

Research On Jet Noise Of Mixers Configuration For Mixing Exhaust Nozzle

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In order to reveal the distribution of frequency spectrum and directivity for the mixing exhaust nozzle, Tam & Auriault's jet noise prediction is conducted for splitter, base lobed and semicircle cut lobed mixer exhaust nozzle. The result shows that jet noise possesses obvious direction. Compared with splitter mixer, the reduced effect of jet noise with lobed mixer is better. Lobed mixer which have better ability of low-frequency noise reduction and the high-frequency noise increase by contrast with splitter mixer. The reduced effect of jet noise with Semicircle cut lobed mixer is better than base lobed mixer. The overall sound pressure level value of splitter mixer is less than that of lobe mixing exhaust nozzle at the directional angle smaller than 83° in this paper.

Key Words: *Mixing exhaust nozzle, Jet noise, Splitter mixer, Lobed mixer, Semicircle cut lobed mixer.*