

## **DRDO going for indigenous production of Pinaka Mk-II rocket, ammunition for Arjun tank**

As Indian armed forces look for state-of-art arsenal to keep up with the rapid developments in defence technology, the Defence Research and Development Organisation (DRDO) is also moving ahead with indigenisation of several weapon platforms. In the last three years, the DRDO has gone for indigenous production of various arms and ammunition.

As Indian armed forces look for state-of-art arsenal to keep up with the rapid developments in defence technology, the Defence Research and Development Organisation (DRDO) is also moving ahead with indigenisation of several weapon platforms. In the last three years, the DRDO has gone for indigenous production of various arms and ammunition.

These include 46m Inflatable Radome (weatherproof radar dome to protect the antenna), medium size integrated aerostat surveillance system (NAKSHATRA), heavy drop system – 16T (aerial delivery system to para drop heavy combat payloads including small vehicles and ammunition), enhanced range (20-80 kilometres) rocket (PINAKA Mk-II) with a guidance module, sub- muniton warheads for PINAKA, 250 kg pre-fragmented bomb, air bursting grenades for individual weapons, penetration-cum-blast (PCB) and thermo-baric (TB) ammunition for 120 mm Arjun tank, multi calibre individual weapon system (MCIWS), mine field marking equipment Mk-II, CBRNe remotely operated platforms (CBRNeP), bar mine layer, mountain footbridge, water mist system validation for fire protection in naval ships, electro-optical fire control system for naval ships, commander’s non-panoramic TI sight for AFVs (T-90, T-72 & BMP-II), medium power radar (MPR) for IAF, anti-torpedo decoy system (MAAREECH), high speed heavy weight ship launched torpedo (VARUNASTRA), multi-influence ground mine (MIGM) etc, according to Defence Minister Nirmala Sitharaman in a written reply to Dr. Vinay P Sahasrabudde in Rajya Sabha on Monday.

She informed the House that the total Budget of Department of Defence Research & Development (R&D) for the Financial Year 2018-19 is Rs 17861.19 crore with a manpower of approximately 24224 (including 7354 scientists).

A total of 13 research projects in Technology Development (TD) and Science & Technology (S&T) category have been taken up in the year 2018-19 in the broad areas of hybrid power system, advanced materials, CBW Defence technologies, laser diode technology, technologies for insensitive munition etc. and since these are in design phase, outcome of research projects will be seen in the subsequent years.

To streamline working of DRDO to expedite various projects, the organisation has been reviewed/audited by a number of independent committees in recent past (since 2007). The review and audit have been carried out by Rama Rao Committee (RRC) and most of the suggestions have been implemented.

In addition, Ministry of Defence (MoD) has set up various committees including the Ravindra Gupta Task Force (RGTF) and Naresh Chandra Task Force (NCTF) on National Security. The minister informed that action has been taken accordingly while performance audit of DRDO labs is done on a case-to-case basis by audit authorities.

<http://zeenews.india.com/india/drdo-going-for-indigenous-production-of-pinaka-mk-ii-rocket-ammunition-for-arjun-tank-2131002.html>

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## BSF installs bio-digester plant for clean water

Jaisalmer: Under the PM's Swach Bharat Mission (SBM), the BSF is using DRDO technique as a pilot project and has started setting up bio-digester plant. It will help convert sewerage water and organic wastes into clean water and even biogas can be made from it.

A bio-digester plant has been set up at BSF's 68th battalion campus on the direction of BSF Rajasthan Frontier IG Anil Paliwal at Dabla in Jaisalmer district which is a first of its kind. Now, implementation has been started to set up such plants at other battalions of BSF Rajasthan frontier and at Indo-Pak border.

The Centre has given Rs 3 crore to BSF for this. To promote Swach Bharat Mission and to provide healthy environment for BSF personnel, 68 BN BSF, Dabla Jaisalmer under the leadership of Commandant Vipin Panthri has installed sanitary napkin incinerator in unit campus. It destroys solid sanitary napkins hygienically and easily by burning them completely, producing only less than one gm of ash per napkin. It has features of automatic temperature maintenance and is wall mountable.

Taking a step forward, the unit is installing the DRDO FRP bio-digester of 20,000 litre capacity for up to 400 users per day in the unit campus. Paliwal said Swach Bharat Mission has become part of BSF under which at Indo-Pak border and at headquarters, this plant is being installed, which will make 100% clear water to be used to water plants. First plant was set up at 68th battalion and has been successful. He said apart from this, for toilet cleaning under Swach Bharat Mission, cleaning vehicles are being purchased along with 8/9/2018 BSF installs bio-digester plant for clean water 2/2 sewerage cleaning system especially at Bikaner and Ganganagar.

<https://timesofindia.indiatimes.com/city/jaipur/bsf-installs-bio-digester-plant-for-clean-water/articleshow/65329633.cms>.