

Analysis of electromagnetic force ripple in a bearingless synchronous reluctance motor

Mukherjee, Victor; Rasilo, Paavo; Martin, Florian; **Belahcen, Anouar** IEEE transactions on magnetics 2021 / art. 9277612, 8 p. : ill <https://doi.org/10.1109/TMAG.2020.3041703> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Analytical model for magnetic anisotropy of non-oriented steel sheets

Martin, Florian; Singh, Deepak; **Belahcen, Anouar**; Rasilo, Paavo; Haavisto, Ari; Arkkio, Antero COMPEL : the international journal for computation and mathematics in electrical and electronic engineering 2015 / p. 1475-1488 : ill <http://dx.doi.org/10.1108/COMPEL-02-2015-0076>

Anisotropic and strain-dependent model of magnetostriction in electrical steel sheets

Belahcen, Anouar; Singh, Deepak; Rasilo, Paavo; Martin, Florian; Ghalamestani, Setareh Gorji; Vandeveld, Lieven IEEE transactions on magnetics 2015 / p. 200-204 : ill <https://doi.org/10.1109/TMAG.2014.2361681> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Calorimetric system for measurement of synchronous machine losses

Rasilo, Paavo; Ekström, J.; Haavisto, Ari; **Belahcen, Anouar**; Arkkio, Antero IET electric power applications 2012 / p. 286-294 : ill <https://homepages.tuni.fi/paavo.rasilo/pubs/Rasilo2012a.pdf>

Combined deterministic algorithm and metaheuristic technique for fast and accurate resolution of optimization problems

Martin, Florian; Aydin, Ugur; Sundaria, Ravi; Rasilo, Paavo; **Belahcen, Anouar** 21st International Conference on the Computation of Electromagnetic Fields (Compumag 2017) : Daejeon, South Korea, 18-22 June 2017 2017 / p. 3-4 : ill http://www.compumag.org/CMAG2017/OA1-2J_131.pdf

Computation of hysteresis torque and losses in a bearingless synchronous reluctance machine

Belahcen, Anouar; Mukherjee, Victor; Martin, Florian; Rasilo, Paavo 21st International Conference on the Computation of Electromagnetic Fields (Compumag 2017) : Daejeon, South Korea, 18-22 June 2017 2017 / p. 214-215 : ill http://www.compumag.org/CMAG2017/PA-A5-10J_129.pdf

Computation of hysteresis torque and losses in a bearingless synchronous reluctance machine

Belahcen, Anouar; Mukherjee, Victor; Martin, Florian; Rasilo, Paavo IEEE transactions on magnetics 2018 / art. 7300804, 4 p. : ill <https://doi.org/10.1109/TMAG.2017.2765080> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Contribution of Maxwell stress in air on the deformations of induction machines

Fonteyn, Katarzyna Anna; **Belahcen, Anouar**; Rasilo, Paavo; Kouhia, Reijo; Arkkio, Antero Journal of electrical engineering and technology 2012 / p. 336-341 : ill <https://ieeexplore.ieee.org/document/5664487>

Coupled magneto-mechanical analysis of iron sheets under biaxial stress

Aydin, U.; Rasilo, Paavo; Singh, Deepak; Lehtikoinen, Antti; **Belahcen, Anouar**; Arkkio, Antero IEEE transactions on magnetics 2016 / art. 2000804, [4] p. : ill <https://doi.org/10.1109/TMAG.2015.2496207>

Effect of Magnetic Forces and Magnetostriction on the Stator Vibrations of a Bearingless Synchronous Reluctance Motor

Mukherjee, Victor; Rasilo, Paavo; Martin, Florian; **Belahcen, Anouar** IEEE transactions on magnetics 2019 / 4 p. : ill <https://doi.org/10.1109/TMAG.2019.2894739> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Effect of mechanical stress on excess loss of electrical steel sheets

Singh, Deepak; Rasilo, Paavo; Martin, Florian; **Belahcen, Anouar**; Arkkio, Antero IEEE transactions on magnetics 2015 / [4] p. : ill <http://dx.doi.org/10.1109/TMAG.2015.2449779>

Effect of multi-axial stress on iron losses of electrical steel sheets

Aydin, Ugur; Rasilo, Paavo; Martin, Florian; **Belahcen, Anouar** Journal of magnetism and magnetic materials 2019 / p. 19-27 : ill <https://doi.org/10.1016/j.jmmm.2018.08.003>

Effect of punching the electrical sheets on optimal design of a permanent magnet synchronous motor

Martin, Florian; Aydin, Ugur; Sundaria, Ravi; Rasilo, Paavo; **Belahcen, Anouar**; Arkkio, Antero IEEE Transactions on Magnetism 2018 / art. 8102004 <https://doi.org/10.1109/TMAG.2017.2768399> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Effect of rotor pole-shoe construction on losses of inverter-fed synchronous motors

Rasilo, Paavo; **Belahcen, Anouar**; Arkkio, Antero Proceedings : 2012 XXth International Conference on Electrical Machines : Palais des Congrès et des Expositions de Marseille Marseille, France, 02-05 September, 2012 2012 / p. 1282-1286 : ill <https://ieeexplore.ieee.org/document/6350042>

Effect of rotor pole-shoe construction on losses of inverter-fed synchronous motors

Rasilo, Paavo; **Belahcen, Anouar**; Arkkio, Antero IEEE transactions on industry applications 2014 / p. 208-217 : ill

Equivalent strain and stress models for the effect of mechanical loading on the permeability of ferromagnetic materials

Rasilo, Paavo; Aydin, Ugur; Martin, Floran; **Belahcen, Anouar**; Kouhia, Reijo; Daniel, Laurent IEEE transactions on magnetics 2019 / art. 2002104, <https://doi.org/10.1109/TMAG.2018.2890407>

Estimation of additional losses due to random contacts at the edges of stator of an electrical machine

Shah, Sahas Bikram; Rasilo, Paavo; **Belahcen, Anouar**; Arkkio, Antero COMPEL : the international journal for computation and mathematics in electrical and electronic engineering 2015 / p. 1501-1510 : ill <http://dx.doi.org/10.1108/COMPEL-02-2015-0083>

Experimental determination and numerical evaluation of core losses in a 150-kVA wound-field synchronous machine

Rasilo, Paavo; **Belahcen, Anouar**; Arkkio, Antero Electric power applications, IET 2013 / p. 97-105 : ill <https://ietresearch.onlinelibrary.wiley.com/doi/full/10.1049/iet-epa.2012.0242>

Flexible identification procedure for thermodynamic constitutive models for magnetostrictive materials

Rasilo, Paavo; Singh, Deepak; Jeronen, Juha; Aydin, Ugur; Martin, Floran; **Belahcen, Anouar**; Daniel, Laurent; Kouhia, Reijo Proceedings of the Royal Society. A, Mathematical, physical & engineering sciences 2019 / 21 p <https://doi.org/10.1098/rspa.2018.0280>

Flux-weakening control for IPMSM employing model order reduction

Far, Mehrnaz Farzam; Mustafa, Bilal; Martin, Floran; Rasilo, Paavo; **Belahcen, Anouar** 2018 XIII International Conference on Electrical Machines (ICEM 2018) : Alexandroupoli, Greece, 3-6 September 2018 2018 / p. 1510–1516 : ill <http://doi.org/10.1109/ICELMACH.2018.8506693>

Homogenization technique for axially laminated rotors of synchronous reluctance machines

Martin, Floran; **Belahcen, Anouar**; Lehikoinen, Antti; Rasilo, Paavo IEEE transactions on magnetics 2015 / [6] p. : ill <http://dx.doi.org/10.1109/TMAG.2015.2463262>

Identification of synchronous machine magnetization characteristics from calorimetric core-loss and no-load curve measurements

Rasilo, Paavo; Abdallah, Ahmed Abou-Elyazied; **Belahcen, Anouar**; Arkkio, Antero; Dupré, Luc IEEE transactions on magnetics 2015 / [4] p. : ill <http://dx.doi.org/10.1109/TMAG.2014.2354055>

Importance of iron-loss modeling in simulation of wound-field synchronous machines

Rasilo, Paavo; **Belahcen, Anouar**; Arkkio, Antero IEEE transactions on magnetics 2012 / p. 2495-2504 : ill <https://ieeexplore.ieee.org/document/6186824>

Iron losses, magnetoelasticity and magnetostriction in ferromagnetic steel laminations

Rasilo, Paavo; Singh, Deepak; **Belahcen, Anouar**; Arkkio, Antero IEEE transactions on magnetics 2013 / p. 2041-2044 : ill <https://homepages.tuni.fi/paavo.rasilo/pubs/Rasilo2013b.pdf>

Magnetic equivalent circuit and Lagrange interpolation function modeling of induction machines under broken bar faults

Hemeida, Ahmed; Billah, Md Masum; **Kudelina, Karolina**; **Asad, Bilal**; **Naseer, Muhammad Usman**; Guo, Baocheng; Martin, Floran; Rasilo, Paavo; **Belahcen, Anouar** IEEE transactions on magnetics 2024 / art. 8200704, 4 p <https://doi.org/10.1109/TMAG.2023.3306207> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Magneto-mechanical modeling of electrical steel sheets

Aydin, Ugur; Rasilo, Paavo; Martin, Floran; Singh, Deepak; Daniel, Laurent; **Belahcen, Anouar**; Rekik, Mahmoud; Hubert, Olivier; Kouhia, Reijo; Arkkio, Antero Journal of magnetism and magnetic materials 2017 / p. 82-90 : ill <https://doi.org/10.1016/j.jmmm.2017.05.008>

Model for stress-dependent hysteresis in electrical steel sheets including orthotropic anisotropy

Rasilo, Paavo; Steentjes, S.; **Belahcen, Anouar**; Kouhia, Reijo; Hameyer, Kay IEEE transactions on magnetics 2017 / art. 2001004, 4 p. : ill <http://dx.doi.org/10.1109/TMAG.2017.2659784>

Model of magnetic anisotropy of non-oriented steel sheets for finite-element method

Martin, Floran; Singh, Deepak; Rasilo, Paavo; **Belahcen, Anouar**; Arkkio, Antero IEEE transactions on magnetics 2016 / [4] p. : ill <http://dx.doi.org/10.1109/TMAG.2015.2488100>

Model order reduction of electrical machines with multiple inputs

Farzam Far, Mehrnaz; **Belahcen, Anouar**; Rasilo, Paavo; Clenet, Stephane; Pierquin, Antoine IEEE transactions on industry applications 2017 / p. 3355-3360 : ill <https://doi.org/10.1109/TIA.2017.2681967> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Modeling of hysteresis losses in ferromagnetic laminations under mechanical stress

Rasilo, Paavo; Singh, Deepak; Aydin, U.; Martin, Floran; Kouhia, Reijo; **Belahcen, Anouar**; Arkkio, Antero IEEE transactions on magnetics 2016 / art. 7300204, [4] p. : ill <http://dx.doi.org/10.1109/TMAG.2015.2468599>

Modeling the Effect of Multiaxial Stress on Magnetic Hysteresis of Electrical Steel Sheets : A Comparison

Aydin, Ugur; Rasilo, Paavo; Martin, Floran; Singh, Deepak; **Belahcen, Anouar** IEEE transactions on magnetics 2017 / art. 2000904, 4 p. : ill <http://dx.doi.org/10.1109/TMAG.2017.2658676>

Modelling anisotropy in non-oriented electrical steel sheet using vector Jiles-Atherton model

Upadhaya, Brijesh; Martin, Florian; Rasilo, Paavo; Handgruber, Paul; **Belahcen, Anouar**; Arkkio, Antero COMPEL : The international journal for computation and mathematics in electrical and electronic engineering 2017 / p. 764-773 : ill <https://doi.org/10.1108/COMPEL-09-2016-0399> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Rotational single sheet tester for multiaxial magneto-mechanical effects in steel sheets

Aydin, Ugur; Martin, Florian; Rasilo, Paavo; **Belahcen, Anouar** IEEE transactions on magnetics 2019 / art. 2001810, 10 p. : ill <https://doi.org/10.1109/TMAG.2018.2889238>

Segregation of iron losses from rotational field measurements and application to electrical machine

Belahcen, Anouar; Rasilo, Paavo; Arkkio, Antero IEEE transactions on magnetics 2014 / p. 893-896 : ill <https://doi.org/10.1109/TMAG.2013.2284606> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

A Simple and efficient quasi-3D magnetic equivalent circuit for surface axial flux permanent magnet synchronous machines

Hemeida, Ahmed; Lehtikainen, Antti; Rasilo, Paavo; Vansompel, Hendrik; **Belahcen, Anouar** IEEE transactions on industrial electronics 2019 / p. 8318-8333 : ill <https://doi.org/10.1109/TIE.2018.2884212>

Thermographic measurement and simulation of power losses due to interlaminar contacts in electrical sheets

Shah, Sahas Bikram; Osemwinyen, Osaruyi; Rasilo, Paavo; **Belahcen, Anouar**; Arkkio, Antero IEEE transactions on instrumentation and measurement 2018 / p. 2628-2634 : ill <https://doi.org/10.1109/TIM.2018.2829321>

Uncertainty propagation of iron loss from characterization measurements to computation of electrical machines

Belahcen, Anouar; Rasilo, Paavo; Nguyen, Thu-Trang; Clénet, Stéphane COMPEL : The international journal for computation and mathematics in electrical and electronic engineering 2015 / p. 624-636 : ill <http://dx.doi.org/10.1108/COMPEL-10-2014-0271>