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(21) International Application Number: PCT/US99/13796 (22) International Filing Date: 18 June 1999 (18.06.99) (30) Priority Data: 09/102,123 19 June 1998 (19.06.98) US (71) Applicant: GENERAL ELECTRIC COMPANY [US/US]; 1 River Road, Schenectady, NY 12345 (US). (72) Inventor: SABAN, Daniel, Michael; 1220 West Foster Park- way, Fort Wayne, IN 46807 (US). (74) Agents: CHASKIN, Jay, L. et al.; General Electric Company, 3135 Easton Turnpike W3C, Fairfield, CT 06431 (US).		(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published <i>With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>



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(54) Title: PAIRED INTERLOCKS FOR STACKING OF NON-ROTATED LAMINATION CORES

(57) Abstract

A rotor core is formed from a stack of laminations. The core includes a plurality of generally circular laminations in a stacked formation one on top of each other. Each lamination defines an axis collinear with an axis of each other lamination in the stacked formation. The laminations each have first and second surfaces and the stack is configured to define at least one inner lamination having laminations adjacent to both its first and second sides and outer laminations having laminations adjacent to only one of its first and second sides. Each lamination has a predetermined number of circumferentially equally spaced slots that define conductor receiving regions. Each inner lamination includes at least one interlocking projection extending from one of the first and second surfaces thereof, at a predetermined radial distance from the lamination axis. Each lamination further defines at least one projection receiving region formed therein for receiving a projection from an adjacent lamination. When viewing the laminations stacks parallel to the axis, the projections are engaged in their respective projection receiving regions so as to define a staggered path of projection and receiving region engagements through the lamination stack. This staggered path configuration defines an elongated, tortuous path having a length greater than a height of the stack for eddy currents through the lamination stack, to increase impedance of an eddy current path therethrough.

