

Title (en)  
SURFACE AERATION IMPELLERS

Title (de)  
LAUFRÜDER FÜR EINE OBERFLÄCHENBELÜFTUNG

Title (fr)  
ROTORS D'AERATION DE SURFACE

Publication  
**EP 1581745 A2 20051005 (EN)**

Application  
**EP 02802924 A 20020916**

Priority  
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Abstract (en)  
[origin: CA2499051A1] A surface aeration impeller for use in a liquid filled tank. The impeller is rotatable about an axis perpendicular to the static liquid surface. The impeller has a plurality of blades mounted on the underside of a disc or disc-like surface. Each blade has a multi-faceted or curved geometry ranging from vertical at the point of attachment to the disc to partially inclined at the bottom. The blades are spaced circumferentially about the axis and are disposed at acute angles to radial lines from the axis of rotation of the impeller. The lower portions of the blades, which are inclined but non-vertical, are positioned at or below the static liquid surface. When the impeller is rotated, the lower portion pumps the liquid up onto the vertical portion of the blades where the liquid is discharged into a spray umbrella in a direction upwardly and outwardly away from the impeller. The design of the invention produces substantially higher oxygen transfer efficiency and overall liquid pumping rates than prior art designs and is particularly useful in the aeration of sewage and other wastewater.

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