

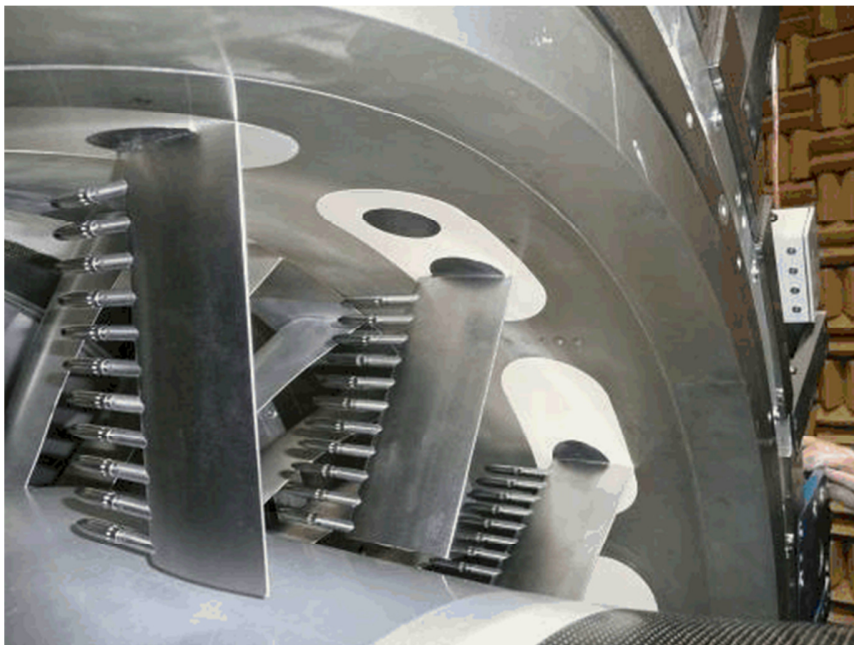
G.R.A.S. Sound & Vibration A/S

Microphones for Turbine radial mode detection

GRAS has developed a new combination of a very short preamplifier, together with a 1/4" externally polarized microphone and nosecone for measurements inside fans of jet-turbines. The preamplifier is only xx mm long with an integrated 4 pin Lemo connector for easy connection. The nosecone is aerodynamically shaped for measurements in high speed windflow situations.



The combination of the preamplifier, microphone and nosecone have been used in a 180 channel rotating microphone array in the AneCom UFFA (Universal Fan Facility for Acoustic) [1].



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In combination with a wall mounted microphone array consisting of the same type of microphones, but without the nosecone, the setup enables detailed and accurate investigation of Radial acoustic modes within in the bypass duct and further downstream in the nozzle equivalent plane.



[1]: Ulf Tapken et al., "A New Modular Fan Rig Noise Test and Radial Mode Detection Capability", 17th AIAA/CEAS Aeroacoustics Conference (32nd AIAA Aeroacoustics Conference) 05 - 08 June 2011, Portland, Oregon