

## ARMY TECHNOLOGY SEMINAR – ARTECH 2018

The Army Design Bureau (ADB) in association with the Society of Indian Defence Manufacturers (SIDM) and the Confederation of Indian Industry (CII) organised the Second Edition of the Army Technology Seminar – ARTECH 2018 with the theme of “Technology as a Key Enabler to Overcome Challenges of Military Operation in High Altitude”, at Manekshaw Centre, New Delhi. The seminar was attended by serving officers of the Indian Army, DRDO Scientists, representatives of Industry and Academia.

During his inaugural address, General Bipin Rawat, UYSM, AVSM, VSM, ADC, Chief of the Army Staff (COAS) congratulated CII for taking the lead to create SIDM, since it has the potential to become the single voice of the Indian Defence Manufacturers. He said Indian industry must develop niche technology for the defence sector to ensure that a soldier on the frontline is empowered with such technologies.



*General Bipin Rawat, UYSM, AVSM, VSM, ADC, Chief of Army Staff delivering the inaugural address.*

“Indian Army will walk the extra mile to handhold Indian industry and absorb the technologies since we want to fight Indian wars with Indian solutions.” – **General Bipin Rawat**, UYSM, AVSM, VSM, ADC, COAS

**Dr S Christopher**, Chairman, DRDO and Secretary, Department of Defence (R&D), in his special address said India can attain self-reliance in defence only when all stakeholders, namely DRDO, the user, industry and the academia work together.

**Lt Gen S K Patyal**, UYSM, SM, PhD, DCOAS (P&S) delivered the opening address and complimented the ADB for becoming the single point of interface between industry and the Indian Army.

**Lt Gen Subrata Saha**, PVSM, UYSM, YSM, VSM\*\* (Retd), Director General, SIDM and Principal Adviser, CII introduced the Society of Indian Defence Manufacturers (SIDM) which aims to become to single voice for the Indian Defence Manufacturers.

**Mr J D Patil**, Vice President, SIDM and Whole-time Director (Defence Business) & Member of the Board, Larsen & Toubro, gave the industry perspective and suggested that long term plan of the army must be projected so that technological solutions could be created.

**Lt Gen PS Rajeshwar**, VSM, DG PP facilitated the release of the Compendium Volume III (2018) by the COAS.



Release of the Compendium on Problem Definition Statements – Volume III (2018)

(L – R) Mr Jayant D Patil, Vice President, SIDM; Lt Gen S K Patyal, UYSM, SM, Phd, DCOAS (P&S); Gen Bipin Rawat, UYSM, AVSM, YSM, SM, VSM, ADC, COAS; Dr S Christopher, Chairman, DRDO and Secretary, DoD, R&D; Lt Gen Subrata Saha, PVSM, UYSM, YSM, VSM \*\* (Retd), DG, SIDM & Principal Adviser, CII; Lt Gen PS Rajeshwar, VSM, DGPP.



Chief of Army Staff, Chairman, DRDO & Secretary, DoD (R & D), Vice President, SIDM inaugurating the exhibition.

For the first time, at the behest of SIDM, private sector and academic institutions were invited to showcase innovative solutions at ARTECH 2018.

In the first session panellists deliberated on “Military challenges in high altitude requiring technological solutions”. The session was chaired by **Lt Gen PJS Pannu**, AVSM, VSM, DCIDS (DOT). Other speakers in the session included **Lt Gen MJS Kahlon**, DGMF; **Lt Gen RS Salaria**, VSM, Comdt School of Artillery; **Lt Gen CP Mohanty**, AVSM, SM, VSM, DGOL; **Mr Sharad Marathe**, Chairman, Universal Technical System. The session focussed that the challenge is not only to equip the soldier with the right kind of equipment and technology to empower him physically & mentally and to protect him from blizzards, whiteouts and other environmental challenges. The session highlighted the areas that require technological solutions:

- Rapid acclimatisation and mobility
- Mobile and hybrid power systems, clothing & habitat
- Surveillance, locate & communicate with soldiers
- Detect avalanches, weather forecast etc
- Prevent freezing of lubricants, greases, oil etc
- Precision targeting and directed fire of artillery and supply chain management



(L- R) Lt Gen CP Mohanty, AVSM, SM, VSM, DGOL; Lt Gen MJS Kahlon, DGMF; Lt Gen PJS Pannu, AVSM, VSM, DCIDS (DOT); Lt Gen RS Salaria, VSM, Comdt School of Artillery; Mr Sharad Marathe, Chairman, Universal Technical System.

**Second session** focussed on “Army’s Indigenisation and Technology Infusion Plans”. This session was chaired by **Lt Gen PS Rajeshwar**, VSM, DGPP and Co-chaired by **Mr Atul Punj**, Chairman, Punj Lloyd Ltd. Other speakers in the session include **Maj Gen AK Channan**, SM, ADG ADB; **Maj Gen MJS Syali**, ADG EME; **Capt T N Pranesha (Retd)**, Sr Vice President, Alpha Design Technologies Pvt. Ltd.; **Prof Sarag Saika**, Research Asst Professor, Purdue University, USA; **Mr Sameer Joshi**, Director, Newspace Research & Tech Pvt Ltd. The session focussed on innovative solutions from academia and industry to promote home grown technology solutions. Need for handholding of the private sector and innovations that needed to be infused into domestic markets for acceptance by global markets was highlighted. Research efforts of academia in waste management, light weight blast proof material and technology exploitation in high altitudes were also showcased during the session.



Standing: Dr Abhijit Bhattacharya, Project Director (Missions), DRDO; (Seated L – R): Mr Sameer Joshi, Director, Newspace Research & Tech Pvt Ltd; Lt Gen PR Shankar (Retd), IIT Chennai; Mr Atul Punj, Chairman, Punj Lloyd Ltd.; Lt Gen PS Rajeshwar, VSM, DGPP; Prof Sarag Saika, Research Asst Professor, Purdue University, USA; Capt T N Pranesha (Retd), Sr Vice President, Alpha Design Technologies Pvt. Ltd.

The theme for the **final session** of the seminar was “Emerging Technologies and Military Operations”. The session was chaired by **Mr Jayant D Patil**, Vice President, SIDM. Other speakers in the session include **Lt Gen Rajiv Sabharwal**, VSM, Comdt MCTE; **Dr S Ahmad**, Former Vice Chancellor, Hamdard University; **Dr Aditya Paranjape**, Professor, Imperial College London; **Cmdre Ajay Sharma (Retd)**, Vice President, Bharat Forge Ltd.; **Dr W Selvamurthy**, DG, Amity Directorate of Science and Innovation. This session gave out the futuristic technologies like artificial intelligence, aerial robotics for UAVs to be useful at super high altitudes. Range of challenges in application of Internet of Things (IoT) in the army and nanotechnology for designing light weight clothing & habitat, smaller surveillance cameras,

lighter & faster aircrafts, and many other solutions including progress in dietary aspects for high altitude were also highlighted.



(L-R): Dr Aditya Paranjape, Professor, Imperial College London; Lt Gen Rajiv Sabharwal, VSM, Comdt MCTE; Mr Jayant D Patil, Vice President, SIDM; Dr W Selvamurthy, DG, Amity Directorate of Science and Innovation; Cmdr. Ajay Sharma (Retd), Vice President, Bharat Forge Ltd.; Dr S Ahmad, Former Vice Chancellor, Hamdard University.



Lt Gen Sarath Chand, UYSM, AVSM, VSM, ADC, Vice Chief of the Army Staff delivering the valedictory address.

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