

11-01-02 10823.0022.PZUS00 APPROV

10/31/02 JC944 U.S. PTO

PROVISIONAL APPLICATION COVER SHEET
 This is a request for filing a PROVISIONAL APPLICATION under 37 CFR 1.53 (c)

Docket Number	10823.0022.PZUS00	Type a plus sign (+) inside this box →	+
---------------	-------------------	--	---

INVENTOR(s)/APPLICANT(s)			
LAST NAME	FIRST NAME	MIDDLE INITIAL	RESIDENCE (CITY AND EITHER STATE OR FOREIGN COUNTRY)
Sheeran	Kent	A.	St. Louis, MO
Rassoolkhani	Payman		St. Louis, MO
Michaels	Paul		St. Louis, MO

TITLE OF THE INVENTION (280 characters max)
 Segmented Stator With Improved Handling and Winding Characteristics and Method of Winding the Same

CORRESPONDENCE ADDRESS
 Howrey Simon Arnold & White, LLP
 750 Bering Drive
 Houston, Texas 77057-2198
 USA

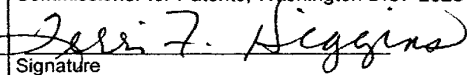
ENCLOSED APPLICATION PARTS (check all that apply)

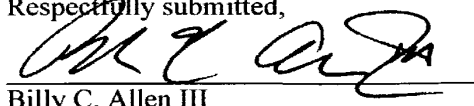
<input checked="" type="checkbox"/> Specification	Number of Pages <u>25</u>	<input type="checkbox"/> Small Entity Statement
<input checked="" type="checkbox"/> Drawing(s)	Number of Sheets <u>9</u>	<input type="checkbox"/> Other (specify) _____

METHOD OF PAYMENT (check one)

<input type="checkbox"/> A check or money order is enclosed to cover the Provisional filing fees.	PROVISIONAL FILING FEE AMOUNT	\$150
<input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge filing fees and credit Deposit Account Number: <u>01-2508/10823.0022.PZUS00</u> should any fees be missing or deficient.		
<input type="checkbox"/> Pursuant to 37 CFR 1.53(g) this provisional application is being filed without a filing fee. Please send the "Notice to File Missing Parts" form pursuant to 37 CFR 1.53(g).		

The invention was made by an agency of the United States Government or under a contract with an agency of the United States Government.
 No.
 Yes, the name of the U.S. Government agency and the Government contract number are: _____

CERTIFICATE OF EXPRESS MAILING
 NUMBER EL 831851985 US
 DATE OF DEPOSIT October 31, 2002
 I hereby certify that this paper or fee is being deposited with the United States Postal Service "EXPRESS MAIL POST OFFICE TO ADDRESSEE" service under 37 C.F.R. 1.10 on the date indicated above and is addressed to: Box Provisional Patent Application, Commissioner for Patents, Washington D.C. 20231.

 Signature

Respectfully submitted,

 Billy C. Allen III
 Reg. No. 46,147
 Howrey Simon Arnold & White, LLP
 750 Bering Drive
 Houston, TX 77057-2198
 (713) 787-1400
 Date: 10/31/02

H: 505278(@TV\$01!.DOC)



750 BERING DRIVE
HOUSTON, TX 77057-2198
PHONE 713.787.1400
FAX 713.787.1440
A LIMITED LIABILITY PARTNERSHIP

October 31, 2002

FILE: 10823.0022.PZUS00

<p>CERTIFICATE OF EXPRESS MAILING</p> <p>NUMBER EL 831851985 US</p> <p>DATE OF DEPOSIT October 31, 2002</p> <p>I hereby certify that this paper or fee is being deposited with the United States Postal Service "EXPRESS MAIL POST OFFICE TO ADDRESSEE" service under 37 C.F.R. 1.10 on the date indicated above and is addressed to: Box Provisional Patent Application, Commissioner for Patents, Washington, DC 20231.</p> <p style="text-align: center;"><i>Teri F. Higgins</i></p> <p style="text-align: center;">Signature</p>
--

BOX PROVISIONAL PATENT APPLICATION

Commissioner for Patents
Washington, DC 20231

RE: *Your Ref. E-2397; U.S. Provisional Patent Application Entitled "Segmented Stator With Improved Handling and Winding Characteristics and Method of Winding the Same" – Kent A. Sheeran, et al.*

Sir:

Transmitted herewith for filing is a provisional application coversheet, a 25-page provisional patent specification including 2 claims and an abstract. Also included are Figures 1-7 on 9 sheets. The specification and drawings constitute the application of Kent A. Sheeran, Payman Rassoolkhani and Paul Michaels for the captioned invention. Applicants reserve the right to add inventors at a later stage.

Pursuant to 37 C.F.R. § 1.53(b)(2) and (d), the Applicants request the Patent and Trademark Office to accept this application and accord a serial number and filing date as of the date this application is deposited with the U.S. Postal Service for Express Mail.

The Commissioner is authorized to charge the fee of **\$150.00** to Deposit Account No. 01-2508/10823.0022.PZUS00. Should any additional fees under 37 C.F.R. §§ 1.16 to 1.21 be



Commissioner for Patents
October 31, 2002
Page 2

required for any reason relating to the enclosed materials, the Commissioner is authorized to deduct said fees from Deposit Account No. 01-2508/**10823.0022.PZUS00**.

Please date stamp and return the enclosed postcard to evidence receipt of this application.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Billy C. Allen III'. The signature is fluid and cursive, with a long, sweeping underline that extends to the right.

Billy C. Allen III
Registration No. 46,147

RJM/tfh
Encl.

10823.0022.PZUS00/EMCA

APPLICATION FOR UNITED STATES LETTERS PATENT

For

**SEGMENTED STATOR WITH IMPROVED HANDLING AND WINDING
CHARACTERISTICS AND METHOD OF WINDING THE SAME**

By

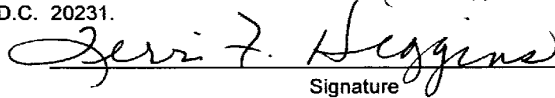
**Kent A. Sheeran
Payman Rassoolkhani
Paul Michaels**

EXPRESS MAIL MAILING LABEL

NUMBER: EL 831851985 US

DATE OF DEPOSIT October 31, 2002

I hereby certify that this paper or fee is being deposited with the United States Postal Service "EXPRESS MAIL POST OFFICE TO ADDRESSEE" service under 37 C.F.R. 1.10 on the date indicated above and is addressed to: Box Provisional Patent Application, Commissioner for Patents, Washington D.C. 20231.



Signature

BACKGROUND OF THE INVENTION

The present disclosure relates to stator assemblies for electromagnetic machines and, more particularly, to segmented stator assemblies in which the stator is formed from a number of discrete stator stacks or segments with each stator segment comprising a yoke portion, a tooth portion and a coil winding wound about the tooth.

While the use of distinct and separately wound stator segments provides some benefits, it potentially increases the complexity and costs of manufacturing operations. For example, in many segmented stators the stator segments are wound individually and one or more manufacturing step are required to appropriately interconnect all the individual stator coils to form the phase windings. In such conventional stator assemblies, because the distinct and separately-wound stator segments are not coupled together during the winding operation, some retention structure is required to hold the stator segments together when they are formed into an annular stator. The requirements for the coil interconnecting step, the materials and equipment required for the same, and the need for a secondary retention mechanism often require a significant capital investment in manufacturing equipment to manufacture such machines and significant material cost adds to the component costs of machines made in according to such processes.

In an effort to overcome some of the limitations associated with stator assemblies having separately-wound stator segments as described above, approaches were developed wherein magnetically-interconnected stator segments were physically coupled to one another prior to the winding operation such that that the coils could be formed in an interconnected manner. In known conventional approaches, the stator segments were

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.