

**AIRCRAFT
DESCRIBED
No. 206
BY
FELIX
PAWLOWICZ**



**S.4
KANIA
3**



THE FIRST S-3 KANIA was intended, by its designer E. Stankiewicz to perform the duties of an aerial tug for gliders, so it was most appropriate that the prototype should have been built at the *Szybowcowy Zakład Doswiadczalny* (Experimental Glider Establishment) at Bielsko – Biala, Poland.

Construction began on this prototype late in 1950, and was quickly completed, enabling the first flight trial to be made on 17th May 1951. Despite proving to be an excellent aircraft for glider towing – possessing as it did better qualities than the widely used tug, the CSS-13 (Polikarpov Po2) certain deficiencies in the aircraft documentation prevented it from receiving its certification of airworthiness. This resulted in the *Kania* being suspended from flying, and despite the urgent requirement for such a craft, the project was abandoned after this brief testing.

Reorganisation of the Polish aircraft industry a few years later enabled Stankiewicz to rekindle his interest in the design, and the first of three new prototypes designated *S-4 Kania 2*, flew on 2nd September 1957 with the registration mark SP-PAA. All these aircraft were built at the W.S.K. factory at Mielec. In 1958 an example was demonstrated at the World Glider Championships, held at Leszno in Poland where there was naturally much interest in this class of machine. The third prototype aircraft incorporated detail refinements and was designated *S-4 Kania 3*, being registered as SP-PBB. All three aircraft were assigned to Aeroclubs, where they received a good reception but partly due to a change of decision of the Sport Aviation Authorities, and partly to the emergence of the new all-metal rival, the PZL-104 *Wilga*, the *S-4 Kania* was never put into series production.

The entire construction of this two-seat glider tug/

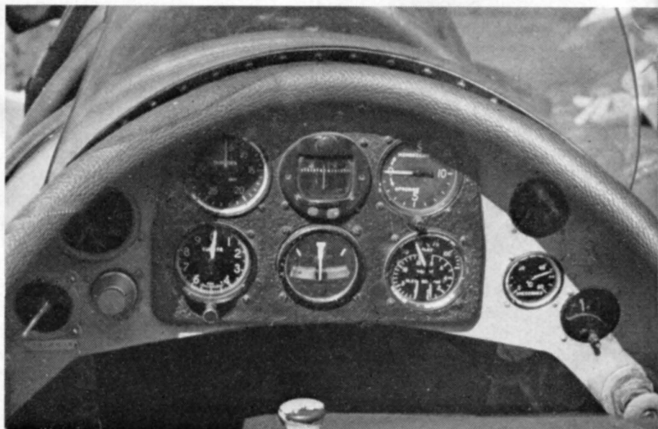
Top, two views of this attractive parasol winged two seater show its suitability for flying scale with large tail surfaces, wing slots, single strut bracing and a clean, uncluttered general appearance. Right: the instrumentation with basic flying panel in centre.

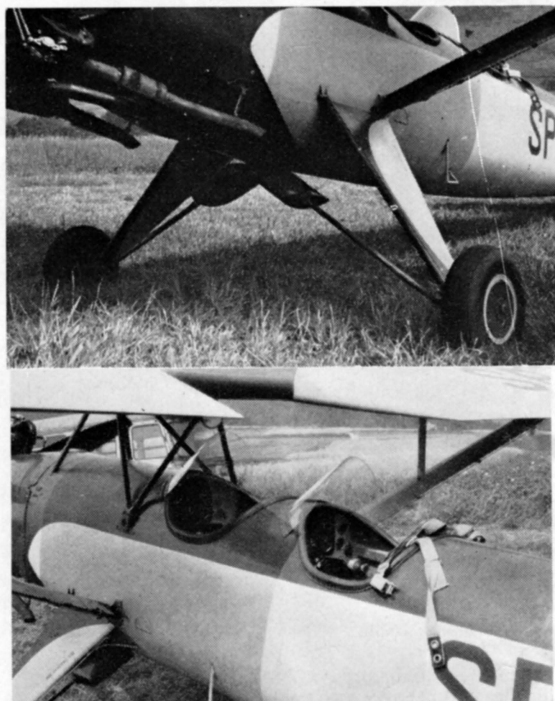
general purpose aircraft was in wood – the fuselage being of plywood semi-monocoque construction with four spruce longerons. This unit was first plywood then fabric covered, while the front portion and engine mounting featured removable dural panel. Aft of the fire-proof bulkhead lay the fuel tank, sufficient to give a range of approximately 360 miles.

The two open cockpits, equipped with dual controls, had a large baggage area located behind them, and beneath this storage area lay a 24 volt battery, providing the power for flaps, navigation and landing lights.

A very 'conventional' double 'V' braced undercarriage unit with two half axles was utilised, suspension being provided by bungees cord passing within the legs themselves. A half-spring, rotateable tail skid, with rubber shock absorber completed the aircraft landing equipment.

Equipped with a five cylinder M110 air-cooled radial engine, rated at 125 h.p., performance was





The fairing over the undercarriage leg permits easy reproduction on a scale model of the Kania. Streamlined bodies over the top ends of the vee rods cover bungee shock cord. Bottom photo gives cockpit area detail. Note the safety harness and parachute straps out of rear seat.

adequate rather than scintillating, maximum speed (A.S.L.) being 150 m.p.h., cruising being confined to 80 m.p.h. A hand starter was also provided.

The braced parasol wing, using an N.A.C.A. 23012 airfoil featured a 5 degree sweep with a very modest 2 degree dihedral and was made in two pieces, joined at the centre portion which was supported on the fuselage by an inverted 'V'-braced pyramid of steel tubing.

Wing construction was again conventional, it being a single spruce box spar unit with a plywood covered 'D' leading edge section - aft of this spar being fabric covering. Flaps situated on the underside of the wings share the distinction with the steel struts to the wing and tail in being the only metallic items on the machine.

Differential slotted ailerons were built-up wooden structures, fabric covered. Leading edge fixed slots with the same span as the aileron were also used. A one-piece, braced tailplane of all wood construction was employed. The elevators being fabric covered as was the fin, the remainder utilising plywood skinning.

In many ways, its shape is distinctly Polish, due no doubt, to the fame of the R.W.D.-8, and at the same time its proportions make it an admirable subject for flying scale power - either free flight, radio controlled or control line, even as a lightweight rubber powered model.

REPRINTS OF THIS FEATURE PLUS FULL-SIZE DYE-LINE PRINTS OF THE 1/24th SCALE ORIGINAL ARE AVAILABLE AS PLAN PACK JH 2927, PRICE 20p (4/-) PLUS 5p POSTAGE FROM AERO MODELLER PLANS SERVICE, 13/35 BRIDGE STREET, HEMEL HEMPSTEAD, HERTS.

CONTEST CALENDAR

August 21st/22nd	CENTRALISED F.A.I. F/F MEETING, RAF Syerston, Newark	September 12th	S.M.A.E. AREA CENTRALISED MEETING, Team Power, F.A.I. Rubber, A/1 glider, Area Venues
August 22nd	BUCKANEERS OPEN C/L STUNT, Finmore Airfield, Tingewick, Nr Buckingham. Field entry 20p. Details J. Mannall, 3 Totnes Close, Bedford	September 12th	BURNS BROWN 'A' COMBAT RALLY at Playing Fields, St Thomas Rd, Stopsley, Luton. Pre-entry 25p to N.P. Blackburn, 'Trebois', Newlands Drive, Maidenhead, Berks
August 29th	TORBAY RALLY, Open R/G/P, All-in F.A.I. Chuck Glider, Woodbury Common, Nr Exmouth	September 19th	SOUTH MIDLAND AREA RALLY, F.F. Open R/G/P, Wakefield, Tail-less, Helicopter, Chuck glider, Junior Kit, C/L Combat, Stunt, (A T/R, F.A.I. T/R Good-year Junior Stunt, Pre-entry (15p) essential, to G. Johnson, 37 Oxford Road, Kirtlington, Oxon. R/C Single Channel, Multi aerobatics (R.O.Y.G. frequencies only). Pre-entry (15p) essential, to D. Giles, 'Derron', 64a Station Rd., Bow Brickhill, Bletchley, Bucks. R/C 'Eyeball' Scale (Brown and Blue freq. only). 15p pre-entry (essential), to R. Edmonds, 16 Telford Way, Bellfield, High Wycombe, Bucks. F/F entries 15p on field. Venue Cranfield, Bedfordshire
August 29th	MANX NATIONAL OPEN SOAR-IN CHAMPS, (Slope and Thermal). Bring the family. Details and holiday brochure from H. Bailey, 'Sunrise', Linden Avenue, Port St Mary, I.O.M. Tel. P.S.M. 3184	September 26th	LONDON AREA F.A.I. GALA, F.A.I. R/G/P in Rounds. Round 1 ends 12 noon. C.d.H. A/1, (A. HLG. No spectators. At R.A.F. Bassingbourn (on A.14, Nr. Royston, Herts.)
August 29th	WOODFORD RALLY, F/F: Open R/G, Tail-less, Chuck, C/L Scale, Combat, F.A.I. T/R, Goodyear, H cap Speed, Stunt, R/C Aerobatics, 'Eyeball' Scale	September 26th	S.E. AREA THERMAL SOARING at Golden Cross, Lewes, Sussex
August 29th	WEST OF ENGLAND R/C SCALE AIR DAY at Westland Airfield, Yeovil, Somerset	September 26th	C/L TRIALS FOR '72 WORLD CHAMPS, Stunt, T/R, Speed. Venue to be announced
August 29th	INDOOR AT CARDINGTON, Beginners Tissue & Microfilm, F.A.I. Microfilm, Open Microfilm. No spectators. Passes essential - Telephone Bruce Edwards, 01-969 7349	September 26th	LEEDS D.M.F.C. RALLY, A/2, Open R/P, Chuck glider (A 2-7 flts, no rounds, £5 prize) 9.30 start. S.M.A.E. members only
August 29th/30th	COTSWOLD R/C SOC. Two Day pylon race Meeting at R.A.F. Hullavington	October 3rd	S.M.A.E. ALL SCALE MEETING at R.A.F. Little Rissington
August 29th/30th	KENT R/C AIR SHOW, F.A.I. Aerobatics, Open aerobatics, Scale Class II, F.A.I. nylon racing, Open pylon, Biplane pylon, W.W.I. dogfight display. Possibly R/C combat. Venue Rochester City Airport		
September 5th	NORTHERN AREA RALLY, Thirty events for C/L, F/F, R/C, including Indoor, Peanut Scale, Jetex, etc., at R.A.F. Lindholme, Nr Doncaster. Details (S.A.E.) R. Firth, 22 Slayleigh Avenue, Sheffield, Yorks		
September 12th	FLYING DRUIDS MULTI RALLY, F.A.I. Schedule at Middle Wallop Airfield, Nr Andover, Wilts. 10.30 a.m. start		