995
E-mail : mail@mmnissim.com
Website : www.mmnissim.com

The Members,
Indian Rubber Manufacturers' Research Association,
Thane, Mumbai.

We have audited the Balance Sheet of INDIAN RUBBER MANUFACTURERS RESEARCH ASSOCIATION as at 31st March 2011 and also the Income and Expenditure Account and the Receipts and payments account for the year ended on that date annexed thereto. These financial statements are the responsibility of the associations' management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with generally accepted auditing standards in India. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatements. An audit includes examining on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by the management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

1. We have obtained all the information and explanations, which to the best of our knowledge and belief were necessary for the purpose of our audit.
2. In our opinion, proper books of account have been kept by the Association in so far as it appears from our examination of the books
3. The aforesaid Balance Sheet and Income & Expenditure Account and Receipts and Payments account dealt with by this Report are in agreement with the books of account.
4. In our opinion and to the best of our information and according to the explanations given to us, the said accounts read with Note No.4 in Schedule 15, in respect of provision for depreciation not being in conformity with the Accounting Standard issued by the Institute of Chartered Accountants of India and read together with the notes thereon give a true and fair view, in conformity with the Accounting Principles generally accepted in India

a) in the case of the Balance Sheet, of the state of affairs of the Association as at 31st March, 2011 and ;

b) in the case of the Income and Expenditure Account, of the excess of Income over expenditure for the year ended on that date.

c) in the case of the Receipts and Payments Account, of the receipts and payments for the year ended on that date.

For M. M. NISSIM AND CO.
Chartered Accountants
(ICAI Regn No. 107122 W)

Place : Mumbai
Date

(N.KASHINATH)
PARTNER
Mem.No.36490

BALANCE SHEET AS AT 31ST MARCH 2011

		Schedule	Rs. As at 31.03.2011	Rs. As at 31.03.2010
CAPITAL FUND AND LIABILITIES				
CAPITAL FUND		1	1,784,082	1,322,082
RESERVES AND SURPLUS		2	64,411,342	19,444,245
PROJECT FUNDS		3	287,163,938	284,030,715
CURRENT LIABILITIES & PROVISIONS		4	43,179,687	34,156,937
TOTAL			**396,539,049**	**338,953,980**
ASSETS				
FIXED ASSETS		5	254,080,938	232,215,864
CURRENT ASSETS, LOANS AND ADVANCES		6	142,458,110	106,738,115
T O T A L			**396,539,049**	**338,953,979**
SIGNIFICANT ACCOUNTING POLICIES		14		
NOTES ON ACCOUNTS		15		

Vide our report of even date

For M.M.NISSIM AND CO.
Chartered Accountants

(N.KASHINATH)	**(Dr.P.THAVAMANI)**	**(O.S.KANWAR)**
PARTNER	DIRECTOR	PRESIDENT

Place : Mumbai
Date :

INCOME & EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31ST MARCH, 2011

	Schedule	Rs. Current Year	Rs. Previous Year
INCOME:			
INCOME FROM OPERATION / SERVICES	7	123,647,967	52,460,428
GRANTS / SUBSIDIES	8	32,354,432	27,242,519
FEES / SUBSCRIPTION	9	778,081	300,000
OTHER INCOME	10	3,462,460	1,806,134
TOTAL		**160,242,939**	**81,809,081**
EXPENDITURE:			
COST OF MATERIALS, CHEMICALS AND STORES	11	15,486,013	16,516,487
ESTABLISHMENT EXPENSES	12	43,883,858	28,686,579
OTHER ADMINISTRATIVE EXPENSES	13	23,227,833	11,182,759
SPONSORED PROJECTS EXPENSES (Refer Note 8)		3,155,264	3,537,127
INTEREST		-	383,457
DEPRECIATION		29,522,875	24,002,701
PRIOR PERIOD EXPENSE (Net)		-	8,970
TOTAL		**115,275,843**	**84,318,080**
EXCESS OF INCOME OVER EXPENDITURE		44,967,096	(2,509,000)
Add: TRANSFER FROM CONTINGENCY RESERVE		-	2,200,000
		44,967,096	(309,000)
APPROPRIATIONS :			
TRANSFERRED TO GENERAL RESERVE		44,967,096	(309,000)
SIGNIFICANT ACCOUNTING POLICIES	14		
NOTES ON ACCOUNTS	15		

Vide our report of even date

For M.M.NISSIM AND CO.

Chartered Accountants

(N.KASHINATH)	**(Dr.P.THAVAMANI)**	**(O.S.KANWAR)**
PARTNER	DIRECTOR	PRESIDENT

Place : Mumbai

Date :

SCHEDULES FORMING PART OF BALANCE AS AT 31ST MARCH, 2011

	Rs. As at 31.03.2011		Rs. As at 31.03.2010	
SCHEDULE 1- CAPITAL FUND:				
Life Membership Contribution				
Balance as at the beginning of the year	125,000			125,000
Add: Contribution received during the year	300,000			-
Balance as at the end of the year		**425,000**		125,000
Admission Fees				
Balance as at the beginning of the year	313,500		309,000	
Add: Contribution received during the year	162,000		4,500	
Balance as at the end of the year		**475,500**		313,500
Capital Donation Fund				
Balance as at the end of the year		**661,093**		661,093
CSIR Capital Grant Fund				
Balance as at the end of the year		**222,489**		222,489
TOTAL		**1,784,082**		1,322,082

SCHEDULE 2- RESERVES AND SURPLUS				
SPECIAL RESERVES	-	-		
Staff Welfare Fund:				
Balance as at the beginning of the year	3,462,226		3,184,849	
Add:Transfer from Income and Expenditure Account	-		-	
Add: Interest on Earmarked Deposits	-		277,377	
		3,462,226		**3,462,226**
GENERAL RESERVE	-	-		
Balance as at the beginning of the year	15,982,020		16,291,019	
Add/(Less):Transfer to/from Income and Expenditure Account	44,967,096		(309,000)	
		60,949,116		**15,982,019**
CONTINGENCY RESERVE	-	-		
Balance as at the beginning of the year	-		2,200,000	
Add: Transfer from Income & Expenditure account	-		-	
Less: Transfer to Income & Expenditure account	-		2,200,000	
		-		-
TOTAL		**64,411,342**		**19,444,245**

SCHEDULES FORMING PART OF BALANCE AS AT 31ST MARCH, 2011

SCHEDULE 3- PROJECT FUNDS

	FUND WISE BREAK-UP				TOTAL	
	Laboratory Fund	Research & Development Fund	Contribution For Sponsored Research	Contribution For NAIP Projects	As at 31.03.2011	As at 31.03.2010
Balance at the Beginning of the year	296,000	14,332,509	254,481,558	14,920,648	284,030,715	260,554,308
Additions to the Funds / Grants	-	-	30,000,000	5,487,654	35,487,654	48,641,847
Interest on Earmarked Deposits	-	-	-	-	-	2,204,035
	296,000	**14,332,509**	**284,481,558**	**20,408,302**	**319,518,369**	**311,400,190**
Utilisation / Expenditure towards objectives of the Grant:						
Depreciation of Rs. 28372603/- (Previous year Rs.22981711/-) and Rs 826565 /-(Previous year 723681/-)relating to Sponsored Research and NAIP Project respectively and the balance representing recurring expenditure for the year are recognised in the Income and Expenditure Account.	-	-	28,372,603	3,981,829	32,354,432	26,485,893
Transfer To Capital Fund	-	-	-	-	-	883,582
TOTAL	**296,000**	**14,332,509**	**256,108,955**	**16,426,474**	**287,163,938**	**284,030,715**

SCHEDULE 4 - CURRENT LIABLITIES & PROVISIONS

A. CURRENT LIABILITIES:			
Sundry Creditors			
For Expenses	1,524,854		(1,595,672)
Others	(2,161,582)		5,697,689
		(636,728)	**4,102,017**
Advances Received	-	-	-
		(636,728)	**4,102,017**
B. PROVISIONS:			
Accumulated Leave Encashment	394,167		-
Provision for Gratuity (Refer Note 11)	130,340		-
Provision for Fringe Benefit Tax	47,101		1,625,247
		571,607	**1,625,247**
Total		**(65,121)**	**5,727,264**

SCHEDULES FORMING PART OF BALANCE AS AT 31ST MARCH, 2011

SCHEDULE 5 - FIXED ASSETS

		GROSS BLOCK				DEPRECIATION				NET BLOCK	
	DESCRIPTION	Cost as at 31.03.2010	Additions during the year	Deductions during the year	Cost as at 31.03.2011	As at 31.03.2010	Provided during the year	Deductions	Total Up to 31.03.2011	As at 31.03.2011	As at 31.03.2010
1	LEASEHOLD LAND	60,200	-	-	60,200	-	-	-	-	**60,200**	60,200
2	FREEHOLD LAND	29,055,500	-	-	29,055,500	-	-	-	-	**29,055,500**	29,055,500
3	BUILDINGS:										-
	(On Leasehold Land)	18,863,915	-	-	18,863,915	12,326,758	653,716	-	12,980,474	**5,883,441**	6,537,157
	(On Freehold Land)	81,908,228	8,134,950	-	90,043,178	10,427,606	7,828,184	-	18,255,790	**71,787,388**	71,480,622
4	LABORATORY EQUIPMENTS	173,636,617	38,241,223	-	211,877,840	80,207,680	14,025,591	-	94,233,271	**117,644,569**	93,428,937
5	VEHICLE	1,442,691	1,158,602	-	2,601,293	1,025,745	149,437	-	1,175,182	**1,426,111**	416,946
6	FURNITURE AND FIXTURE	4,272,756	163,402	-	4,436,158	2,402,642	195,181	-	2,597,824	**1,838,334**	1,870,114
7	OFFICE EQUIPMENTS	1,499,014	75,000	-	1,574,014	1,204,873	49,746	-	1,254,619	**319,395**	294,141
8	COMPUTER/PERIPHERALS	5,493,619	662,270	-	6,155,889	4,758,954	639,480	-	5,398,434	**757,455**	734,665
9	ELECTRICAL INSTALLATION	15,287,390	1,186,570	-	16,473,960	6,019,721	4,387,009	-	10,406,730	**6,067,230**	9,267,669
10	LIBRARY BOOKS	874,474	-	-	874,474	874,474	-	-	874,474	**-**	-
11	FIRE FIGHTING EQUIPMENTS	125,306	-	-	125,306	110,750	2,183	-	112,933	**12,373**	14,556
12	DIES AND TOOLS	9,014,493	85,501	-	9,099,994	4,963,396	614,077	-	5,577,473	**3,522,521**	4,051,097
13	OTHER FIXED ASSETS	86,351	-	-	86,351	79,459	1,723	-	81,182	**5,169**	6,892
14	INTANGIBLE ASSETS	1,655,896	-	-	1,655,896	1,055,965	149,983	-	1,205,948	**449,948**	599,931
25	NAIP - EQUIPMENTS	15,130,770	-	-	15,130,770	733,333	718,088	-	1,451,421	**13,679,349**	14,397,437
26	NAIP Coir Equipments	1	1,680,431	-	1,680,432	-	108,477	-	108,477	**1,571,955**	1
	TOTAL	**358,407,221**	**51,387,949**	**-**	**409,795,170**	**126,191,356**	**29,522,875**	**-**	**155,714,231**	**254,080,938**	232,215,864
	PREVIOUS YEAR	199,302,725	159,104,495	-	358,407,220	102,188,655	24,002,701	-	126,191,356	232,215,864	

SCHEDULES FORMING PART OF BALANCE AS AT 31ST MARCH, 2011

	Rs.	Rs. As at 31.03.2011	Rs. As at 31.03.2010
SCHEDULE 6 - CURRENT ASSETS, LOANS AND ADVANCES.			
A) CURRENT ASSETS:			
Inventories:			
Developed Rubber Products		1,373,962	759,566
Work in Progress		333,450	0
Chemical, Stores and Spares		2,778,659	2,419,514
		4,486,071	**3,179,081**
Sundry Debtors: (Unsecured, Considered Good, unless otherwise stated)			
Debts Outstanding for a period exceeding six months :			
Considered Good		11,617,956	18,485,955
Considered Doubtful		500,000	500,000
		12,117,956	18,985,955
Less: Provision for Doubtful Debts		500,000	500,000
		11,617,956	18,485,955
Others		13,212,851	14,719,295
		24,830,807	**33,205,249**
Cash Balance in hand		**48,386**	**21,993**
Bank Balances:			
With Scheduled Bank			
In Current Accounts		**46,532,064**	**15,841,274**
In Margin Accounts		**3,612,974**	**620,974**
In Deposit Accounts			
Earmarked deposits		0	27,500,000
Others		48,037,448	15,570,028
		48,037,448	**43,070,028**
TOTAL (A)		**127,547,749**	**95,938,598**
B. LOANS, ADVANCES AND OTHERS ASSETS:			
(Unsecured , Considered Good)			
Staff Loans		2,856,850	3,248,750
Advances and other amounts recoverable in cash or kind			
or for value to be received		7,979,140	4,986,237
Tax Deducted at Source		2,987,608	1,168,631
NAIP Project Receivables (Refer Note 8)		0	108,006
Income Accrued On;			
Earmarked deposits		0	836,766
Other Deposits		1,086,763	451,127
		1,086,763	**1,287,893**
TOTAL (B)		**14,910,361**	**10,799,517**
TOTAL (A + B)		**142,458,110**	**106,738,115**

SCHEDULES FORMING PART OF BALANCE AS AT 31ST MARCH, 2011

	Rs. As at 31.03.2011	Rs. As at 31.03.2010
SCHEDULE 7 - INCOME FROM OPERATION / SERVICES		
Sponsored Development Projects	41,668,287	32,962,647
Testing & Investigation Charges	80,429,000	18,149,747
Training / Workshop Fees & other recoveries	1,549,378	1,348,034
Miscellaneous Income	1,301	0
TOTAL	**123,647,967**	**52,460,428**
SCHEDULE 8 - GRANTS/SUBSIDIES (Irrevocable Grants & Subsidies Received)		
Sponsored Projects: (Refer note 8)		
Revenue Expenses	3,155,264	3,537,127
Deferred Income(revenue grant)	29,199,168	23,705,392
	32,354,432	**27,242,519**
TOTAL	**32,354,432**	**27,242,519**
SCHEDULE 9 - FEES/SUBSCRIPTIONS:		
Annual Fees/Subscriptions	778,081	300,000
TOTAL	**778,081**	**300,000**
SCHEDULE 10 - OTHER INCOME		
INTEREST :		
On Term Deposits with Scheduled Banks		
Earmarked deposits	0	2,481,412
Others	3,049,284	992,722
	3,049,284	3,474,134
Transferred to Earmarked Funds	0	2,481,412
On Term Deposits	**3,049,284**	**992,722**
On Staff Loans	285,888	284,618
Sale of Scrap	51,350	215,819
Sundry Other Income	75,938	45,109
NAIP - Institutional Charges	0	267,866
TOTAL	**3,462,460**	**1,806,134**

SCHEDULES FORMING PART OF BALANCE AS AT 31ST MARCH, 2011

	Rs. As at 2011	Rs. As at 2010
SCHEDULE 11 -COST OF MATERIALS,CHEMICALS AND STORES		
Laboratory Chemicals, Stores & Spares Consumed	16,793,003	14,132,865
(Increase) / Decrease in Stock	-1,306,991	2,383,621
	15,486,013	**16,516,487**
SCHEDULE 12 - ESTABLISHMENT EXPENSES:		
Salaries, Wages and Allowances	36,229,106	25,628,347
Contribution to Provident , Gratuity and Other Funds	6,682,884	2,220,824
Staff Welfare Expenses	971,868	837,408
TOTAL	**43,883,858**	**28,686,579**

SCHEDULES FORMING PART OF BALANCE AS AT 31ST MARCH, 2011

SCHEDULE 13 - OTHER ADMINISTRATIVE EXPENSES:

Rent	26,200	9,066
Power and Water Charges	6,589,310	4,614,254
Repairs & Maintenance on Plant & Machinery & other Assets	3,237,873	1,470,715
Insurance	776,382	398,353
Rates and Taxes	221,697	658,006
Vehicles Repairs and Maintenance	229,661	157,002
Postage, Telephone and Communication Charges	334,175	430,720
Printing and Stationary	478,869	531,400
Travelling and Conveyance Expenses	1,686,361	910,475
Expenses on Seminar/Workshops/Conference	352,650	129,330
Subscription Expenses	145,277	72,644
Audit Fees	139,530	116,000
Professional Charges	1,231,678	235,951
Finance Charges	602,038	308,475
Freight and Forwarding Expenses	425,981	633,367
Advertisement Expenses	412,048	163,647
Miscellaneous Expenses	664,032	343,355
Bad Debts written off	5,670,086	0
Foreign Exchange Loss/Gain	3,985	0
TOTAL	**23,227,833**	**11,182,759**

SCHEDULES FORMING PART OF ACCOUNTS FOR THE YEAR ENDED 31ST MARCH, 2011

SCHEDULE 14 – SIGNIFICANT ACCOUNTING POLICIES:

A. ACCOUNTING CONVENTION:

The financial statements are prepared on the basis of historical cost convention and on the accrual method of accounting and in accordance with the applicable Accounting Standards issued by The Institute of Chartered Accountants of India, except where otherwise stated.

B. USE OF ESTIMATES

The presentation of financial statements requires the management to make estimates and assumptions that affect the reported amount of assets and liablities on the date of financial statements and reported amount of revenues and expenses during the reporting period. Differences between the actual results and estimates are recognised in the period in which the results are known / materialised.Although these estimates are based upon management best knowledge of current event and actions, actual results could differ from these estimates

C. INVENTORY

Developed Rubber Products, Materials, Chemicals Stores and Spares are valued at lower of cost and net realisable value. Cost of Materials, Chemical, stores and spares conprises of purchase cost and cost of conversion. Developed rubber products includes cost of conversion and other cost incurred in bringing them to their present location and condition. Inventory is valued on FIFO basis.

D. FIXED ASSETS

a) Fixed Assets are stated at cost of acquisition inclusive of inward freight, duties and taxes and incidental and direct expenses related to acquisition.

b) Assets acquired under sponsored projects are capitalised in the year of acquisition, at cost.

c) Costs relating to acquisition of Software which are not an integral part of the related hardware is capitalised as Intangibles

E. DEPRECIATION:

Depreciation is provided on written down value method as per Income Tax Rules from the year of their Capitalisation, including assets created out of Government and other Grants, except for assets acquired under NAIP Projects.

Assets Purchased / Acquired under NAIP Projects, depreciation for the year is provided on straight line method at the rates stipulated for NAIP project assets. NAIP assets purchased in the year for a sum of less than Rs. 10000/- each are depreciated at the rate of 100% retaining a residual value of Rs. 1/-. Depreciation on additions during the year is provided for the whole of the year.

Cost of Leasehold land is not amortised over the lease period

F. GOVERNMENT AND OTHER GRANTS:

Government / Other Grants are accounted when there is a reasonable assurance that the association will comply with the conditions attached to them and there is reasonable certainty of its receipts.

Grants relatable to depreciable Fixed Assets are treated as Deferred Income and recognised in the Income and Expenditure Account in proportion in which depreciation is charged. Recurring revenue expenditure towards Sponsored Projects are appropriated from the fund and are recognised in the Income & Expenditure account.

G. REVENUE RECOGNITION:

a) Sponsored Projects representing items developed by the association are generally accounted at the time of delivery and when the risks and rewards are transferred

b) Testing and Training fees are recognised as Income at contracted rates on rendering of the service.

c) Interest Income is accounted at contracted rates on time proportion basis.

H. FOREIGN EXCHANGE TRANSACTIONS:

Transactions arising in foriegn currencies during the year are recorded at the exchange rates prevailing on the dates of the transactions. Foriegn currency monetary items are converted into Rupees equivalent at the exchange rates prevailing as on Balance Sheet date. Non- Monetary items are carried at historical cost denominated in a foriegn currency and are reported using the exchange rate at the date of transaction. Exchange differences arising on settlement /restatement of monetary items are recognised as income or as expenses in the year in which they arise.

I. EMPLOYEE BENEFITS:

a) Defined Contribution Plans

The Association contributes to a defined contribution plan to Employees Provident Fund which is administered by the Regional Provident Fund Authority, and has no further obligation beyond making its contribution, which is expensed in the year to which it pertains.

Defined Benefit Plans

The liability for Gratuity is determined on the basis of an actuarial valuation as at the end of the year, which is calculated using Projected Unit Credit Method. Actuarial gains and losses which comprise experience adjustment and the effect of changes in actuarial assumptions are recognized in the Income and Expenditure Account. The Gratuity Fund is administered by Trust through the Group Scheme of Life Insurance Corporation of India. The premium paid is charged to Income and Expenditure account.

b) The employees are entitled to leave as per the leave policy of the association. The liability in respect of unutilized leave balances is provided based on actuarial valuation as at the end of the year,calculated using Projected Unit Credit Method

J. INCOME TAX:

The Association is notifid under section 35 (1) (ii) of the Inccome Tax Act, 1961 and is exempted from payment of Income tax.

K. PROVISIONS AND CONTINGENT LIABILITIES:

The Association recognises a provision when there is a present obligation as a result of a past event that probably requires an outflow of resources and a reliable estimate can be made of the amount of the obligation. A disclosure for a contingent liability is made when there is a possible obligation or a present obligation that may, but probably will not require an outflow of resources. Where there is a possible obligation or a present obligation that the likehood of outflow of resources is remote, no provision or disclosure is made.Contingent asset are neither recognised nor disclosed in the financial statement

SCHEDULES FORMING PART OF ACCOUNTS FOR THE YEAR ENDED 31ST MARCH, 2011

SCHEDULE 15 – NOTES ON ACCOUNTS:

1. CONTINGENT LIABILITIES :

In respect of :-

a Unpaid amount to Maharashtra Labour Welfare Fund Rs.30366 /-(Rs. 30366/-)

b. Performance Bank Guarantee given by the association Rs. NIL (Rs. 508474/-)

c. Letter of Credit opened by bank on behalf of the Association Rs NIL (Rs Nil lacs)

2 Estimated amount of contracts remaining to be executed on Capital account (net of advances) and not provided for Rs 4,50,000 (Rs Nil)

3 Balances under the head Loans and advances, Sundry Debtors, Creditors, and deposits are as per the books of accounts and are subject to confirmations, reconciliation and consequential adjustments, if any. In the opinion of the Management, the current assets, loans and advances have a value on realisation in the ordinary course of business, equal at least to the aggregate amount shown in the Balance Sheet.

4 Depreciation is provided on SLM basis on additions during the year acquired under "National Agricultural Innovation Projects" as prescribed by Indian Council of Agricultural Research and is not in strict compliance with the Accounting Standards issued by the Institute of Chartered Accountants of India. The management has not quantified the impact of the same, as in its opinion the charge on account of depreciation is not likely to be materially significant.

5 GOVERNMENT GRANTS

During the year, a sum of Rs. 300 lacs (Rs 450 Lacs) has been received as Plan Grant from Govt. The amount so received has been credited to "Contribution for Sponsored Research Project" and the expenditure incurred during the year on these approved projects in the nature of Capital Expenditure to the tune of Rs. 499.27 Lacs (Rs 1129.85 Lacs) have been capitalised in the books of accounts and Recurring Expenditure, if any, is considered in the Income and Expenditure account, where applicable. The balance representing unspent funds to be utilised later is temporarily invested in term deposits with Scheduled Banks and is disclosed seperately in the Balance Sheet.

During the year there has been no receipt of Non plan Grant from the Government.

6 FOREIGN CURRENCY EXPENDITURE

	2010-11 Rs.	2009-10 Rs.
Capital Expenditure	39354498	61902783
Machinery Maintenance Contracts	575910	-
Travelling Expenses	166095	-

7 PRIOR PERIOD EXPENSE/INCOME

The Prior Period items include:

	2010-11 Rs.	2009-10 Rs.
1) Excess Provision for Annual Turnover Discount	-	(4,203)
2) Short booking of Purchase	-	(16,601)
3) Travelling expense of NAIP, taken as IRMRA expense	-	11,834
Net Balance	-	(8,970)

8 NAIP PROJECT

a. During the year 2008-09, the association was awarded a project for "A Value chain for coconut fibre and its byproducts : Manufacture of diversified products for higher value and better marketablity to enhance the economic returns of farmers" to be operated under consortium mode, by National Agricultural Innovation Project (NAIP) of Indian Council of Agricultural Research (ICAR). The total budgeted award for 2008-09 to 2011-12 is Rs.59.13 Lacs. During the year, the association has incurred Rs.90,339/- (23,433/-) towards Institutional charges. The association has incurred a sum of Rs.15,05,229/- (5,04,835/-) towards recurring expenses which is considered in the Income and Expenditure account and has been adjusted against NAIP funds. Also a sum of Rs. 16,80,431/- (5,700/-) has been incurred for non recurring exenses i .e for purchase of Equipments. During the year the association has received a total sum of Rs.28,66,420/- (Rs. 16,69,501/-) and at the year end the unspent balance of Rs.26,15,329/- (Net) (Rs. 12,54,138/-) is reflected as balance fund in hand from NAIP under the head "PROJECT FUNDS"(Refer Schedule 3).

b. During the year 2007-08, the association was awarded a project for "Design and Development of Rubber Dams for Watersheds" to be operated under consortium mode, by National Agricultural Innovation Project (NAIP) of Indian Council of Agricultural Research (ICAR). The total budgeted award for 2007-08 to 2010-11 is Rs.314 Lacs. During the year, the association has accrued Rs.6.07 Lacs (Rs 18.81 Lacs) towards Testing Income and Institutional charges which are receivable from NAIP . Further, the association has incurred a sum of Rs.16.50 Lacs (Rs. 30.32 Lacs) towards recurring expenses which is considered in the Income and Expenditure account and has been adjusted against NAIP funds. Also a sum of Rs. Nil Lacs (Rs 91.26 Lacs) has been incurred for non recurring exenses i .e for purchase of Equipments .During the year the association has received a total sum of Rs.26.21 Lacs (Rs 19.72 Lacs) and as at the end of the year the balance of Rs.146.38 Lacs (net) (Rs 136.66 Lacs) is reflected as balance fund in hand under the head "Project Funds"(Refer Schedule 3) and amount of Rs.4.89 lacs((Rs.1.08 Lacs receivable} is reflected as payable from NAIP under the head "Loans and Advances".

SCHEDULES FORMING PART OF ACCOUNTS FOR THE YEAR ENDED 31ST MARCH, 2011

SCHEDULE 15 – NOTES ON ACCOUNTS: Contd..

c) Details of Sponsored Projects Expenses

Particulars	Rubber Dam Project		Coir Project	
	2010-11 Rs.	2009-10 Rs.	2010-11 Rs.	2009-10 Rs.
Testing & Evaluation	-	340,315	152,987	108,095
Travelling Allowance/Daily Allowance	136,748	82,458	70,078	51,849
Workshop	94,703	70,418	-	-
Salaries, Wages & Allowances	670,934	860,826	248,258	139,897
Consumables & Chemicals	750,686	880,713	303,700	160,747
Stationery & Postage etc	8,553	16,656	24,978	690
Outsourcing	183,977	446,945	98,500	-
Advertsement , Octroi etc.	25,955	-	17,178	16,696
Moulding & Calendering	51,507	14,975	149,700	-
Vehicle Hiring / Running	55,393	3,050	57,990	-
National Training	-	14,342	40,617	3,428
Repairs - Plant & Machineries	107,993	33,998	-	-
Institutional Charges	187,984	267,596	90,339	23,433
Expenses as per NAIP Certification	2,274,433	3,032,292	1,254,325	504,835
Adjustments *	(624,398)	-	250,904	-
Expenses as per Books	1,650,035	3,032,292	1,505,229	504,835

d) Expenses on above sponsored projects and balances outstanding are stated as per the books of accounts, and are subject to reconciliation and consequential adjustments interse projects

9 Micro, Small & Medium Enterprises Development Act

The Management has initiated the process of identifying enterprises, which have provided goods and services to the association, and which qualify under the definition of micro and small enterprises as defined under Micro, Small and Medium Enterprises Development Act, 2006. Accordingly, the disclosure in respect of the amounts payable to such enterprises as at 31st March, 2011 is not done as no information is received for the same. Further, in the view of the Management, the impact of interest, if any, that may be payable in accordance with the provisions of the Act is not expected to be material.

10 PROJECT FUNDS

Term Deposits have not been earmarked towards any specific fund and consequently the interest earned on term deposits have not been transferred to specific funds, which hitherto were accounted as part of the respective funds..

SCHEDULES FORMING PART OF ACCOUNTS FOR THE YEAR ENDED 31ST MARCH, 2011

SCHEDULE 15 – NOTES ON ACCOUNTS: Contd..

11 Employee Benefits

a During the year, the Association has recognised the following in the Income & Expenditure Account

(i) Defined contribution plans :	**Rs. 2010-11**	Rs 2009-10
Employer's contribution to Provident Fund *	2826637	1346428

* included in contribution to Provident and other funds * (Refer Schedule 12)

(ii) Defined benefits plans :	**Gratuity Funded(Rs.) 2010-11**	**Gratuity Funded(Rs.) 2009-10**
Current Service Cost	673315	299457
Interest Cost	55911	269562
Expected return on plan assets	-368905	-299306
Net Actuarial (Gain) / Loss	0	667733
Net Cost	**360321**	**937446**

b Reconcilation of benefit obligations and plan assets for the year

Present value of defined benefit obligation	8247529	4578503
Fair value of plan assets	4654847	3900791
Net asset/(liability) as at 31st March 2011 recognised in the Balance Sheet	**(3592682)**	**(677712)**

c Change in defined benefit obligation

Present value of obligation as at 1st April 2010	4,578,503	3369521
Service Cost	673,315	299457
Interest Cost	55,911	269562
Acturial (Gain)/Loss	3,094,680	667733
Benefits paid	(154,880)	(27770)
Present value of obligation as at 31st March 2011	**8247529**	**4578503**

d Change in fair value of plan assets

Fair value of plan assets as at 1st April 2010	3900791	3234981
Expected return on plan assets	368905	299306
Contribution by employer	551183	394274
Actuarial Gain/(Loss)	(11,152)	-
Benefit paid	-154880	(27770)
Fair value of plan assets as at 31st March 2011	**4654847**	**3900791**

e The principal actuarial assumptions	**(%)**	**(%)**
Discount rate	8.25	8.00
Salary escalation rate :	6.00	5.00
Expected rate of return on plan assets	9.00	9.15

The estimates of future salary increases considered in actuarial valuation, take into account of inflation, seniority, promotion and other relevent factors such as supply and demand in the employment market.

f Investment details of plan assets		
Administered by Life Insurance Corporation of India	100%	100%

12 Previous year's figures have been indicated in brackets and recognised / recast to confirm to current year's presentation

Vide our report of even date
For M. M. NISSIM AND CO.
Chartered Accountants

(N.KASHINATH)	**(Dr. P. THAVAMANI)**	**(O.S.KANWAR)**
PARTNER	DIRECTOR	PRESIDENT

Place : Mumbai
Date :

SCHEDULES FORMING PART OF ACCOUNTS FOR THE YEAR ENDED 31ST MARCH, 2011

Receipts	Current Year	Previous Year	Payments	Current Year	Previous Year
Opening Balances :			-	-	-
Cash on hand	21,993	9,791	Laboratory Chemicals, Stores & Spares	25,347,986	7,242,368
Bank current accounts	15,841,274	2,178,765	-	-	-
			Establishment Expenses	38,794,913	27,641,856
Sponsored Projects / Testing Income	130,471,730	45,602,056	Administrative Expenses	18,412,725	8,898,819
Training / Workshop Fees	1,549,378	1,348,034	Fixed Assets purchased	51,387,949	117,099,828
Interest on Term Deposits	3,250,414	746,297	Recurring Expenses NAIP Projects	3,155,264	3,537,127
Annual Fees/Subscriptions	778,081	300,000	Margin monies paid	2,992,000	620,974
Other Income	414,477	813,412	Investments in Term Deposits (Net)	4,967,420	(79,842,044)
Life Membership Contribution	300,000	-	Income Tax deducted at Source	1,818,977	755,081
Admission Fees	162,000	4,500	Bank Overddraft	-	7,246,814
Advance from Customers	4,788,783	11,836,966	Interest Paid		383,457
Government Grants	30,000,000	45,000,000	Others		16,470
Contribution For NAIP Projects	5,487,654	3,641,847			
Staff Loans	391,900	(2,017,650)			
			Closing Balances :		
			Cash on hand	48,386	21,993
			Bank current accounts	46,532,064	15,841,274
TOTAL :	**193,457,684**	**109,464,018**	**TOTAL :**	**193,457,684**	**109,464,018**

Vide our report of even date

For M.M.NISSIM AND CO.
Chartered Accountants

(N.KASHINATH)	**(Dr.P.THAVAMANI)**	**(O.S.KANWAR)**
PARTNER	DIRECTOR	PRESIDENT

Place : Mumbai
Date :

Our Members: Our Patrons

Accura Valves Pvt. Ltd.
Nashik - 422 112 .

All India Rubber Industries Association
Mumbai – 400 099.

Ameya Dyechem Pvt. Ltd.
Vadodara – 390 020.

Anand Motors Products P. Ltd.
New Delhi – 110 042.

Apcotex Industries Ltd.
Taloja – 410 208
.

Apollo Tyres Ltd.
Haryana – 122 001

Agarwal Rubber Pvt. Ltd.
Patancheru – 502 320, A.P

Ashok Rubber Works
Mumbai – 400 052.

Ashutosh Rubber Pvt. Ltd
Rajkot – 360 001.

Atur Rubber Products
Mumbai – 400 018.

Arvico Rubber Industries
Mumbai – 400 063

Anchor Cork Pvt. Ltd.
Mumbai – 400 059

Allied Electronics Corporation
Mumbai – 400 054.

B.D.K.Engineering Ltd.
Hubli – 580 030

Basant Rubber Factory Ltd.
Mumbai – 400 083.

Bhavna Polymers
Ahmedabad – 380 004

Bombay Oil Seals Co.
Mumbai – 400 086.

Bata India Ltd.
Kolkata – 700 013

Bengal Waterproof Limited
24, Paraganas, W.Bengal.

Belmont Rubber Industries
Faridabad – 121 001, Haryana

Best Rubber Products
Mumbai – 400 063.

Bymer Elastomers
Nasik – 10.

Blaze Enterprise
Nasik – 422 010.

Brahans Polymers Pvt. Ltd.
Navi Mumbai – 400 709.

Bharat Leather & Rubber Industries
Mumbai – 400 063.

Choksey Chemicals Pvt. Ltd.
Mumbai – 400 022.

Camata Enterprises
Mumbai – 400 072.

Chadha Rubber Pvt. Ltd
New Delhi – 110 020.

Chopra Retec Rubber Products Limited, Lucknow – 226 001

Ceat Limited
Mumbai – 400 078.

Chemetall-Rai India Ltd.
Pune – 412 207.

Caravan Engineers
Pune – 411 037.

Devashish Polymers Pvt. Ltd.
Silvassa – 396 191

Devkishin Polymers
Vasai (E) – 401 208.

Eliokem India Pvt. Ltd
Mumbai – 400 059.

Elastomeric Engineers
Salem – 636 201.

Eltech Rubber (India) Pvt. Ltd.
Mumbai – 401 104

Essen Specialities
Mumbai – 400 009.

Flooratex
Alleppey Dist., Kerala

Fairdeal Rubber
Pune – 411 026.

Fosroc Chemicals (India) Pvt. Ltd.
Bangalore – 560 020.

Gala Precision Engineering Pvt. Ltd
Thane – 400 604.

Garware Elastomerics Limited
Pune – 411 019.

Gold Seal Engineering Products Ltd
Mumbai – 400 078.

GG Tyres & Tubes Pvt. Ltd.
Mahaboob Nagar Dist. – 509 223

Gosalia Rubber Industries
Goa – 403 706.

Gujarat Reclaim & Rubber Products Ltd
Mumbai – 400 086.

Gujarat Multi Gas Base Chemicals P. Ltd
Mumbai – 400 057.

Gharda Chemicals Limited
Dombivli (East) – 421 203
.

Hawkins Cookers Limited
Thane – 400 604.

Hind Elastomers Pvt. Ltd.
Mumbai – 400 006.

HCPL Parts Company
Parwanoo – 173 220.

Harkesh Rubber Industries
Mumbai – 400 069.

HNM Rubber Products Pvt. Ltd.
Coimbatore – 641 108.

Heva Elastica
Ujjain – 456 001, M.P.

India Coffee & Tea DistributingCo.Ltd.
Mumbai – 400 001.

Innova Rubbers Private Ltd.
Nashik – 422 010.

Indica Chemical Industries Pvt. Ltd.
Noida – 201 301.

Indica Coveyors Limited
Amritsar – 143 501.

Industrial Rubber Products P.Ltd.
Vasai (East) – 401 206.

Inarco Limited
Thane (W) – 400 601.

J.K.Tyre & Industries Limited
New Delhi – 110 002.

J**.Sons Company Ltd.**
Meerut – 250 002 (U.P)

Jai Hind Rubber Products (P) Ltd.
Mumbai – 400 007.

Jayashree Rubber Industries
Mumbai – 400 002.

Joseph Leslie Drager Mfg. Pvt. Ltd.
Mumbai – 400 028.

J.K Rubber Products
Kanhangad – 671 531

Komal Industries
Dist.Sangli – 416 436.

Kanta Rubber Pvt. Ltd.
Mumbai – 400 003.

Kwality Polymers Pvt. Ltd.
Thane – 400 604.

Ka Prevulcanised Latex Pvt. Ltd
Nagercoil – 629 003

Kaypan Vanijya Pvt. Limited
Mumbai – 400 083.

Kanpur Polymers Private Ltd.
Kanpur – 208 002.

Kantilal Chhotalal & Co.
Mumbai – 400 060.

Khosla Profil Pvt. Ltd.
Mumbai – 400 051.

Lord India Chemical Products Pvt. Ltd
Mumbai – 400 059.

Larsen & Toubro Ltd.
Mumbai – 400 072

Lathia Rubber Mfg. Co. Pvt. Ltd.
Mumbai – 400 072.

Leo Rubber Industries
Ahmedabad – 382 405.

L.G.Balakrishnan & Bros. Ltd.
Karur – 639 002, T.N.

Mystical Polyplast
Thane 400 604.

Marine Rubber Industries
Mumbai – 400 027.

Mask Polymers Pvt. Ltd.
Talawade – 412 114.

Manisha Rubber Enterprises
Mumbai – 400 080

Madhu Silica Pvt. Ltd.
Bhavnagar – 364 004.

Mecnam Products
Thane (W) – 400 602.

Meenakshi Molding Pvt. Ltd.
Chennai – 600 096.

Mazda Colours Limited
Mumbai – 400 020.

Mihir Rubber Products
Mumbai – 400 080.

Mansons Auto International
Kamothe – 410 209

MRF Limited
Chennai – 600 006

Mercantile & Industrial Development Company Limited
Mumbai – 400 022.

Metachem
Karnataka State.

MIL Industries Limited
Chennai – 600 098

Mysore Polymers & Rubber Products Ltd
Mysore – 570 016.

Mac Seal Rubber Products
Mumbai – 400 063.

National Organic Chemical Inds. Lt.d
Navi Mumbai – 400 705.

Newage Hose Manufacturing Co.
Mumbai – 400 022.

OM Polymers
Baroda – 390 020.

Omega Speciality Techno-Chem Pvt. Ltd. Pune – 411 009.

Paradise Rubber Pvt. Ltd.
Mumbai – 400 001.

Polybond India Pvt. Ltd.
Pune – 412 105.

Prasad Polymers
Mumbai - 400 090.

Precise Industries
Mumbai – 400 063.

PRS Permacel Private Ltd.
Mumbai – 400 072.

Pelican Rubber Pvt. Ltd.
Hyderabad – 500 012.

Precision Rubber Industries
Worli, Mumbai – 400 018.

Phoenix Yule Limited
Dist. Nadia – 741 234

Prasad Engineering Works
Mumbai – 400 011.

Packwell Industries
Delhi – 110 095.

Permalon TransmissionsPvt. Ltd
Mumbai – 400 056.

Prabhat Elastomers Pvt. Ltd.
Mumbai – 400 083

Pidilite Industries Limited
Mumbai – 400 059.

Polmann India Ltd
Mumbai – 400 021.

R&J Industries
Mumbai – 400 092.

Rainbow Industries
Mumbai – 400 097

Rishiroop Polymers Pvt. Ltd.
Mumbai – 400 021.

The Rubber Products Ltd
Thane – 400 604.

Raksha Polycoats Private Limited
Bhosari – 411 026.

Resistoflex Private Ltd.
Noida – 201 301, U. P.

Roop Polymers Ltd. (Unit – II)
Gurgaon – 122 001

Rane Elastomer Processor
Mumbai – 400 068.

Royal Plastic Industries Pvt. Ltd.
Mumbai – 400 068.

Rubber Industries (India)
Mumbai – 400 093.

Rockford Rubbertext (India) Ltd
Mumbai – 400 093.

Rishabh Elastomers Pvt. Ltd.
Gurgaon – 122 001.

Reliable Rubber Industries
Haryana – 121 004

Shree Ganesa Enterprises
Thane – 400 604.

Schmalz India Pvt. Ltd
Pune – 411 026

Schnell Global Industries
Chakan – 410 501.

Senna Polymers
Chennai – 600 089.

Seed Rubber Products
Marol Naka, Mumbai – 400 059.

Satish Industrial Polymers
Thane – 400 602.

Schrader Duncan Limited
Mumbai – 400 080.

Standard Oringsham
Mumbai – 400 063.

Sun Petrochemicals Pvt. Ltd.
Mumbai – 400 093.

Sujan Industries
Mumbai – 400 093.

Spaco Technologies (I) Pvt. Ltd
411 019.

Siddhi Polymers
Mumbai – 400 062.

Simta Manufacturing Company
Coimbatore – 641 402.

Sudeep Rub-Chem Pvt. Ltd
Gujarat – 388 120

Shreenath Rubber Industries
Vasai (East) – 401 208.

Siri Surgicals
Hyderabad – 500 042.

Shakthi Rubbet Products Pvt. Ltd
Mysore – 570 012

Samsaa Rubber & Polymers P. Ltd
Hyderabad – 500 055.

Surakasha Products Pvt. Ltd.
Mumbai – 400 064.

Taprath Polymers Pvt. Ltd.
Mumbai – 400 053.

Techno Polymer Industries
Mumbai – 400 009.

TVS Srichakra Limited
Madurai – 625 002

Toja Tyre & Treads Pvt. Ltd.
Kerala – 683 574.

Tega Industries Limited
Calcutta – 700 053.

Triveni Rubber
Thane – 400 601.

Thacker Brothers
Kulgaon – 421 503.

Teksons Limited
Thane – 400 601.

TM Tyres Ltd.
Medak – 502 336, A.P

Tricon Polymers Pvt. Ltd
Mumbai – 400 093.

Tyresoles (India) Pvt. Ltd.
Mumbai – 400 042.

United Rubber Inds (I) Pvt. Ltd
Bhayandar (E) – 401 105

Unimers India Limited
Navi Mumbai – 400 705.

Vako Seals Pvt. Ltd.
Mumbai – 400 063.

Vir Rubber Products Pvt. Ltd.
Ambernath

Vaid Elastomer Processors Ltd.
Navi Mumbai – 400 701.

Vajra Rubber Products Ltd
Trichur – 680 123, Kerala.

Vinsar Elastomers
Hosur – 635 109, T.N

West Coast Polychem Pvt. Ltd.
Mumbai – 400 034.

Wilson Engineering Works
Mumbai – 400 018.

West India Power Equipments
Sultanpur Dist. – 227 817, U. P.

Zenith Rubber & Plastic Works
Mumbai – 400 020.

Machineries & Equipments

Chemical Section

FTIR Spectrophotomer with ATR (Nicolet 6700)
FTIR Spectrometer (Perkin Elmer Paragon 1000)
CHNS Analyzer (TRUSPEC –CHNS MICRO)
High Pressure Liquid Chromatograph (HPLC/GPC Agilent 1100)
GCMS with Pyrolyser / FID (Shimadzu GC -17A)
ICP – Spectrophotometer (Spectrociros CCD)
Weather-O-Meter (Atlas Model Ci3000 W)
Low temperature Retraction Rigidity
Low Temperature Brittleness Tester (Nivtech)
BET Surface Area Analyzer (Smart Instrument SORB90)
Flammability Tester
Brookfield Viscometer (Brookfield DV-II)
IR Spectrophotometer(Perkin Elmer 1310)
Gas Chromatograph – GC 2014
Submicron Particle Sizer – Nicomp 380
UV Spectrophotometer-SHIMADZU 1800

Thermal Section

Dynamic Mechanical Analyser (DMA) (VA-4000) METRAVIB
Servo Hydraulic Machine (Instron Make)
Stress Relaxometer
Differential Scanning Calorimeter (DSC-7) PerkinElmer
Differential Scanning Calorimeter (Q-10)-TA instrument
TGA Pyris 1 PerkinElmer
Thermo Gravimetric Analyser (TGA – 7) -PerkinElmer
Thermo Gravimetric Analyser (TGA–6) with auto sampler, PerkinElmer
Thermogravimetric Analyser (Q-50)-TA instrument
Izod – Impact Tester
Melt Flow Index Tester
Vicat Softening Point Tester

Creep Testing Equipment:

Compression
Torsion

Physical Section

Rheometer Model-R-100, Monsanto
Mooney Viscometer, LABTECH
Rubber Processability Analyser (RPA), ALPHA TECHNOLOGIES, USA
Universal Testing Machine (10000kg, 500 kg)
Universal Testing Machine Zwick (500 kg)-STAR Make
Milli Megohm Meter (Model LS-3)
Universal Testing Machine with video extensometer - INSTRON
Rubber Hardness Tester-(IRHD), Dead Load etc.
DIN Abrasion Tester (2Nos)
Taber Abrasion Tester(USA)
Dunlop Tripsometer
De-mattia Flexing Machine
Ross Flexing Machine
Ozone Chamber (2 nos)
Deflection Tester for diaphragms
Air/Gas Permeability Tester
Goodrich Flexometer
Carbon Black Dispersion Tester
High Voltage Tester (40 KV)
Gamma Chamber (2500 Ci)
Shock Absorption Tester

Supporting facilities

Pelletalizer
Humidity Chamber (Nivtech)
High Pressure Reactor
High Pressure Hose testing Machine
Electronic Balances (4 nos)
Multicell Ageing Oven
Oxygen/Air Bomb Tester
Air Circulating Ageing Ovens (9 nos)
Hydro Pneumatic Pump
UV Chamber(Nivtech)
Cryo Test Chamber up to 80°C (Nivtech)
Cryo Test Chamber up to 30°C with sealant test facility (Nivtech)

Processing & Other Equipment:

Re-treading Machine

Mixing:

Banbury Mixer (FA 40) – 35 liter Capacity
Mixing Mill
6" x 13" – 2 nos.
12" x 30" – 1 no.
16" x 42" - 1 no.
Brabender Plasticorder with extruder
(Model PL–2200)

Moulding Press:

Twin Hydraulic Press of sizes
12" x 12",
14" x 14"
Hydraulic Press
36" x 36" – 1 no.
47" x 47" – 1 no.
1 mtr x 2 mtr – 1 no.
Vacuum Compression Press – Panstone
Rubber Injection Moulding Machine – REP Make (1000cc Capacity)
Plastics Injection Moulding Machine (Engel USA)

Calander:

3 Rolled Calender – Lab Size – 1 no.
3 Rolled Calender – 16" x 48" size – 1 no.

Extruder:

3" Cold Feed Extruder
6" Hot Feed Extruder
Twin Screw Extruder with feeder

Auto Clave:

4' x 8' length Auto clave (Indirect type) 1no.
2' x 8 mtrs length Autoclave (direct type) 1 no.
Boiler 300S (Thermax Make).- 1 no.

Nano & Latex Section:

Particle Size Analyser
MST (Mechanical Stability Tester)
Surface Tensimeter
Dipping Machine
Thread Unit
Foam Forming Equipment
Hot Air Oven
Ball Mill for Latex & Dispersion Mill
Colour Spectrophotometer
Micro Wave Oven

Tool Room / Maintenance Section:

CNC Milling Machine (Hardinge Make)
Universal Milling Machine (Vertical & Horizontal)
Radial Drill Machine
Surface Grinding Machine (Manual)
Hydraulic Surface Grinding Machine
Centre Lethe Machine
Bench Grinding Machine
High frequency Welding Machine
Hose Bursting Pressure Machine
Air Compressors

Tyre Testing Machineries to Shereography:

Tyre Endurance Testing Machine for Scooter, Passenger car, Truck and Bus etc with Rolling Resistance attachment.
Noise, Vibration & Harshness Testing
Universal Testing Machine with plunger test
Bead Unseating facility, foot print and

ROLL OF HONOURS & ACTIVITIES / EXPERTISE

Accreditations / Certifications / Recognitions from:

- NABL (ISO:IEC/17025 :2005)
- UL (Underwriters Laboratory), USA
- ISO – 9001:2008
- Centre for Military Air Worthiness & Certification (CEMILAC)
- Directorate General of Mines Safety (DGMS)
- Dept. of Scientific & Industrial Research
- BIS

Main Activities:

- Process and Product Development
  - Material Selection / Specialization and Development
  - Reverse Engineering / Compound Development
  - Testing and certifications (Tyre & Non-Tyre testing)
  - Rubber Engineering and Finite Element Analysis
  - Quality Audit & GMP services.
  - Training & Consultancy services on Rubber Technology & LMS (Laboratory Management System)
  - Storage and Service life prediction
  - Quality Control / Assurance
  - Process Improvement / Trouble Shooting
  - Cost Reduction
  - Failure Analysis

With the help of state-of-the art facilities created by IRMRA and the expertise developed by its scientists, IRMRA can provide technical and scientific advise to the industries in respect of the following:

Expertise :

- Specification and its interpretation
- Reverse Engineering
- Process Development
- Indigenization & import substitution of rubber products
- Cost reduction
- Life prediction
- Control of rejections / wastage
- Improvement in quality of final products
- TPR

FOR FURTHER DETAILS, PLEASE CONTACT
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