

to his line of sight to the target, is 900yd.

Last week three SS-12(M)s and two SS-11(M)s were fired by *Susa* at a 15ft x30ft towed lattice target at ranges of up to 5,500yd. Though there was little wind there was a good swell—sea state four—running. *Susa* herself was very steady during her 50kt runs-in—the commander having to keep a very true heading, to within one or two degrees, during the initial phase to give the aimer any chance of a hit. The aimer was Nord development engineer (and crack marksman) M Malaval, seated in the turret in the operations room below the bridge with the APX 260 sighting head projecting through the deckhead immediately forward of the open bridge. Vosper and Nord claim that any normal man with good reflexes and eyesight can be trained to operate the system—in the RLN, the first operational user, the gunnery officer will be aimer. No special staff is needed to test and maintain the missiles aboard, it is claimed, and two men, or only one in an emergency, is all that is needed to operate the system.

In last week's firing the first SS-12(M) struck and ricocheted from the water some way short of the target. The second scored a hit but the third also bounced off the water short of the target. With two SS-11s fired from shorter ranges two hits were scored, one 15ft and the second only 3ft from the centre of the bullseye. The two SS-12(M) misses were both attributed by a Nord representative to technical failures—probably wire breakages—which would be looked into. To observers watching the missiles once gathered on to the line of sight, continuing their flight to target only a few feet above the water, it seemed that wire breakage might have occurred through wave interference. Without the x10 magnification through the sight that the aimer enjoys, it seemed that the missiles, skimming only inches and feet above the wave crests for thousands of yards, must strike the water at any moment and a random high wave must be a real hazard to the success of a firing. Against this it is fair to add that the target being used was far smaller than the targets a missile-equipped FPB would normally engage.

No price was quoted for the cost of the entire system when installed in an FPB (it is equally suitable for installation in other displacement craft and in ACVs). It is understood that the price per round is £2,400 for the SS-12(M) and £850 for the SS-11. These are prices for rounds with dummy warheads; in fully explosive fighting trim the missiles cost about £3,000 and £1,100 a round respectively.

Encouraged by the first application of a lightweight guided-missile system to FPBs, Vosper is going a stage further in its latest design for a 100ft FPB. Slightly longer than the Libyan boats, permitting the fitting of more powerful diesel cruising engines for a longer range at higher cruising speed, this vessel includes not only the 2x4 batteries of Nord weapons but also four launchers for the Contraves Italiana Sea Killer beam-riding ship-to-surface missile. This has a range of about 20km (11 n.m.). Its associated Sea Hunter

fire-control and guidance system is also compatible with the Short Seacat short-range anti-aircraft missile, a triple launcher for which, it is proposed, will be mounted at the stern. The usual 20mm gun on the foc'sle is retained as a general-purpose weapon for occasions when the use of missiles would not be justified.

Vosper's contention is that a very powerful range of armament can now be carried in the fast, small, hard-to-hit and relatively inexpensive patrol boat, and now makes the FPB a valuable and potent addition to every modern fleet.

Bridge Pilot Leaving RAF

THE RAF AUTHORITIES have decided not to court martial Flt Lt Alan Pollock, 32, who on April 5 flew his Hunter FGA.9 between the two towers, the bascules and the upper span of London's Tower Bridge.

The MoD (Air) announced on May 31 that the AOC-in-C, Air Support Command, Air Marshal Sir Thomas Prickett, has decided in the light of medical opinion not to bring Flt Lt Pollock to trial by court martial. Flt Lt Pollock has recently been in Ely and Wroughton RAF hospitals with pneumonia. The statement said that medical opinion was that "if he were brought to trial it would probably have a damaging effect on his health, both immediately and in the long term."

In an unprecedented, and some might think unusual way, the statement went on to anticipate the findings of a medical board not yet convened, in adding: "When he is well enough he will come before a medical board and is expected to be invalided from the RAF."

The decision follows by some weeks that of the City of London Police to take no action against Flt Lt Pollock in the civil courts. His implied discharge on medical grounds begs many questions, in particular those concerning the level of support which his demonstration—against the failure of the Government to acknowledge reasonably the RAF's 50th anniversary—enjoys in the Service. Certainly there have been several expressions of support and sympathy for Pollock's action made to *Flight* by serving RAF officers in recent weeks.

In making this strange decision the MoD seems to impugn Flt Lt Pollock's mental health for it is highly unlikely that a court martial would have adverse medical effects upon a man simply recently recovered from pneumonia. There seems little doubt that from the authorities' point of view Flt Lt Pollock's recent illness, and a medical

discharge, has provided a felicitous way of avoiding punishing Pollock for manifesting resentments widely shared throughout the Service and to the public expression of which a court martial might well have led.

Japanese F-X Short List

THE SHORT LIST of candidate aircraft to become Japan's air-defence interceptor in the 1970s (see Sensor last week) has been drawn up after consultations between the Prime Minister, Mr E. Sato, and the Director-General of the Defence Agency, Mr K. Matsuda. The three aircraft are the McDonnell Phantom F-4E, the projected Lockheed Starfighter development, the CL-1010/2, and the Dassault Mirage F.1C. A 12-member survey team, led by General K. Ogata, will travel to the USA and France this summer to make further assessments of the aircraft before a decision, expected in the early autumn.

The Japanese Government plans to order about 60 aircraft—provisionally designated F-X—during the current third defence build-up programme, which ends in 1971, in which year the selected aircraft is required to enter service. A considerably greater number will be ordered in later years.

The Japanese air staff is reported to favour the McDonnell F-4E but proponents of the CL-1010 are reported to be stressing its relatively low unit price, its similarity to the present F-104J and thus lower re-training costs, and its lesser capabilities as an attack aircraft. This might be considered a shortcoming in contexts other than Japan, where its advocates argue that, as an almost wholly defensive aircraft, it will be less likely to invite domestic and foreign criticism over its relevance to Japan's "peace" constitution.

LIT Outline Revealed

STOL WAS ESSENTIAL and VTOL welcome if it could be provided without much extra cost in the USAF's projected Light Intra-theatre Transport (LIT), USAF Secretary Dr Harold Brown told Congress in testimony recently released. The LIT will replace the Caribou, C-123 Provider and some C-130 Hercules in the 1970s. Boeing, LTV and McDonnell Douglas have recently received contracts to study STOL designs for the requirement, following earlier studies of V/STOL designs.

Dr Brown said that USAF studies indicated a need for 350kt airspeed, a 250 n.m. combat radius, and a freight capacity of between 15 and 20 tons with STOL capabilities with that payload.

The four-seat EA-6B electronic-counter-measures development of the Grumman A-6A Intruder made its first flight on May 25. Seating is two by two, with a forward-fuselage stretch of the standard A-6A airframe. Ordered by the US Naval Air Systems Command, the EA-6A is designed for carrier-borne and advanced base operation alongside A-6A bombers and the earlier EA-6A two-seat ECM version

