Pinaka Long Range Guided Rocket

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Why in News?

The Defence Research and Development Organisation (DRDO) has successfully conducted the maiden flight test of the Pinaka Long Range Guided Rocket (LRGR–120) at the Integrated Test Range (ITR), Chandipur.

- **LRGR-120** – It is a ***long-range, precision-guided rocket*** for India's Pinaka Multi-Barrel Rocket Launcher (MBRL).
  - ***Pinaka MLRS*** is an indigenous, all-weather artillery system that can fire 12 rockets in under a minute.
- **Maximum strike range** – Up to 120 km.
- **Launcher –** Fired from existing Pinaka launchers, so no new platform was needed.
- **Developed by –** DRDO's Armament Research and Development Establishment (ARDE), Pune, and
- **Supporting labs** includes
  - High Energy Materials Research Laboratory (HEMRL)
  - Defence Research and Development Laboratory (DRDL)
  - Research Centre Imarat (RCI)
- **Evolution of Pinaka Rocket –**

Variant	Range	Guidance	Role
Mk-I	40 km	Unguided	Short-range artillery support
Mk-II	75 km	Unguided	Extended battlefield reach
LRGR-120	120 km	Precision-guided	Deep-strike, counter-force, stand-off capability

Key Features

- **Enhance accuracy –** It is equipped with a guidance system that significantly improves accuracy.
- **Guidance system – A** Combination of
  - Inertial navigation,
  - With mid-course updates and
  - Terminal correction,

    - Reducing circular error probable (CEP) compared to earlier variants.
- **Targets –** Capable of engaging enemy artillery positions, command nodes, and logistics installations at long distances.
- **Stand-off Strike Capability –** The system lets the Army strike targets from a safe distance, keeping the launch units protected.
- **Precision –** This rocket achieved textbook accuracy, validating its guidance system.
- **Operational Deployment** – It is intended for deployment across artillery regiments operating the Pinaka system.
- **Strategic significance** – It provides the Indian Army with a ***cost-effective, rapid-deployment alternative*** to missiles for deep-strike operations.

To know more about the Pinaka Missile System, click here

References

1. The Hindu | DRDO successfully tests 120-km strike range Pinaka rockets
2. Times of India | DRDO conducts Pinaka test

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