

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
6 April 2006 (06.04.2006)

PCT

(10) International Publication Number
WO 2006/036257 A1

(51) International Patent Classification : **F04B 37/08**,
37/02

Holden, MA 01520 (US). **THOMPSON, Brian** [US/US];
2 Katies Way, Lakeville, MA 02347 (US).

(21) International Application Number:
PCT/US2005/024715

(74) Agents: **SMITH, James, M.** et al.; Hamilton, Brook,
Smith & Reynolds, P.C., 530 Virginia Road, P.O. Box
9133, Concord, MA 01742-9133 (US).

(22) International Filing Date: 11 July 2005 (11.07.2005)

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA,
MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ,
OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL,
SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US (patent),
UZ, VC, VN, YU, ZA, ZM, ZW.

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
10/948,955 24 September 2004 (24.09.2004) US

(63) Related by continuation (CON) or continuation-in-part
(CIP) to earlier application:
US 10/948,955 (CON)
Filed on 24 September 2004 (24.09.2004)

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,
FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT,
RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA,
GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(71) Applicant (for all designated States except US): **HELIX
TECHNOLOGY CORPORATION** [US/US]; Mansfield
Corporate Center, Nine Hampshire Street, Mansfield, MA
02048-9171 (US).

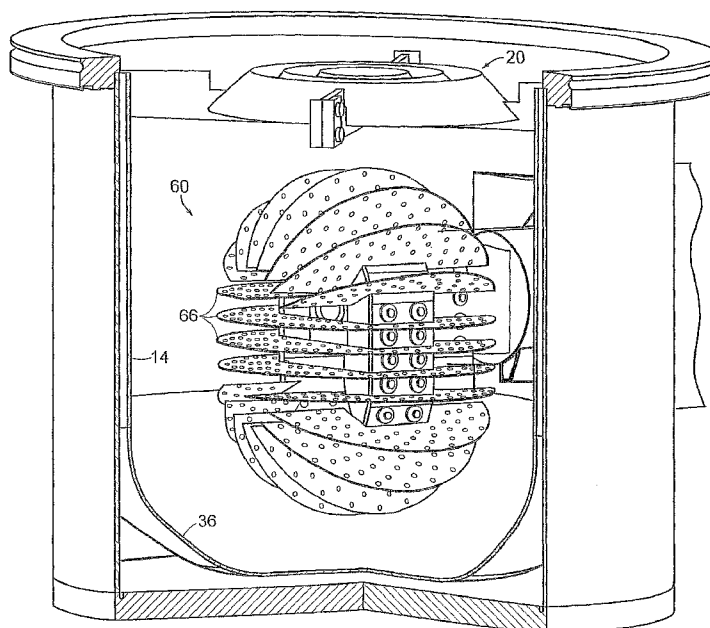
(72) Inventors; and

(75) Inventors/Applicants (for US only): **BARTLETT, Allen,
J.** [US/US]; One Stallbrook Road, Milford, MA 01757
(US). **NORDBORG, John** [US/US]; 10 Sumac Circle,

Published:
— with international search report

[Continued on next page]

(54) Title: HIGH CONDUCTANCE CRYOPUMP FOR TYPE III GAS PUMPING



(57) Abstract: A cryopump provides for high pumping speed of Type III gases. An open configuration of a frontal array provides high conductance of gases into a radiation shield which is shaped to focus gases toward a second stage array. The second stage array has an open configuration of baffles coated with adsorbent. Substantially all of the adsorbent has a direct line of sight to the radiation shield or to the opening in the radiation shield, and substantially all of the baffles are coated with adsorbent. In one form, the second stage cryopump array comprises an array of discs fanned to define a generally ball shaped envelope.

WO 2006/036257 A1



For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.