

Title (en)  
CONTINUOUS FLOW MACHINE HAVING BLADED DIFFUSER

Title (de)  
STRÖMUNGSMASCHINE MIT BESCHAUFELTEM DIFFUSOR

Title (fr)  
TURBOMACHINE À DIFFUSEUR À AUBES

Publication  
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Application  
**EP 16828750 A 20161229**

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Abstract (en)  
[origin: WO2017129342A1] The invention relates to a continuous flow machine (2) having a rotor (4) that is mounted such that it can rotate about a rotational axis (6), and a diffuser (24) having a plurality of diffuser blades (28). So that the continuous flow machine (2) can be cost-effectively operated, according to the invention, at least one of the diffuser blades (28) is arranged at a first distance (32) to the rotational axis (6) and at last another of the diffuser blades (28) is arranged at a second distance (34) to the rotational axis (6). Advantageously, the low-solidity diffuser (24) has an even total number of diffuser blades (28), wherein half of the diffuser blades (28) are arranged at a first distance (32) and the second half of the diffuser blades (28) are arranged at a second distance (34) in relation to the rotational axis (6). The diffuser-dependent excitation of rotor vibrations and the excitation amplitude thereof is reduced using the assembly according to the invention, substantially reducing the risk of excitations harmonic with the rotational speed. The risk of rotor damage is also reduced.

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