Pinaka Mk-I Rocket System

Pinaka Mk-II rocket is an indirect fire, free flight artillery rocket system designed to deliver large volume of fire power on variety of area target. Six rockets are loaded in single pod and two such pods are mounted on Pinaka launcher system. The rockets are fired from Pinaka launcher system which are capable to deliver monolithic warhead on target in single fire or salve mode. Rocket system mainly comprises of solid propellant based propulsion system, wrap around fin stabilizer system, warhead and Fuze. The various technologies employed for achieving desired performance of rocket system are as below:

- Flow formed motor tube
- Propulsion system with two motor tube configuration
- Ablative Lining of Motor Tubes
- High energy composite propellant
- Pressure equalization for cartridge loaded propellant grains
- Head end ignition
- Stabilization of rocket during flight using curved fin based stabilizer
- Preformed Fragment (PF) warhead for improved performance
- Disposable FRP Launcher Tubes and open structure pod

Brief specifications of the rocket are as follows:

a. Calibre: 214 mm
b. Range: 10 to 37.5 km
c. Rocket weight: 277 kg
d. Propellant weight: 100 kg
e. Warheads weight: 100 kg
f. Length of rocket: 4881 mm
g. Operating temperature range: -20^0 C to $+55^0$ C
h. Fuze: Turbo powered, Proximity/ Point Detonating, Height of burst 4 m to 16 m
i. Brake rings: 2 (small and big)
j. Propellant: Solid HTPB Composite
k. Head end ignition
l. Warhead types: Preformed Fragment (PF) & Restricted High Explosive (RHE)
m. Accuracy & Consistency: 1.5% of Range (Free flight)