CASE STUDY

MRO Aeronautical Complex
(Abu Dhabi, UAE)

Client: Abu Dhabi Aircraft Technologies (ADAT)
Facility: Hangar 6, 3 bay, A380 capable heavy maintenance
Size: Hangar floor area of 32,000m^2
Annex Building (offices and workshops etc) 12,000m^2
Status: Completed January 2011.

Aircraft Support Industries completed the design and build contract for the heavy maintenance Hangar 6 project for Abu Dhabi Aircraft Technologies (ADAT). ASI was appointed as the “main contractor” for the project which was delivered on time and within budget. The project was completed and handed over to ADAT in January 2011.

The L-shaped triangular design concept developed by ASI was very different to the arrangement originally envisaged by ADAT but had several advantages:-

- Greater overall number of aircraft combinations – operational flexibility increased
- Hangar Footprint increased from 26,500m2 to 32,000m2 (20% more area)
- Workshops and offices more centrally and effectively located
- Greater surrounding flexibility and access for aircraft movements and parking
- Future expandability allowing the construction of future hangar (H6D).
- Reduced capital cost of construction of the overall project.

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CASE STUDY

Using our highly experienced specialist
Designers ASI focused on developing the design so that maintenance operations can be undertaken efficiently. The distances between the aircraft and the particular workshops serving those parts of the aircraft being maintained were minimised. The location of offices and tool cribs were likewise best located to suit their function. Each hangar bay has a dedicated satellite control room, tool cribs and stores. Goods hoists can accommodate small forklifts and are centrally located in each bay. The cabin interior workshops are located on the first floor, with direct access to the aircraft at mezzanine level in each bay to facilitate good productivity.

The roof structures were designed to accommodate the imposed loads of overhead cranes, teleplatforms and suspended docking systems. The hangar floors have service pits for utilities including mains power, 400Hz, compressed air, mass airflow, preconditioned air, fuel exhaust and water. The pits were located to minimize the extent of cables, pipes and equipment etc on the hangar floor thereby increasing maintenance efficiency whilst improving occupational health and safety for ADAT's

Maintenance Staff.
The air-conditioning system within the hangar carefully designed to minimise operational cost. Vertical lift doors were selected to provide a superior seal against dust and sand whilst providing a good level on natural light and thermal insulation. The fire detection and protection system was designed by ASI's experts to comply with the relevant codes and local authority requirements.