44th HISTORY OF ASTRONAUTICS SYMPOSIUM (E4)
Scientific and Technical History (3)

Author: Mr. Philippe Jung
Association Aéronautique & Astronautique de France (3AF), France, philippe.jung10@gmail.com

Mr. Jean-Jacques Serra
AAAF, France, JJ.Serra@wanadoo.fr
Mr. Jean Robert
AAAF, France, jean.robert17@wanadoo.fr

FROM MARUCA TO MASURCA AN HISTORY OF THE FIRST FRENCH NAVY'S SAM

Abstract

In a previous paper, we saw how, starting from a wartime modified German Schmetterling, French Marine entered in the missile world with the air-to-ship Maruca.

When the latter appeared, jet fighters were breaking the sonic barrier and new supersonic bombers even were being designed. The technology being used thus no longer allowed to keep pace with the evolution of aircraft performances, leading to the study of a new weapon system able to counter the evolving threat, since the German design did not allow supersonic speed. However retaining some of the elements of the Maruca A design, like its guidance system, the new missile was known under the name of Masurca (for Marine Surface Ruelle Contre Avion). Its lifetime spread over more than a half century.

On 25 June 2007 the last ship fitted with the last evolution of Masurca SAM was downgraded to Complément status, before her final withdrawal with her last missiles in 2008. An exceptional 55-year lifetime, for a missile conceived in the very first years of the fifties, thus ended and became history.

For the French Marine, Masurca was similar to the US Navy's Terrier-Standard missiles, born out of the Bumblebee project. Developed at the same time, but independently and with different backgrounds, they both reflect their period.

Masurca was initiated in 1953 by a request from Direction Centrale des Constructions Armes Navales (DCCAN), to provide shipboard missile systems for Marine Nationale's new cruisers. Three studies were initiated for short, medium and long range missiles, under the names of Mabranca, Masurca and Masalca.

All were built and tested but only one reached the series production status. Mabranca was soon stopped, long range Masalca, a sort of French Talos, was abandoned in 1958 and only the medium range Masurca survived until our times. From 1968 to 2008, in its very last evolution, it was the main anti-aircraft armament of cruiser Colbert and of the two Frégates Lance Engins, Suffren and Duquesne.

This paper describes for the first time the initial Masurca development, from the first liquid propellant models to the solid propellant ones, and from radio command to beam riding, then to homing guidance systems for the last production Masurca Mq2. This study is limited to the RD phase which led to the operational Mq2 missiles.