

# **Dr. R. RAMARATHNAM**

## **EDUCATIONAL QUALIFICATIONS:**

B.Tech (EE) from I.I.T., Madras

M.Tech (EE) and Ph.D from I.I.T., Bombay

## **PRESENT OCCUPATION:**

Executive Chairman, Basil Energetics Private Ltd., Chennai.

Chairman, Westcott Electricals (P) Ltd., Chennai

## **MAJOR ASSIGNMENTS HANDLED:**

### **Research, Design & Development:**

Presently focussing on Embedded Controls for Electrical Machines, mainly for Energy Conservation, Renewable Energy, Power Conditioning & Measurement. Developed solutions for AC, Brushless DC, Brushless Synchronous & Switched Reluctance motors. Focussing on Energy Conservation in select verticals like Appliances, Automotive, Fluid Handling Systems, Textile Spinning Machinery Drives, Portable Electric Tools, Controls for Generators in Renewable Energy Systems and Solar Submersible Pumps, Fans, Air Conditioners, Refrigerators, Power Conversion for Solar/UPS, etc.. The manufacturing plant has recently been awarded the prestigious quality certification IATF 16949 by TuV Germany.

A total and novel solution for rooftop solar systems for homes & offices has been developed by this company and introduced in the market recently. Combining the three ideologies that are in vogue presently amongst Electrical Engineers in the world, viz., Distributed Generation, Smart Grid and LVDC (Low Voltage DC) appliances, the company has come out with a 'Smart Micro Grid using Hybrid Appliances'. Amongst the key features of this technology is the drastic reduction in Power Plant rating and roof top area requirements. Focused work on Green Electricity for Water, Appliances, Livelihood Equipments and Transportation.

Earlier promoted ELECTRODYN, Chennai. Was the key supplier of appliance motors for leading Indian & MNC brands for Mixi, Vacuum Cleaner, Washing M/C, etc. Developed and marketed several innovative motors like Vibrator Motors, Torque Motors, Actuator Motors, High Frequency Motors to leading companies in India. Established automated winding lines for mass production of stators & rotors for the above motors and designed and developed the entire range of machines indigenously. Established ISO 9001 in early nineties. Millions of motors were produced by the company for home appliances in the period mid Eighties & Nineties. Several import substitution items were developed for Defence and Public Sector Companies like BEL, BHEL, DRDO, Hindustan Shipyard, Mazogaon Docks, et.al. by this company.

Earlier worked in Jay Engineering Works Ltd., at their Hyderabad R & D as development manager (electrical). Introduced new designs for fans and machine winding for stators.

Commenced career with Jyoti Ltd., Vadodara after post graduation. Reached the position of Senior Development Engineer in charge of Electric Motor Development including HT motors. Was the leader of the team for commissioning Primary coolant pump set & moderator pump set for the nuclear power plant at Kota, Rajasthan. Has handled several innovative projects in the R & D, the chief among them being Computerisation of Electrical Machine Design.

### **Engineering and R & D Management:**

Has been managing successfully for the last 40 years a well-knit team of Electrical, Electronics and Mechanical Engineers. Has handled and successfully concluded several product developments, right from design stage to mass production stage. Also well versed in Quality management including TQM techniques and ISO 9000 certification. Vast experience in handling the total operations of a light engineering company in all its aspects like Design & Development, Production Engineering, Supply Chain Management, Production, Quality Assurance, Marketing & After market support.

**GLOBAL DESIGN PARTNER:** for RENESAS, Japan, MICROCHIP and CYPRESS, USA.

**PUBLICATIONS:** Has published several papers in National/International Journals & Conferences, including 2 in Transactions in IEEE, USA.

## **PATENTS**

1. A Multi-speed Motor Controller: Granted in USA, EU & India
2. A Portable Electric Tool: Granted in USA, EU & India
3. 3 more are in the patenting process in Textile Drives, Generator Controls & Kitchen Appliance.
4. 3 more patents are in the application stage and about to be filed

## **PROFESSIONAL ASSOCIATION:**

- Senior Life Member of the Institute of Electrical & Electronic Engineers (IEEE), New York, USA including their Power Engineering Society, Power Electronics Society, Industrial Electronics Society, Industrial Applications Society and Computer Society.
- Vice Chairman, IEEE Madras Section, 2020
- Partner, REEEP (Renewable Energy & Energy Efficiency Program), United Nations Industrial Development Organisation, Vienna, Austria.
- Member of SyC & Work Group 1 (WG1), on LVDC - International Electrotechnical Commission, Geneva, CH (Switzerland)
- Member of SyC Sub Committee for Marketing the Idea of LVDC - International Electrotechnical Commission, Geneva, CH (Switzerland)
- Member of ETD 50 Committee on LVDC, Bureau of Indian Standards, India.
- Honorary Chairman of DRDO Committee for Design Review, Project Evaluation, Project Proposal Review, Ministry of Defence, Government of India.

**HONOURS:** Listed in Marquis' Who is Who in Science & Engineering.

## **AWARDS:**

- Action For India: Entrepreneur with a Social Consciousness, AFI Conference, January 2015
- Best Innovation Award by Madras Management Association, September 2016
- Best Impact on Environment by TiE & ISB Hyderabad for the energy saving products. November 2016
- UNIDO Global Cleantech Innovation Program - Finalist 2017
- WWF (World Wide Fund for Nature) - Global Climate Solver Award 2017
- Global LEAP (Lighting & Energy Access Partnership), USA, Runner Up in Ceiling Fan, adjudged as the most efficient ceiling fan in 2017
- Global LEAP (Lighting & Energy Access Partnership), USA, Winner in Large Refrigerators, 2017 competition.
- Global LEAP (Lighting & Energy Access Partnership), USA, Runner in Small Refrigerators, 2017 competition.
- Top 20 Startup innovators by CII, 2017
- Top 50 Influential Leaders in Solar Energy, World Solar Congress, 2018
- Energy Efficiency Solution Label from Solar Impulse Foundation, Switzerland, 2018
- Member, World Alliance for Efficient Solutions, Switzerland, 2018

- Invited to present the solution to a world audience during Innovation Week 2018 organised by IRENA (International Renewable Energy Agency), Bonn, West Germany, September, 2018.
- Shortlisted for the “BLUETECH AWARD” conferred by CAAC (Clean Air Alliance of China), 2018
- Invited to present the solution to a world audience during Global Climate Action Summit - GCAS 2018, September 2018 in San Fransisco, USA.
- Winner of FLCTD (Facility for Low Carbon Technology Deployment) for “Space Conditioning”, 2018 - Competition organised by UNIDO, GEF, BEE & CII
- Winner of FLCTD (Facility for Low Carbon Technology Deployment) for “PUMPS”, 2018 - Competition organised by UNIDO, GEF, BEE & CII
- Won the Most Innovative Solution chosen in an audience poll at the Global Energy Innovation Meet, 2019, organised by Govt of Andhra Pradesh, Vijayawada.
- Winner of Global Competition conducted by E4A (Efficiency For Access) and received a major grant from UKAID, May 2019
- Selected in a global competition for showcasing during “Mission Innovation” conference in Vancouver, Canada, May 2019.
- Top 5 Technology Innovators in 2020, CII, 2020
- Finalist in YGT (Young Green Technology) award in a Global competition 2021
- Selected by REEEP (Renewable Energy & Energy Efficiency Partnership), a unit of UNIDO (United Nations Industrial Development Organisation), Vienna, Austria for field study of Basil’s Solar Cold Storage.
- Selected for the final site testing of Global Leap Cold Challenge Competition 2022 by CLASP (Collaborative Labelling & Appliance Standards Program), a Washington DC Institution.