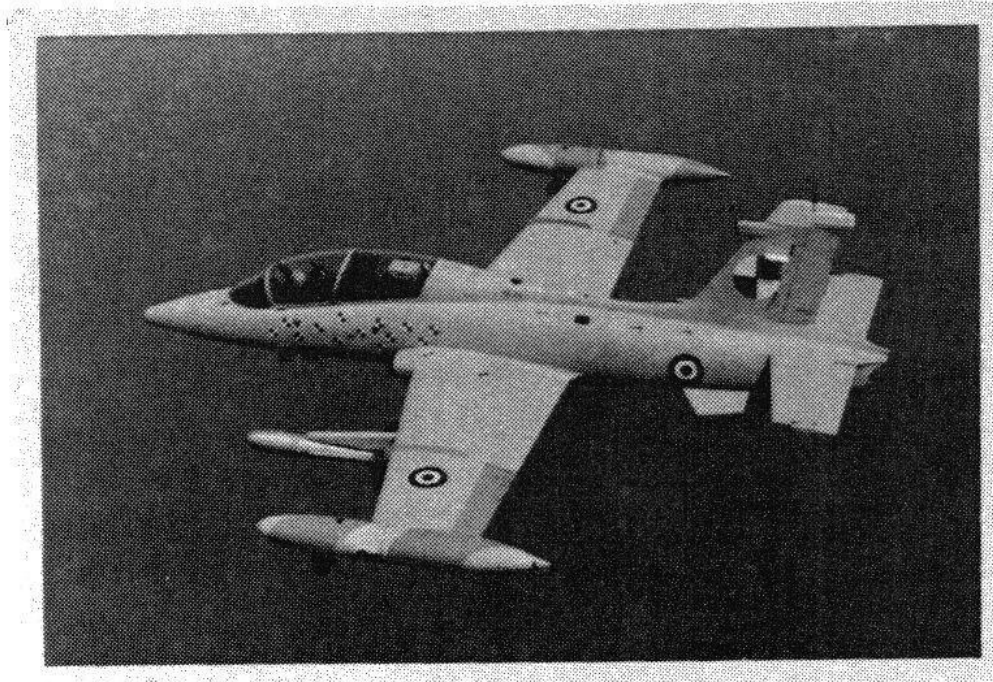


QUALIFICATION OF AN ANTI-SHIP MISSILE FOR CARRIAGE IN THE MB-339 AIRCRAFT

Prepared by : D. Bramé, D. Canziani
AIR VEHICLE TECHNOLOGY
AERMACCHI Spa - Varese - ITALY



MB-339 AIRCRAFT

ABSTRACT

This document describes the test program for the carriage, integration and safe separation of an anti-ship missile of new design in the MB-339 aircraft.

The following paragraphs provide a summary of the accomplished activity including:

- a description of the weapon system
- the instrumentation used
- the technologies and methods used for the tests
- the tests performed and the results obtained

During the qualification process of the weapon system, the Flight Simulator and the Real Time Analysis were extensively used to maximize the efficiency, quality and safety of the test activity.

Besides, a Flight Test Analysis System integrated with a post-flight data processing system was used for the evaluation of the test data.

The flutter and carriage tests were performed at Aermacchi, while the safe separation tests were conducted in a suitably equipped firing range in Sardinia.

As a result of the performed activity and the obtained results, the MB-339 aircraft was qualified to carry in flight the anti-ship missile and the safe separation clearance in the given launch envelope.

SYMBOLGY

TAS	True Air Speed
DSTK-P	Stick displacement in pitch
DSTK-R	Stick displacement in roll
PHI	Roll angle
PSI	Yaw angle
THETA	Pitch angle
P	Roll rate
Q	Pitch rate
R	Yaw rate
TALTI	True altitude
TMN	True Mach Number