

Apart from these conceptual shortcomings of certification, there is a built-in limitation on the degree of noise reduction which could be attained through this means. This limitation arises from the nature of the air transport system itself under which any given type of aircraft has to be designed to fly into all of the airports in the system.

Transport aircraft cannot be produced in different models for different airports. They must be standardized at an optimum design for all airports. This means that any certification noise limit for a given type of future transport aircraft would have to be set at a single specific level of noise output, expressed in some measurable and widely accepted unit. Moreover, from the viewpoint of safety alone, that unit would have to be compatible on a national basis with all other requirements, so that to the maximum extent possible it would be a uniform requirement.

In determining what single noise value to prescribe, the Administrator or the Secretary would have to select an optimum noise level, one which would be acceptable to airport neighborhoods at most airports or the "average" airport. He could not adopt as the noise value one which would satisfy the complaints at the most noise-sensitive airports.

To require all aircraft of a given type to be designed solely to satisfy a few noise-critical localities would be to put the cart before the horse. In short, freezing the design of a new aircraft type on the basis of only the most noise-sensitive airports would impose inequitable and unjustified penalties on the total air transport system. Yet the dilemma is that it is the noise-sensitive airports—which are comparatively few in number—which constitute the nub of the aircraft noise problem in the United States.

Since an optimum noise level would not satisfy the noise complaints of the sensitive airports, it is apparent that, in a very fundamental sense, the so-called noise problem cannot be resolved through mere certification for noise. The limitation is inherent in the system.

At the same time, the adoption of an optimum noise limit would impose a penalty on every aircraft operating at every airport regardless of whether there is a serious noise problem at a given airport. Normally this would be a wasteful approach to noise abatement since most airports do not have a serious noise problem.

Moreover, the penalties imposed on the aircraft by these design limitations might ultimately be reflected in degraded air transport service or a higher cost of air transportation to the public or both. The question then becomes whether noise certification is really justifiable as a matter of policy if it penalizes the entire airport and air transport system while not satisfying the communities with the most serious noise problem. This is a very difficult question of regulatory policy.

Added to this difficulty is the fact that U.S.-manufactured aircraft are not designed for the U.S. market alone. They are sold worldwide for air transport operations into more than 100 countries. Just as it is impractical to produce one transport aircraft type for operation into noise-sensitive airports and another one for nonsensitive communities, it is also not feasible to produce one version of an aircraft for U.S. operations and a different one for operations worldwide.

In these circumstances, for the United States to freeze the design of U.S.-made aircraft in the interest of noise reduction would either