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(54) **Turbine vibration reduction system**

(57) A turbine vibration reduction system (10) includes a nozzle (14), a bucket (18) in operable communication with the nozzle (14), and a structure (16) having

at least one opening (22) configured to inject fluid into flow traveling past the nozzle (14) and the bucket (18) to disrupt formation of a vortex.

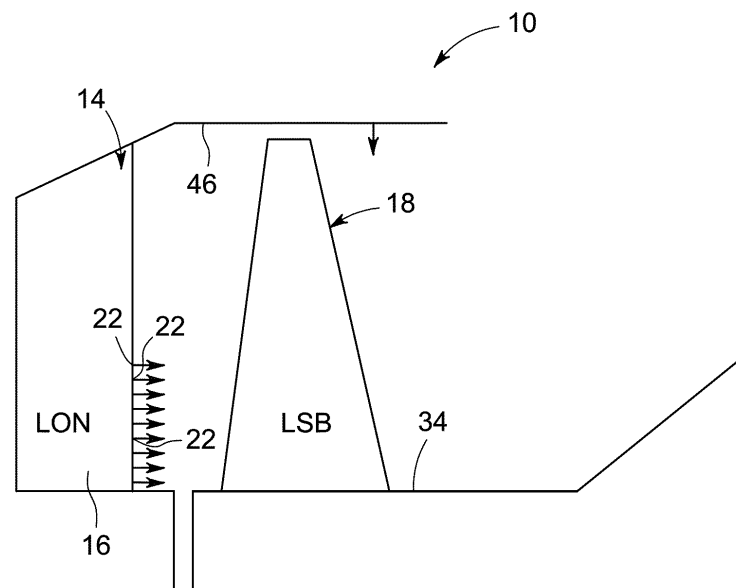


FIG. 1



EUROPEAN SEARCH REPORT

Application Number
EP 13 16 3840

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 4 967 550 A (ACTON ELIZABETH [GB] ET AL) 6 November 1990 (1990-11-06) * column 1, lines 6-10 * * column 7, lines 10-27 * * column 12, line 29 - column 13, line 36 * * column 32, line 69 - column 33, line 25; figure 12 *	1,2,4-10	INV. F01D25/04 F01D25/06
X	US 2002/041805 A1 (KUROKAWA JUNICHI [JP] ET AL) 11 April 2002 (2002-04-11) * paragraphs [0003], [0014], [0021], [0024], [0025], [0164], [0176], [0180], [0190], [0198], [0199], [0215]; figures 1, 8,9,11,22, 27 *	1-3, 11-14	
X	WO 2006/060010 A1 (UNITED TECHNOLOGIES CORP [US]; SUCIU GABRIEL L [US]; NORRIS JAMES W [U] 8 June 2006 (2006-06-08) * page 3, line 13 - page 6, line 5; claims 1-3, 6, 7; figures 1-3 *	1,2,4-8, 11,12	
			TECHNICAL FIELDS SEARCHED (IPC)
			F01D
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 21 November 2013	Examiner Balice, Marco
<p>CATEGORY OF CITED DOCUMENTS</p> <p>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</p> <p>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</p>			

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EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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21-11-2013

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