Project Report Thermistance

Name of the startup: Thermistance Technologies Pvt. Ltd.

Founder's details:

Bhimashankar Wangaskar:

Founder & CEO

Bhimashankar is the founder and CEO of Thermistance. Bhimashankar, a COEP and IIT Kanpur alumni with tremendous experience in passive cooling technology. Bhimashankar is recognized as researcher with number of international research publications and conference publications. He had expertise in developing different metallic porous structures and its characterization techniques. He worked on ISRO as well as CETHIL sponsored Thale's avionics projects. He had 8+ years of experience working on passive cooling technology. With both industrial and research experience he is working on product development at Thermistance. Bhimashankar also had interest in management from his college days. He was the part of key management positions at different college festivals. Currently he is handling day to day operations, fundraising and partnerships at Thermistance.

Dhananjay Kishor Gavas

Director & COO

Dhananjay is the chief of operations at Thermistance. Dhananjay had 12+ years of experience in design, development, production management, material management and quality assurance. He also had experience in handling different technologies including CVC technology in cold rolling mills. He Worked with DRDO, L & T, precision products, SMS Group, CVRDE Chennai etc. through previous organizations he worked with. He is highly enthusiastic for new roles. He was trained in China for precision manufacturing technologies in his previous firm. Bhimashankar is designing the products and Dhananjay is making these products as reality with his industry experience. Currently Dhananjay handling product design and development, Manufacturing set-up development, automation along with design team.

Company profile:

Miniaturization and enhanced capabilities of electronic devices lead to higher heat dissipation leading to overheating. We are solving the problem of overheating and failure of electronic devices due to overheating. 55% of electronic devices fail due to temperature problems.

Overheating is not limited to electronics, its major cause for performance degradation in the battery, healthcare devices, laser devices, high power LEDs. We are proposing two-phase passive loop heat pipe technology to avoid overheating of electronic devices. The biggest advantage of our solution is, it does not require any external power input, and it's efficient and reliable.

Our vision: Develop cost effective advanced passive technology for our customers, so they can design their products without thermal limitations and advance the technology for the benefits of humanity. Develop cost effective advanced passive technology for our customers, so they can design their products without thermal limitations and advance the technology for the benefits of humanity.

Our values: Maintaining our integrity while being ethical and giving our excellent performance backed up by the pillars of teamwork.

Our mission: Become a trusted partner in the world's technological revolution by removing barriers to efficient thermal management.

Product details:

We are manufacturing 4 products

1) Thermosiphon

2) Heat Pipe

3) Vapour Chamber (R&D in Process)

4) Loop Heat Pipe

5) Heat sink

6) Consultancy services for implementing above products.

How much funding raised other than SSP:

Total funding raised including grants:

Nidhi Prayas grant: Rs. 8 Lakhs

Start-up India SEED fund Rs. 12.5 Lakhs

BRISK Electronic CSR Grant Rs. 5.104 Lakhs

ASME grant Rs. 8.25 Lakhs

Friends & Family CCD funding Rs. 24.9 Lakhs

Current funding in process SEED round Rs. 4.5 Cr. (DD completed, SHA drafting is in process)

How much is the revenue: Rs 7.37 Lakhs paid prototyping revenue till date. More partnerships are in process. Expecting Rs. 10-15 Lakhs more paid prototyping revenue or extend to April 2024. Commercialization will start from June 2024.

How many team members: 7 full time tam members and new hiring is in process. One PhD Fellow from IIT Bombay will join in May 2024.

Overall growth since received the SSP funds

Since the SSP funding received we have completed inhouse 40% of manufacturing plant. Dies and fixture designs are completed and shared with vendors for manufacturing. Started building R&D Team for further product development and improvement. For building strong foundation we hired PhD scholar from IIT Bombay with thermal background. New hirings are in process. Signed multiple NDA including Prompt Innovations, Intel India, DRDO, Vanix technologies, Dalnex LLP, Uno-Minda, Kabra extrusion. Developed inhouse design capabilities and innovation capabilities with licensed software such as Solidwork and Ansys Icepak. Due to innovative technology and potential received interest from multiple industry investors along with venture capitalist and angel investors. We have completed DD and about to sign SHA for Rs. 4.5 Cr. funding. Onboarded multiple mentors including Amit Vyas (MD, AMUL Milk), Pranit Gupta (Director, Public investment fund, Saudi Arabia), Ruchira Shukla (Head, South Asia, IFC). With the remaining SSP funds we will complete further manufacturing set-up and commercialization of our products. We are expanding our team to cater with recurring order and new developments at Thermistance.

Success story of Thermistance (100 words)

Thermistance technologies is the first deep tech startup in the field of passive cooling technologies. Their phase change based miniature loop heat pipe is game changing for electronic cooling, EV thermal management, satellite thermal management, defence application. Founded by Bhimashankar Wangaskar and Dhananjay Gavas with 20+ years of combined industry experience. Thermistance is developing state of the art manufacturing plant in Pune to start mass manufacturing. Supported by BHAU institute along with multiple angel investors and leading venture capitalist. Early paid prototyping is successful and recurring order delivery will start from June 2024. Thermistance won ASME's ISHOW with $10000 grant, Innovate for India challenge 2022 runner-up, climate launchpad India winner, BOEING BUILD regional winner.