



## BUSINESSDAY

### South Africa: SA-Brazil Missile Venture in Full Flight

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Johannesburg — SUCCESSFUL tests in Sweden of an air-to-air missile being developed jointly by the Brazilian and South African defence industries have brought closer the opportunity for the South African Air Force (SAAF) to start training its fighter-jet pilots with the new equipment.

The R1bn A-Darter missile programme, geared for both countries' air forces, has completed a series of ground-launched flight tests that are a necessary part of the preparation for the transition to air-launch flight tests.

Denel Dynamics is the prime contractor for the A-Darter, a fifth-generation imaging infrared air-to-air defence missile, but the project is jointly funded by the governments of Brazil and SA. As a result, the programme involves both countries' engineers, scientists and technicians. There are at least 30 Brazilian experts working on it in SA.

Denise Wilson, Denel Dynamics executive manager for air-to-air programmes, says the project will be ready for full production by 2012 to supply both air forces with operational missiles for their fighter fleets.

However, the company is planning to be ready to at least supply the SAAF with unarmed trainer missiles as early as next year to enable the force to train its pilots.

The SAAF wants the weapon for its Gripen aircraft, while Brazil has several fighter jets including the Northrop's F-5A/B Freedom Fighter and F-5E/F Tiger II. However, the future use of the A-Darter missile in Brazil is to be determined in the next few weeks when its government announces the winner of a multibillion-dollar contract to supply its air force with new fighter jets.

France's Dassault with its Rafale fighter, Sweden's Saab with the Gripen NG aircraft and US-based Boeing with the F/A-18 Super Hornet are competing to supply Brazil's air force with 36 new fighter jets. The deal has an initial value of about between 4bn and 10bn, with the possibility of many more fighters being added later on.

Denel Dynamics CEO Jan Wessels says the Brazilian Air Force - Latin America's largest, with about 700 manned aircraft in service, and 73 000 personnel on active duty - is expected to place a larger order for these missiles as soon as production starts. But the company expects to sell the product to other interested countries.

The A-Darter will be the fifth generation of missiles designed and produced in SA.

There is uMkhonto (spear), recently completed for the South African Navy; the GPS co-ordinated Umbani (lightning), a long-range surface-to-surface missile, as well as its smaller version, Ingwe (leopard); and the Raptor, which can destroy underground bunkers.

Programme manager Deon Olivier says the project is now at the stage "where uncertainties have decreased considerably" and risks are on the decline because "the seeker" has performed better than expected.

The critical tests were conducted in January and February this year where the performance of the seeker head was tested.

The second tests involved a series of programme shots to evaluate the missile's aerodynamics and control. The third focused on guided shots where all the components were tested together in flight mode.

The carriage clearance tests of the A-Darter missile on the Gripen aircraft were completed last month, where the full envelope of 12g (a centrifugal force 12 times the acceleration of gravity) instantaneous manoeuvres at 13700m altitude were done, Wilson explains.

She says final ground-launch programmed tests for aerodynamics and flight control evaluations will be conducted in the next few weeks. These will be followed by firing clearance from the Gripen aircraft enabling missile evaluation tests as well as a series of seeker pod tests.

Ever since Hitler's Germany launched V1 guided missiles at London with devastating results, Wessels says that indigenous guided-missile capability has become a highly strategic one for countries. "Until a few years ago it was the exclusive domain of the so-called advanced economies of North America, western Europe, Russia and its allies.

"Politically, such a capability provides one of the most explicit messages of a country's ability to defend itself when called upon to do so," he says.