

عنوان مقاله:

Research and Development on Transonic Compressor of High Pressure Ratio Turbocharger for Vehicle Engines

محل انتشار:

ششمین همایش موتورهای درونسوز (سال: 1388)

تعداد صفحات اصل مقاله: 6

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خلاصه مقاله:

The pressure ratio requirements for a turbocharger centrifugal compressor increase with IC engine power density. High pressure ratio causes a transonic flow field at the impeller inducer. Transonic flow narrows the stable flow range and deteriorates stage efficiency. In this work, an advanced high pressure ratio transonic compressor was designed. The experimental results show that the maximum pressure ratio of this turbocharger is about 4.0, the maximum efficiency is above 80% and the stable flow range at designed rotating speed is up to 34%. A turbocharger with this transonic compressor has been in mass production for vehicle engines.

کلمات کلیدی:

Turbocharger, IC engine, Compressor

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