

46ESS-79: SAFRAN gas turbine engines and technology evolution

CAMILLE HAMDAN

Safran is a French multinational company that develops aircraft engines, aerospace components and rocket engines. It leads innovation in commercial, military and space engines. Several partnerships in the past years occurred with other aero-engine manufacturers for mutual benefits. For several decades, the engine overall behaviour of the gas turbine stayed as it is: compression, combustion and expansion of the air to gain thrust. However, with higher fuels costs, tougher environmental regulations, and changing geopolitical context, constant innovation is compulsory to meet the customers demand. It is especially needed when the aim of the aircraft is different. To achieve that, components can be upgraded or new ones can be implemented into the engine. With an important number of developed engines, it was decided to focus mainly on the transition from the CFM56 to the LEAP for commercial engines and from the M53 to M88 in the military domain.