

New Aircraft Carriers for the Fleet Air Arm

The Blackburn Skua Fighter and Bomber

ANNOUNCEMENT of the contract award for a big new British aircraft carrier and the imminent launching of two more ships of this class bring several stages nearer materialisation Admiralty plans for large scale expansion of the Fleet Air Arm. Lady Kingsley Wood, wife of Britain's enterprising Secretary of State for Air, consented to perform the traditional ceremony at the launching of H.M.S. *Formidable* at Belfast, this month.

Less than a month later H.M.S. *Victorious* will go down the slipways at Vickers-Armstrongs' works, Walker-on-Tyne. Name of the new carrier, sixth in succession to the *Ark Royal*, which is the first Royal Navy ship to be built from the keel upwards primarily for fleet aviation, is now announced as H.M.S. *Indefatigable*. Her construction has been entrusted to the famous shipbuilding firm of John Brown and Co.

Production of aircraft to re-equip Fleet Air Arm squadrons is proceeding at full speed. Bulk delivery of several new types of ship-borne aircraft takes place this year. A new fighter aircraft, details of which are still official secrets, is scheduled for delivery before the end of this year to supplement the increased striking and defence power given by the Blackburn Skua and Roc all-metal monoplanes.

Work is well advanced on orders for aircraft which are to supersede the new Fairey Albacore dive-bomber torpedo-plane, first details of which are only just available—a pointer to the remarkable rate of technical progress achieved by British technicians.

Performance details have now been released of the Blackburn Skua fighter dive-bomber, the first all-metal monoplane to go into service in the Fleet Air Arm. The Skua already equips naval air squadrons and will arm squadrons which are to serve in the new aircraft carriers. It is designed for ship or land operation. Standard power plant is a Bristol Perseus XII moderately supercharged sleeve-valve engine developing a maximum output of 905 h.p. at 6,500 feet.

Particular requirements of fleet aviation, especially the limitations imposed by confined hangar space in a ship, give rise to unique features in the Skua. For economy in stowage-space, wings are arranged to turn as they fold;

at rest they lie in the vertical plane with leading edge uppermost. Severe flying loads imposed on the wings by steep dives and fast flight are safely borne by robust latch pins which lock the wings securely and rapidly into the flying position.

Special flaps are fitted to the wings, partly to reduce the diving speed (and thus give the pilot steadier aim), partly to improve take-off from the short space of a carrier's deck. Use of these flaps for landing and the deceleration provided by wheel brakes and check-wires stretched across the deck of the carrier enable the Skua to pull up in an astonishingly short space when landing on the deck.

Metal monocoque structure forms the fuselage, which is built up in two parts. Watertight compartments are built inside the fuselage fore and aft of the cockpit, which is itself watertight up to the coaming. Similar compartments are located inside the stressed-skin metal wings, the whole ensuring buoyancy in the event of forced descent on the sea. Lightness and smoothness of control at high and low flying speeds are assisted by the ball bearings on which all control surfaces are hinged.

Overall shipshape lines of the Skua in flight are accentuated by a retractable undercarriage, the two legs of which fold upwards and outwards to rest finally flush with the underside of the wings. A crew of two is accommodated inside a long cockpit which juts up well above the fuselage to give the pilot a clear view ahead, a necessary adjunct for flying on and off the carrier's deck and for dive-bombing.

The powerful monoplane appears in two guises. It may serve as a dive-bomber or a two-seat fighter, appropriate variations of equipment being made for the alternative duties. As a two-seat fighter it carries a battery of machine guns mounted in the leading edge of the wings and ranged to bring a concentration of fire on an enemy target ahead. This version is fitted with a power-operated gun turret amidships and is called the Roc.

As a dive-bomber the Skua is able to carry a formidable bomb in a streamlined recess under the fuselage. Diving steeply at a near-vertical angle which would considerably increase the difficulties of anti-aircraft fire, the pilot steers

his craft towards the enemy target and at a suitable height releases his bomb with shattering effect directly on to the objective. Such is the Skua's streamlining that the head-on view presented enemy gunners in this form of attack amounts to little more than a pin-point with a line ruled through it, representing all that is seen of the narrow frontal area of the Perseus engine and the clean sweep of the monoplane wings.