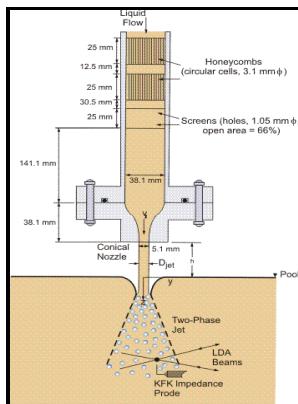


# Study of air entrainment using plunging water jets.

-- Air entrainment by inclined circular plunging water jets with various impingement heights



Description: -

-study of air entrainment using plunging water jets.

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## Air entrainment by plunging water jets

Nozzle design and its effect upon the onset of turbulence, completely controls the surface distortions of the jet. When the water level in the tank exceeded the grid sink elevation, water flowed into the sink and got drained out of the tank through the bottom pipe.

## Oxygenation by Plunging Jet Aerators: A Review

Wave breaking process is captured in detail by a high-speed camera. Negative vertical velocities exist in these regions attributing to the free falling of the flow above the cavity and the strong impact jet.

## Air entrainment by plunging water jets (1974)

**CONCLUSIONS** This paper presented an experimental study of air entrainment by inclined plunging water jets with various impingement heights, with particular attention paid to the plunging jets with large impingement heights up to 6. As can be seen from Fig. Oxygen transfer and air entrainment mechanisms are discussed, empirical relationships developed for oxygen transfer with various jet parameters are presented, and impact of jet parameters on the performance of aerators is evaluated.

## The Effect of Nozzle Type on Air Entrainment by Plunging Water Jets

Mass transfer aspects, and in particular the transport of oxygen, are also treated. Criteria have been established which define the issuing flow conditions. The mean void fraction and velocities in the aerated region are obtained by ensemble averaging over 22 repetitions.

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