

“with the ability to detect targets by day and night to a range of 300 m; identify friendly troops (IFF); use remote sighting to aim and fire from behind cover; designate targets; and transmit video data that is received on a helmeted mounted display”.⁶⁷

The PAPOP grenade system can be programmed at the instant of firing to optimize a lateral or frontal fragmentation pattern on the target area. The grenade weight is 200 grams. The weapon incorporates day and night sights, a laser range finder, and several digitized programmable features. The French believe that a 35 mm grenade is the minimum size required to meet their lethality requirements. It should be noted that while most high velocity, launch-fired spin stabilized grenades are 40 mm, the Russians have developed a 30 mm grenade with a round weight of 348 grams and grenade weight of 275 grams.⁶⁸

OTHER SALW DEVELOPMENTS

As in small arms, light weapons continue to evolve in terms of both effectiveness and lethality. A review of incremental improvements to existing systems together with new equipment (either in the R&D stage or in initial operational service) suggests changes similar to those experienced in the field of small arms. A few of these changes incorporate such variables as digitization, improved target acquisition and sights (all weather all light conditions), improved ammunition and/or warhead lethality, increased range, and ease of use. The following section examines some of the more significant systems relevant to the SALW arms control debate.

Anti-Materiel Rifles

While not a new system, the advent of new innovative ammunition types has renewed interest in this weapon. The term “anti-materiel” is a fairly new nomenclature for the rifle, which is, depending on its ammunition, a throwback to the .50 caliber long-range sniper rifle and various WW II anti-tank rifles. The name may appear somewhat disingenuous but new ammunition developments do make this a legitimate “anti-materiel” weapon. These rifles are generally long barreled bolt action or SLR of the 12.7 to 20 mm type mounted with appropriate sights and fired from the prone position using a bi-pod. They also come in a bullpup design. According to one source “these weapons are being adopted in greater numbers”.⁶⁹ According to Raufoss Technology of Switzerland, the development of the multi-purpose round

⁶⁷ “France’s next century ‘soldier system’,” *Jane’s Defense Weekly* (10 June 1998), p. 11.

⁶⁸ *Jane’s Infantry Weapons*, p. 566.

⁶⁹ Andrew Tillman, “Sniper Rifles: Maximum Havoc for Minimum Expenditure,” *International Defence Review* (12) 1993, p. 947. Also see Charles Cutshaw and Terry Gander, “Small Arms Heavyweights: The Growth of Anti-Materiel Rifles,” *Jane’s International Defence Review* (3) 1998, pp. 45-49.