

Title (en)

Multi-bladed propeller and shaft assembly.

Title (de)

Montage einer Welle und eines Propellers mit mehreren Flügeln.

Title (fr)

Assemblage d'un arbre et d'une hélice à plusieurs pales.

Publication

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Application

EP 85306384 A 19850909

Priority

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- GB 8503934 A 19850215

Abstract (en)

A multi-bladed propeller and shaft assembly is provided in which air can be fed to the propeller blades to reduce the effects of cavitation. A shaft (10) leads to a multi-bladed propeller (15) and carries a sleeve (18) formed with inlet passages (20) and axial and radial passages (21, 24) leading to the respective blades (17). A slip ring (45) supported in an anti-rotation device (62) allows the shaft sleeve (18) to rotate within axially spaced bearings (46, 47) of the slip ring (45). Axially spaced air seals (49, 50) together define with the body (48) of the slip ring an annulus (51) within which inlet passages (20) rotate. Each seal (49 or 50) is formed as a multiplicity of arcuate segments (80) resiliently biased towards the sleeve (18) and having movably sealed end face portions (81, 82) to maintain pressure tightness. The body (48) further has a radial flow passage (57) for admission of air under pressure to the annular space (57) and a flexible fluid connector (56) connects the radial flow passage (57) to an air supply line (54) leading from the hull structure. The present shaft delivery slip ring avoids the need to feed air down the whole length of the propeller shaft or to feed air into the hub through a slip ring making wiping contact with the hub, which is structurally more complex.

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