SaM146

Propulsion system for new small-jet generation

Partnership: Snecma Moteurs (France), Avio (Italy).

The main airlines that have signed contracts for the purchase of the SSJ-100 aircraft powered by the SaM146: Aeroflot, Armavia, Asset Management Advisor, Avialeasing, Finance Leasing, ItAli Airlines, Superjet International and Kartika Airlines.

The SaM146 programme

The SaM146 is a turbofan engine family that Powerjet (a jointly owned company between Snecma Moteurs, France 50% and NPO Saturn, Russia 50%), conceived to cover a thrust range from 14,000 lb up to 17,500 lb for the new twin-engine regional jet family, Sukhoi SSJ-100.

The regional jet is scheduled to be certified by the end of 2010.

The thrust levels the engine will be able to provide are:

- maximum thrust sea level 15,400-17,500 lb
- take-off (NTO/SLS/ISA) 13,500-15,400 lb

Avio for the SaM146

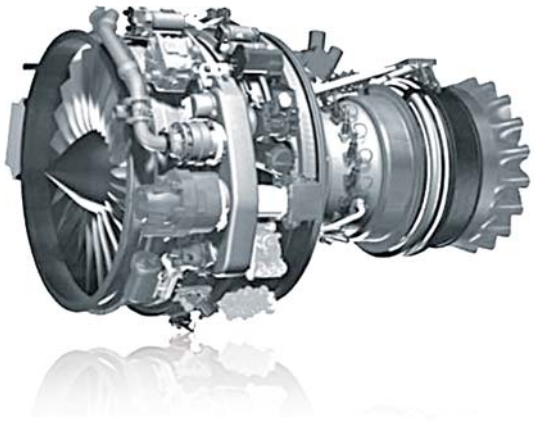
Avio is a partner in the SaM146 programme and is responsible for the design and manufacture of the:

- complete cinematic geartrain of the accessory gearbox
- accessory gearbox and horizontal drive shaft;
- transfer gearbox, radial drive shaft and inlet gearbox
- combustion chamber, including liners, flanges and inner case

Accessory Gearbox (AGB)

The AGB comprises the:

- input gearbox, a gearbox for the transmission of motion, which transfers torque from the HP engine shaft to the accessory gearbox
- vertical prop shaft and horizontal shaft linking the input gearbox, the gearbox for the transmission of motion and the accessory gearbox
- accessory gearbox, fitted to the static structure housing the fan, activates 7 accessories of the engine and aircraft



Combustion Chamber (CC)

The combustion chamber comprises:

Module 8: combustion casing:

The casing's primary purpose is to help to ensure a correct and uniform distribution of air to the various inlet ports in the flame tube, and is responsible for protecting the flame tube against damage.

The characteristic of the pressurised box is its one-piece construction (high-pressure turbine and combustor casing).

Module 9: combustor, consisting of:

1) flame tube, made up of:

- inner/outer liner
- combustor dome and relative thermal shield
- external conveyors (cowls) for the injection system and primary combustion zone
- combustor/casing coupling flange

2) 18 ducts (housing as many injectors) consisting of swirlers for effective fuel atomisation and mixing.

AGB accessories

Engine accessories:

- fuel pump
- lubrication unit
- starter
- permanent magnet alternator
- N2 speed sensor

Aircraft accessories:

- integrated drive generator
- hydraulic pump

Avio
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