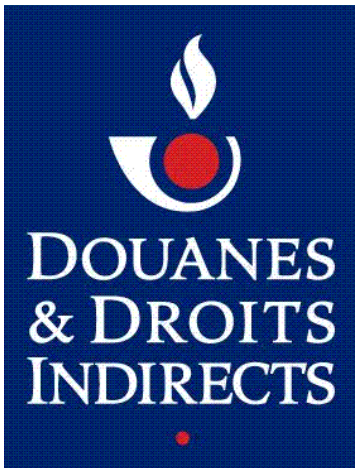




**MINISTÈRE
DE L'ÉCONOMIE, DE L'INDUSTRIE
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Direction Générale des Douanes et Droits Indirects

Annales des épreuves



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**CONCOURS EXTERNE ET INTERNE
POUR L'EMPLOI DE CONTRÔLEUR DES DOUANES ET DROITS INDIRECTS**

BRANCHE DE LA SURVEILLANCE

SPÉCIALITÉ « SURVEILLANCE ET MAINTENANCE AÉRONAUTIQUE : SYSTÈME CELLULE AVION »

DES 20, 21 ET 22 MARS 2007

ÉPREUVE ÉCRITE D'ADMISSIBILITÉ N°4

(DURÉE : 1 HEURE - COEFFICIENT 2)

**TRADUCTION SANS DICTIONNAIRE D'UN TEXTE TECHNIQUE
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SECONDARY POWER

The commercial aircraft applications requiring « secondary power » comprise pressurisation systems, galley, anti-ice systems, flight controls and landing gear, fuel pumps, lights avionics, and of course the main engine starting. The suppliers of this power are APU, main engines(once they are running), ram air turbine, when the aircraft is in cruise, and batteries. Power from these sources is distributed various forms which include mechanical, hydraulic or electrical. This power is subsequently transformed into the specific mode required by generators and motors, pumps, compressors, fans ,actuators and turbines.

Apart from the ground, when the engines are not running, the normal way of supplying secondary power is by extracting it from the powerplants during flight by bleeding compressors at specific tappings ports;compressor bleed from the main engines is an important source of secondary power; the main functions of the bleed are to ensure pressurization, ventilation, and air conditioning. Increased requirements are envisaged for secondary power in the very high capacity aircraft, such as the recently launched A380.To match these needs, advances have already been made, particularly with regard to turbofan engine development, which will ensure that the needs are fully satisfied.

Several examples give an idea of the diversity of services which are operated by secondary power, as well as illustrating the requirements of an engine to produce thrust .