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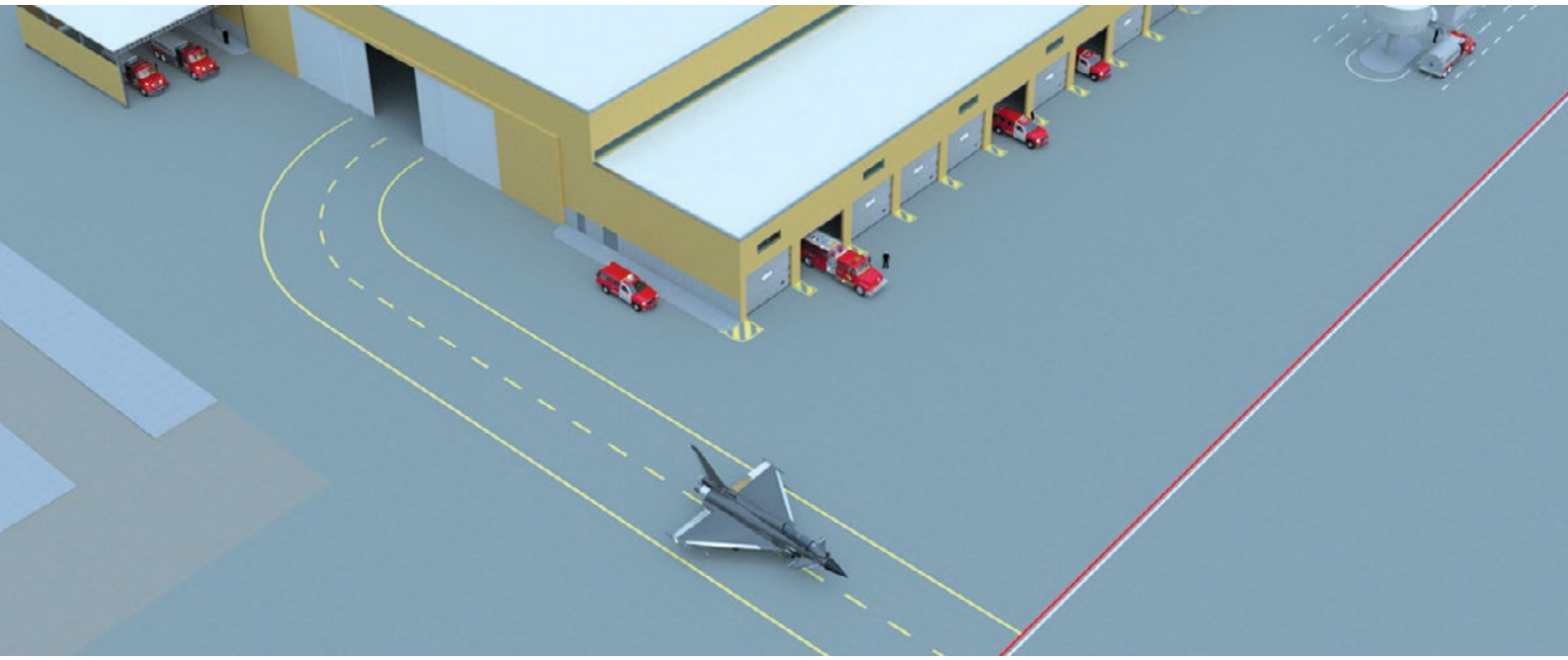
Industrial Engineering

Maintenance hangar for **12 Eurofighter aircraft** Phase II / Works to modernise Moron de la Frontera Air Base (Seville, Spain)

CASSIDIAN / Detailed design and works management **Infrastructures (2010-ongoing)**



The project consists of designing a building which includes a hangar, office facilities and a fire station, along with the refurbishment and enlargement of the warehouse building. The hangar must have sufficient capacity to hold 12 EF-200 Eurofighter aircraft and the necessary facilities to perform maintenance operations on the aircraft. It is sized to allow the parking of aircraft and their movement through the hangar.

The office facilities are divided in such a way so that the programme's management and production control department are located on the top floor and the workshops on the ground floor.

The fire station measures 1,500m^2 and houses a vehicle workshop area, housing units, administrative facilities for the hospital, communications and alarm systems, among other facilities.

The warehouse building is to be enlarged by approximately 2,400m^2. In order to achieve greater storage capacity, a paved area measuring 6,000m^2 has been made available on an adjacent plot, seeking to optimise distribution into the different areas and elements stored.

(Continued overleaf)

CASSIDIAN
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Industrial Engineering

Work phases

- ¬ Detailed design
- ¬ Works management
- ¬ Health and safety coordination

Scope of work

- ¬ Maintenance hangar for 12 EFA-2000 aircraft directly connected with the aircraft apron
- ¬ Fire station. Capacity for 10 fire-fighting vehicles
- ¬ New roadways to improve connections within the base
- ¬ Enlargement and refurbishment of the warehouse, including:
  - · *Enlargement of the logistics warehouse*
  - · *Enlargement and refurbishment of the offices*
  - · *Outdoor supply apron*
  - · *Ground level car park for 240 vehicles*
  - · *Connection roadways*

Technical data

- ¬ Surface areas: Aircraft hangar area 5,496.46m^2 / Offices and workshops 1,316.46 + 1,260.48 = 2,576.94m^2 / Fire-fighting vehicle parking area 1,116.75m^2 / Fire service ancillary building 528.90 + 485.79 = 1,014.69m^2 / Plot development 13,075.57m^2 / New roadways 11,542.50m^2, Supply warehouse building 4,961.55m^2 / Offices in warehouse building 1,484.44m^2 / Outdoor apron 5,952.00m^2 / Connection roadways 6,288.00m^2
- ¬ General foundations made of on-site piling and pile caps
- ¬ Metal structure
- ¬ Non-accessible self-protected deck roof and skylights
- ¬ Lifelines
- ¬ Enclosure made with 80mm-thick sound proofed panels
- ¬ Enclosure footing made of 20cm-thick reinforced concrete
- ¬ Hangar door with four motorised sections measuring 30x9m
- ¬ Sanitation
- ¬ Rainwater and wastewater
- ¬ Supplies
- ¬ Sanitary hot water through solar thermal energy
- ¬ Distribution station
- ¬ Transformer station
- ¬ Low-voltage electricity installation
- ¬ Earthing network
- ¬ Outdoor and indoor lighting
- ¬ Climate control and ventilation
- ¬ Diesel facility
- ¬ Energy management system
- ¬ Communications
- ¬ PA system
- ¬ Fire protection facilities in accordance with NFPA criteria: closed-head water sprinkler system, manual system equipped with 45mm (BIE) water hoses, fire hydrants, self-oscillating water and low-expansion foam monitors, water and foam portable carts, aspiration early detection system, triple infrared (IR3) technology sensor system, indoor sound alarm system and outdoor sight-and-sound alarm system