ABSTRACT

FLEET FUEL ALLOCATION

The present application discloses a computer implemented method (4090) of determining a fleetwide fuel allocation for a plurality of missions carried out by a plurality of aircraft, the plurality of missions being supplied with fuel from a fuel source comprising an amount of a default fuel and an amount of a non-default fuel, the fuel allocation indicating the amount of the non-default fuel and the default fuel to be allocated to each of the plurality of missions, the default fuel and the non-default fuel having one or more fuel characteristics different from each other. The method comprises the following steps: obtaining (4092) an initial proposed fuel allocation for each of the plurality of missions; performing (4094) a fleet-wide optimisation in which the proposed fuel allocation of each of the plurality of missions is modified within the constraints of the total available default and/or non-default fuel from the fuel source to minimise a sum of per-mission nvPM impact parameters over all of the plurality of missions, each of the plurality of missions being associated with a respective per-mission nvPM impact parameter determined according to a fuel usage for that mission, the fuel usage defining how the fuel allocation for the respective mission is to be used during that mission; and determining (4096) the fleetwide fuel allocation for the plurality of missions based on the fleet-wide optimisation. Also disclosed is a method (4100) of loading fuel onto a plurality of aircraft, a non-transitory computer readable medium and a fleetwide fuel allocation determination system (5100).

[Figure 37]