

Cfd Analysis Of Fan Aeroacoustics Comparative Studies

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CFD-ANALYSIS OF FAN AEROACOUSTICS -COMPARATIVE STUDIES

The need of aeroacoustically high efficient fans requires more detailed investigations of three dimensional effects and separated flow analysis. Comprehensive studies and code validation for fans have shown, that further development - especially for the influence of sweep - is necessary.

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In this approach the computational domain is split into different regions, such that the governing acoustic or flow field can be solved with different equations and numerical techniques. This would involve using two different numerical solvers, first a dedicated Computational fluid dynamics (CFD) tool and secondly an acoustic solver. The flow field is then used to calculate the acoustical sources.

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