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An-2 general-purpose biplane, which is now built in considerable
numbers for the USSR and satellite countries. At about the same
time negotiations began for closer economic integration of the
Sjviet bloc countries, and the decisions reached concerned the
aviation industry also. It appears that it was agreed to increase
collaboration and limit competition between the rival industries, and to eliminate unnecessary duplication of designs for aircraft in some categories. One may speculate that the recent liquidation of the East German aircraft industry was a direct outcome of these developments. Similar reasons might have induced the Poles to drop the OKL's executive light-twin project, comparable to the Czech L.200 Morava, and the Czechs to abandon production of the agricultural L.60 Brigadyr, which on many counts was found inferior to its Polish rival, the PZL-101 Gawron.
The new 1961-65 plan for the Polish aircraft industry was pre-pared in the light of requirements for the economic co-operation with other Soviet bloc nations. Although no exact details of this five-yearly programme have been revealed, many of its features are discussed in the review of recent activities of the Polish industry which follows.

OKL (aviation design centre), at the WSK Warsaw-Okecie Among the original 1L projects taken over by the newly created OKL design centre was the TS-11 Iskra (Spark) two-seat jet trainer. Developed by Tadeusz Soltyk to a Polish Air Force specification as replacement for the TS-8 Bies, the Iskra was the first turbojet aircraft ever designed in Poland. The machine was to be powered initially by a foreign engine, the British Viper being the favoured choice; but negotiations eventually broke down and work was delayed until a suitable home-developed powerplant was well in sight. The first prototype, powered by the national engine of some 2,0001b thrust, first flew in the spring of 1960, and was publicly revealed on September 11 of that year during the air display at Lodz. Regarded as a p-oject of predominant importance, the Iskra is being vigorously developed, and production aircraft are expected to enter service with the Polish Air Force during the present five-year programme. Other aircraft will be undoubtedly offered for export. Estimated speed is 850km/hr (528 m.p.h.) and ceiling 11,000m (36,000ft). All other details are restricted, but it appears that the aircraft will carry an extensive range of armament. Another design initiated at the IL and continued at the OKL is the MD-12 four-engined light transport, which was flown for the first time in the summer of 1959. A progressive development of the smaller twin-engined CSS-12, this aircraft was evolved by Franciszek Misztal and Leszek Duleba to a specification of PLL Lot, with particular emphasis upon operating economy and good field performance. The machine, an all-metal stressed-skin low-wing monoplane with retractable nosewheel undercarriage, and powered by four Narkiewicz WN-3 radial piston-engines of 340 b.h.p. each, is intended for use as a passenger, passenger/cargo or all-cargo transport on short-haul domestic routes. The second prototype SP-PBD, fitted out as a 20-passenger local-service airliner, com-menced scheduled operations with Lot on August 26, 1961. The MD-12 is now in limited production at WSK Warsaw-Okecie. Spm of the MD-12 is 21.3m (69ft 11 in), length 15.8m (5lft lOin), and empty and max weight 4,950kg (10,9121b) and 7.500kg (16,5351b) respectively. Performance includes a cruising speed of 285km/hr (177 m.p.h.) at 2,500m (8,200ft) and a range of 378 n.m. A larger, 40-passenger twin-turboprop development is under consideration. The first aircraft to carry the PZL designation letters, adopted by the OKL office for its designs, was the PZL-101 Gawron (Rook), developed by the light-aircraft team headed by Stanislaw Lassota. Evolved on the basis of Yak-12M, the quantity production of which began at the WSK Warsaw-Okecie in the summer of 1957 following the completion of an initial batch of Bies trainers, the PZL-101 began

The slotted ailerons and slotted flaps of the MD-12

its flight tests early in 1958. The aircraft, intended mainly for agri-cultural use, was ordered in quantity by the Ministry of Forestry and Agriculture, and early production machines appeared in 1959. The first export delivery was made in June of that year to the Austrian Agrar-Flug-Gluck, and a repeat order from the same company was received a few months later. In 1960 the PZL-101 Gawron was exported in quantity to the USSR, Hungary and Spain and single examples were delivered to most countries of the Eastern bloc for trial use. The machine proved an outstanding success, and at the conference of the Agricultural Aviation Engineers of the Socialist Countries, held in Prague in March 1961, it was strongly-backed by the Russians and Hungarians. The PZL-101 was ac-cepted as a standard agricultural aircraft of the Soviet bloc countries for the period 1961-65.
The Gawron, which is now built in considerable numbers at WSK Warsaw-Okecie, differs from the original Yak-12 in several important respects. The extensively modified wing, of an area of 23.86m2

(256.8 sq ft), incorporating full-span leading-edge slats
and slotted ailerons and pneumatically-operated slotted flaps on the trailing-edge, is swept back by 41J

and provided with large wing-tip
end-plates, which increase aileron efficiency at high angles of attack. The fuselage structure is greatly simplified, allowing disposable load to be increased to 700kg (1.5431b).
The pure agricultural variant, the PZL-101 G-l, can be fitted either with a distributor and non-corrosive sheet-steel chemical hopper for 500kg (1,1001b) of dust, or with spray-bars and an

One of the twelve PZL Gawrons delivered to Hungary in I960. The type
will be a standard agricultural aircraft in Communist countries

805-litre (177 Imp gal) tank for liquid chemicals. The general-utility PZL-101 G-2, in addition to agricultural duties, can be used as a liaison or executive aircraft, as a light freighter, or as a glider-tug, capable of towing up to four gliders simultaneously. Both models are powered by a 260 h.p. AI-14R nine-cylinder radial engine, driving Type W-530 D-U propeller. Data include: span, 12.6m (41ft 4in); length 9m (29ft 6in); weight empty, 964kg (2,1251b); gross weight, 1,665kg (3,6701b); max speed, 170km/hr (106 m.p.h.); stalling speed, 50km/hr (31 m.p.h.).
The second aircraft to be evolved by Lassota's team was the PZL-102 Kos (Blackbird) all-metal low-wing cantilever monoplane, seating two side-by-side, which first flew on July 16, 1958, powered by the national 65 h.p. WN-1 flat-four engine. According to the original expectations the aircraft was to be built in large numbers for export and home use. It was hoped that the WN-1 -powered PZL-102A would be delivered to the Polish flying clubs, activities of which had been severely hampered in the post-war years by lack of suitable equipment. Unfortunately, this lower-powered model did not come up to expectations and only the export PZL-102B powered by the 90 h.p. Continental C90-12F engine entered into production. This aircraft, acclaimed during demonstration tours as ideally suited for club and private use and one of the cheapest in its class on the market, held promise of great success, and orders from several countries were received, with production deliveries beginning in 1960. Handling impressions by a staff-writer were published in Flight for June 10, 1960.
The latest design from the OKL's stable is the PZL-104 Wilga (Thrush) all-purpose aircraft, intended as a successor to the Gawron. Evolved by Ryszard Orlowski, the machine was publicly revealed at the 30th Poznan Fair last June. It will be built in several versions covering agricultural, ambulance, freight, executive and general