



NEWS RELEASE

Visit <http://www.mindef.gov.sg> for more news and information about MINDEF and the SAF

Factsheet - Republic of Singapore Navy's Frigate Programme

09 Dec 2005

INTRODUCTION

In March 2000, MINDEF signed a contract with Direction des Constructions Navales (DCN) of France for the construction of six frigates for the Republic of Singapore Navy (RSN). DCN had designed and built the French Navy's low signature La Fayette-class frigates. Under the technology transfer arrangement, DCN designed and built the first ship while the other five are built locally by Singapore Technologies Marine. These Formidable-class frigates will replace the RSN's Missile Gunboats, which would have been in service for more than 25 years.

SHIP'S CAPABILITIES

The new frigates are highly capable warships. They are equipped with advanced combat systems and also have stealth features incorporated into their design. They also have longer endurance, being able to stay at sea for longer periods. Each frigate is designed to carry a medium-class helicopter which can complement the ship in Anti-surface and Anti-submarine warfare. By leveraging on a high level of automation and enhanced work processes, each frigate requires a crew of only 71. The frigates will be equipped with advanced state-of-the-art combat capabilities allowing them to perform a wide spectrum of missions and to deal with various threats in all dimensions of naval warfare – surface, air and underwater. These systems include the Thales Herakles Multi-function Radar (MFR), the MBDA Aster SAM System, the EDO Active Low Frequency Towed Sonar (ALOFTS) system, the Eurotorp A244S torpedo and the Boeing Harpoon missile system. The Shore Based Integration Centre (SBIC) has been set up in Changi Naval Base to allow the combat system suppliers, using the actual equipment and software, to test and demonstrate that they could exchange messages correctly over the local area network, similar to the one onboard the ship.

The platform characteristics and the combat systems configuration of the RSN's Formidable-class frigates are detailed in the appendix to this fact sheet.

PROGRAMME STATUS

The frigate programme is progressing smoothly. All six frigates are in various stages of construction. Four have already been launched and are now in the final phases of construction. The lead ship of the Formidable-class stealth frigates arrived in Singapore on 8 Jul 2005 from France. RSS Formidable is currently undergoing Combat Systems checkout, integration and testing. She is expected to be fully operational in 2007.

In tandem with the frigates' construction, the combat system integration effort has also gradually intensified over the course of this year. The Shore Based Integration Centre (SBIC) has been set up in Changi Naval Base to allow the combat system suppliers, using the actual equipment and software, to test and demonstrate the exchange of information over the local area network, which closely replicates the one on the ship. The laboratory environment of the SBIC allows the integration team to run the required sequence of tests and to initiate trouble shooting and rectification measures before testing on board the ship commences. The frigates' systems are also being put through various operational scenarios for extensive testing employing simulators. The shore-based integration testing approach will shorten the time taken for integration and help bring forward the delivery of the frigates by almost a year.

The frigate programme represents the continuous effort of the RSN to improve its capabilities and enhance the operational effectiveness of the SAF.

PLATFORM DESIGN AND SYSTEMS CONFIGURATION

Dimension	
Length	114 metres
Beam	16 metres
Displacement	3,200 tonnes
Speed	In excess of 25 knots
Range/Endurance	> 3,500 nautical miles
Platform Systems	
Propulsion System	4 x MTU 20V 8000 M90, 8200 kW (CODAD)

	Configuration)
Electrical System	4 x IFM V1708 with AvK alternator, 800kW
Helicopter/Ship-Heli Interface	Sikorsky S-70B Naval Helicopter
	Heli-Visual Approach System
Complement	71 crew + Air detachment of 15 personnel

FRIGATE'S COMBAT SYSTEMS CONFIGURATION	
Multi-Function Radar	Thales Herakles Multi-function Radar (MFR)
Navigation Radar	Terma Electronic Navigation Radar
Surface-to-Surface Missile	Harpoon Surface Missile System
Surface-to-Air Missile	MDBA Aster Missile System
Naval Gun	OTO Melara 76mm Gun
Sonar	EDO Active Low Frequency Towed Sonar (ALOFTS)
Torpedo	Whitehead A244S System
Communications	ST (Elect) CET Integrated Communications System
Gun Fire Control System	EADS 4 Gunfire Control System
Command and Control	DSTA in-house developed Combat Management System (CMS)

Standard Operating Common Consoles	ST (Elect) SES
---	----------------

National Archives of Singapore