Experimental investigation of combustion instabilities has been and is still an important target of scientific research. Combustion instabilities can cause serious damage to combustors. Especially swirl-stabilized flames are prone to combustion instabilities.

Experimental Investigation for Enhanced Control of Rotating Unsteady Flow Instabilities in an Unshrouded Centrifugal Turbine

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Rotating Instabilities in an Axial Compressor Originating from Throat Instabilities

In the present paper the experimental investigations will be discussed. Combustion instabilities have been analyzed by considering untreated cases in a swirl generator. The amplitude increases strongly with the equivalence ratio.

Numerical and experimental investigation of the effect of temperature on flow boiling instabilities in a silicon heat sink consisting of 40 parallel microchannels. The inlet and outlet of a central group of channels and at the midpoint between the groups were investigated. The high accuracy 2-dimensional LDV results allow investigating reverse flow magnitude and both Reynolds normal and shear stresses. The method of the HW anemometer allows analyzing the amplification process of flow oscillations induced by instability mechanisms.

Experimental and computational investigation of flow loop instabilities in gas/liquid two-phase flow systems. Two-phase flow instabilities, both static and dynamic, are commonplace in closed two-phase loops. For two-phase flow systems, several instabilities can occur, including density wave oscillation (DWO), pressure drop oscillation (PDO), and parallel channel instability (PCI).

Experimental investigation on two-phase flow instabilities in a single channel, forced convection, open loop, up-flow system has been investigated. The two-phase flow instabilities in a single channel, forced convection, open loop, up-flow system have been investigated. The input, inlet liquid temperature and upstream compressible volume on two-phase flow instabilities have been investigated.

Experimental and analytical investigation of flow loop instabilities in a vertical plate fin and tube heat exchanger. Two-phase flow instabilities, both static and dynamic, are commonplace in closed two-phase loops. For two-phase flow systems, several instabilities can occur, including density wave oscillation (DWO), pressure drop oscillation (PDO), and parallel channel instability (PCI).

Mallock and Couette did experimental investigations for measuring the fluid viscosity. Mallock (1889) proposed that flow is unstable when the angular velocity of the inner cylinder is faster than the outer cylinder. This work is an extension of the previous study of flow boiling instabilities in a silicon heat sink consisting of 40 parallel microchannels. The inlet and outlet of a central group of channels and at the midpoint between the groups were investigated. The inlet, half way along the channel (midpoint) and outlet of a central group of channels and at the midpoint between the groups were used to measure wall temperature fluctuations at the inlet, half way along the channel (midpoint)

EXPERIMENTAL INVESTIGATION OF NON-UNIFORM HEATING ON FLOW BOILING INSTABILITIES IN A MICROCHANNELS BASED HEAT SINK D..sun@man-es.com. 2005 Edinburgh, UK

Experimental investigation on flow instabilities of ultra sonic atomisation sprays. Flow instability denotes the transition from one flow state to another in the presence of external disturbances, such as perturbations in pressure, temperature, or velocity. Flow instability exists widely in the boiler, steam generator, heat exchanger, water reactors, and other devices.

Experimental Investigation Of Flow Instabilities And