

## Turkey's defence industries get priority

THE success of Turkey's first full defence equipment exhibition can be measured by the fact that more than 400 international companies took space at the show, drawn by the prospect of winning orders in the country's \$15,000 million armed forces modernisation programme. IDEA 87 was held at the Turkish Air League's Etimesgut airfield, 18 kilometres outside Ankara, from 27 April-1 May.

The bulk of the investment in the 10-year programme is slated to come from the Defence Industry Development & Support Administration (DIDA), set up in November 1985. The scheme calls for the re-equipment of forces which, with nearly 750,000 personnel, are the second-largest in NATO.

Revitalising Turkey's old-established but largely antiquated defence industries is a top government priority, as shown by the attendance at the exhibition of Prime Minister Turgut Ozal, Defence Minister Zeki Yavuzturk, Industry & Commerce Minister Cahit Aral, armed forces chief of staff General Necdet Urug and DIDA president Vahit Erdem. Foreign guests included UK Secretary of State for Defence George Younger and West Germany's NATO military committee member General Wolfgang Altenberg, as well as leading defence industry figures such as Serge Dassault, chief executive of France's Avions Marcel Dassault-Breguet Aviation.

In an address at the exhibition's opening, Younger pointed out that Turkey cannot hope to update its military equipment solely through imports. It was a message not lost on his international audience: most companies were happy to talk about co-production and/or offset arrangements to help to sell their wares.

### Co-production

One of the army's most urgent requirements is a replacement for its 2,000 aging M-113 armoured personnel carriers (APCs). Bids reflect the need to plan for local production. West Germany's Krauss-Maffei/Diehl is offering its privately developed Puma APC with the local Ercan Holding. Similarly, the US' FMC Corporation is bidding with the Nurol group for a contract to supply its armoured infantry fighting vehicle (AIFV).

A determined effort is being made by the UK's GKN, which is bidding with the Koc group to build its Warrior tracked AIFV, known locally as the Savasci. GKN has one

advantage over its rivals: the Warrior is already being supplied to the British army, while the Puma and FMC AIFV have not been ordered by the West German or US armed forces.

The initial Turkish requirement could be for production of 1,500 vehicles worth a total \$1,500 million. GKN defence operations marketing director John Fletcher says. The UK company, which is advised by Morgan Grenfell, is aiming for eventual 60 per cent local production content, a buy-back of components made in Turkey and the formation of a joint venture to pursue export opportunities.

The UK government has offered a memorandum of understanding for a possible deal "embracing a very open export policy subject to mutual national security considerations," officials say. Production of other GKN items, such as the Saxon wheeled armoured vehicle, could follow; another key aim is to set up a research and development facility in Turkey, Fletcher says.

Another UK company — Land Rover — announced the award at IDEA of a contract to supply 400 of its model 110 four-wheel drive vehicles to the gendarmerie. The £4 million (\$6.7 million) order, which includes an option on a further 100 vehicles, was won in competition with West Germany's Mercedes.

The army's need for high-frequency, single sideband tactical communications equipment has drawn bids from West Germany's Siemens, which is offering its CHX 200 system, and two UK companies. Plessey is bidding to supply its System 4000 and Marconi Communication Systems is offering its Scimitar combat radio system. The order could be worth \$170 million-350 million, industry observers say.

Modernisation of its 160-strong fleet of M44 self-propelled howitzers is also high on the army's shopping list. Bids have been received from a West German group of Motoren & Turbinen Union (MTU) and Krauss Maffei subsidiary Gesellschaft fuer Logistischen Service (GLS), and the Netherlands' RDM with the US' BMY, part of the Harsco Corporation; France's GIAT is offering co-production of its 155-millimetre towed gun.

### Air defence

Priority in air defence is to improve protection against low-level attack. British Aerospace's (BAe's) Dynamics Group is

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UK and Turkish defence ministers examining a Tornado

bidding with its latest Rapier Laserfire system against offers from the Euromissile consortium, and UK and Swiss companies.

Euromissile, which links two West German firms — Messerschmitt Boelkow-Blohm (MBB) and Siemens — with France's Thomson-CSF, is offering its Roland system; Switzerland's Contraves has proposed its Skyguard anti-aircraft fire control system. The Aeronutronic division of the US' Ford Aerospace & Communications is offering its Chaparral surface-to-air weapons system, which is already in service with Egypt, Morocco and Tunisia. A strong bid is also being made by Switzerland's Oerlikon Buehrle, with its dual-purpose air defence, anti-tank (ADATS) system.

Several companies, including the UK's Marconi Radar, are pursuing a potential \$70 million order for 13 mobile 3D radars. Marconi, in competition with the US' Loral, is also bidding to supply electronic warfare equipment for the F-16 fighter jets that Turkey is to start producing in 1988 (see box). Marconi is offering its Zeus system and Loral its Rapport 3 system.

The air force's requirement for additional transport aircraft has drawn bids from Italy's Aeritalia, which displayed its G222 troop transport at IDEA, and Spain's Construcciones Aeronauticas (CASA), which is offering the CN-235. MBB is trying to sell its C-160 Transall, made with France's Aerospatiale. Twenty Transalls have already been supplied in a special West German aid package. Lockheed is also in the bidding with its C-130.

CASA's bid is valued at \$500 million. The Spanish concern, whose transports are co-produced with Indonesia's Industri

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Prime Minister Turgut Ozal tours IDA 87

Pesawat Terbang Nusantara, is proposing to supply two aircraft to the state-owned Tusas (Turk Ulak Sanayi) aerospace company, followed by kits for co-production of 50 more. The aim would be to achieve 90 per cent local production within two years. The aircraft uses 30-40 per cent US components, including General Electric CT7-7A engines, so it is believed the project would qualify for US foreign military sales (FMS) credits. However, Turkey's main preoccupation in aircraft production is the F-16 project, due to start up in a matter of months.

### Naval advance

The IDEA event is likely to be held again in two years, DIDA chief Erdem said, although it may be held in Izmir rather than Ankara. Another possibility is a naval equipment show, which may be held in Istanbul later in 1987, illustrating the fact that naval shipbuilding is the most advanced of the country's defence industries.

Licensed assembly, ranging from submarines and frigates to fast patrol boats, is taking place at yards in Taskizak and Golcuk, based on designs and components supplied by West German companies — Luerssen for the patrol vessels, Howaldtswerke-Deutsche Werft (HDW) for the submarines, and a grouping of Thyssen-Rheinstahl Technik, Bloehm & Voss and HDW for the frigates. Switzerland's Contraves and the Netherlands' Hollandse Signaal have an interest in the ships' radar and communications systems. Naval equipment manufacturers' interest at IDEA was concentrated on prospects for possible orders for six more submarines and a similar number of patrol boats.

## Aircraft production takes off with F-16

THE first Turkish-built F-16 fighter is scheduled to take to the air for test flights in about five months' time. The jet has been assembled at a production complex at Murted, near Ankara, set up as part of a US-Turkish co-production deal agreed three years ago. The programme — Peace Onyx — entails investment of nearly \$4,200 million over 10 years.

The 2 million-square-metre Murted complex is being built for Tusas Aerospace Industries (TAI), a Turkish-US joint venture established in May 1984. Tusas, the national aircraft corporation, has a 51 per cent stake; General Dynamics, the F-16's producer, has 42 per cent, and General Electric (GE), which makes the aircraft's F110 engine, has 7 per cent.

About 12 parts for the engine are planned to be produced at a factory in Eskisehir, in the central region. In addition, Westinghouse, which makes the F-16's APG68 radar, is negotiating with Sezai Turkes-Feyzi Akkaya (ST-FA) to set up a joint venture to co-produce the radar locally.

The speed with which the programme is proceeding pleases TAI managing director Jerry R Jones, who previously managed the F-16 co-production programme in Europe. "Nobody has ever tried to create an aircraft industry on a wheat field in two-and-a-half years," he says. By the end of 1988, 250 Turkish workers will have been trained in the US; Murted will eventually employ 1,800.

The aim of Peace Onyx is to produce 160 F-16 C/D aircraft at Murted for delivery to General Dynamics. The US company is contracted to supply them to the US government, which has agreed in turn to provide them to Turkey — an arrangement which ensures that none of the aircraft is sold to third parties without Washington's agreement. Starting next January, one F-16 will roll off the line each month, increasing to two a month from 1989 until the programme ends in 1994.

Murted is eventually intended to become the nucleus of a national aircraft industry, with the design capability and capacity to produce aircraft weaponry, including missiles. It will also be able to carry out refit modernisation for a variety of military aircraft.

Present plans call for the production of 213 aft and 180 centre fuselages, and 157 sets of wings. As part of a direct offset programme, 101 aft and 80 centre fuselages, and 69 sets of wings will be produced at Murted for the US

air force's own F-16 procurement programme.

Peace Onyx allows for a massive transfer of advanced aerospace expertise in manufacturing methods and know-how in key areas such as aircraft production accounting, purchase procedures and management information systems. Says Jones: "TAI is not only trying to give Turkey a modern aircraft plant. We aim to become competitive on the international market. We will be on the international scene to sell our components and we have to produce them at low cost to be able to do this."

General Dynamics, GE and Westinghouse in 1984 committed themselves to a 10-year direct offset programme involving the purchase of locally produced parts. General Dynamics agreed to spend \$82 million, GE \$50 million and Westinghouse \$18 million.

In a separate 10-year deal, which included three years' grace, the three also agreed to indirect offset investments. General Dynamics is investing \$800.5 million, GE \$317.5 million and Westinghouse \$152 million. About 15 per cent of this will have been invested by the end of this year.

Key planned offset investments in 1987 include participation in Hilton hotel projects at Ankara, Izmir and Mersin, the Tekirdag thermal power station, a Monsanto project to produce nitrogen membrane separators and a Rockwell plant to make truck brakes.

Technology transfer is also planned for a range of activities, including micro-electronic assemblies, and the purchase of steel core wire and cotton linters. There are plans to help in marketing finished marble, tyres and tubes, boric acid and carpets. In addition, US firms aim to assist the tourist sector in obtaining more business convention and trade show business.

Despite the wide scope of the offset commitment, US participants express confidence in the programme. Says Jones: "General Dynamics is in Turkey with a strong determination to be successful. Projects like the F-16 are not give-away programmes. General Dynamics is a business concern which aims to make a profit in its operations and is not here to lose money. We are trying to find joint ventures in Turkey which will then produce items we can export and we will get a return on our investment. So both sides will profit in the end."

How much of Turkey's planned military procurement will take place according to plan depends on DIDA's continuing efforts to encourage co-operation between the private and dominant state-owned parts of the defence sector.

Optimism within Turkey and the interest of international defence equipment companies has been encouraged by DIDA's terms of reference. These exempt it from

the country's general accounting and bidding laws, allowing wide room for manoeuvre as well as giving manufacturers the guarantee of long-term orders. The next 12 months should provide a firm indication of how successful DIDA is likely to be — and how many projects will ultimately take off.

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recently in Ankara