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(54) Submersible multistage pump with impellers having diverging shrouds

(57) A centrifugal pump may include plural pump stages (300), each comprising an impeller assembly (304), a stationary disc assembly (306) and a diffuser assembly (302), all disposed about an impeller shaft (102) that is driven by a motor. The impeller assembly (304) may include upper and lower impeller shrouds (338,334) having facing surfaces, and a plurality of im-

PELLER VANES (344) EXTENDING BETWEEN THE SURFACES OF THE SHROUDS (338,334) TO DEFINE A PLURALITY OF FLOW PASSAGES (346) FOR LIQUID TO FLOW OUTWARDLY FROM A CENTRAL HUB (340) OF THE IMPELLER ASSEMBLY (304). TO ASSIST IN PRESSURE RECOVERY OF THE PUMP, THE DISTANCE BETWEEN THE SURFACES OF THE IMPELLER SHROUDS (338,334) MAY INCREASE AS THE RADIAL DISTANCE FROM THE CENTRAL HUB (340) INCREASES.

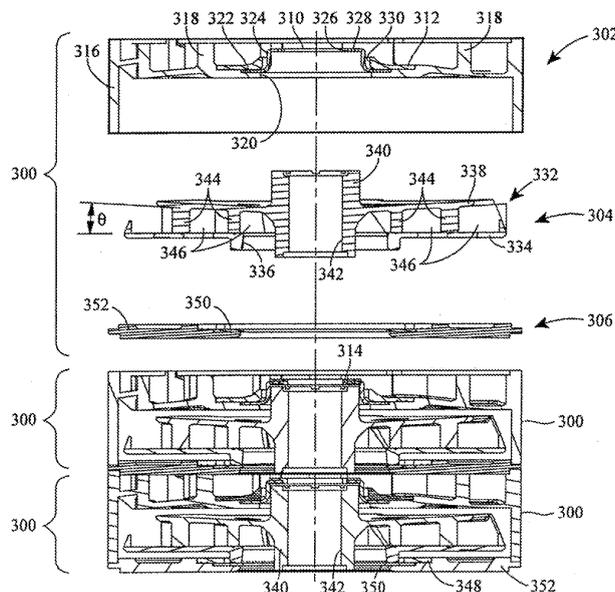


FIG. 8

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EUROPEAN SEARCH REPORT

Application Number
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			TECHNICAL FIELDS SEARCHED (IPC)
			F04D
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 12 July 2010	Examiner de Martino, Marcello
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

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EPC FORM 1503 03.82 (P/4C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
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12-07-2010

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