

Analytical model for magnetic anisotropy of non-oriented steel sheets

Martin, Floran; 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>

Broken bar indicators for cage induction motors and their relationship with the number of consecutive broken bars

Martinez, Javier; **Belahcen, Anouar**; Arkkio, Antero Electric power applications, IET 2013 / p. 633-642 : ill <https://digital-library.theiet.org/content/journals/10.1049/iet-epa.2012.0338>

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 FE and two dimensional spectral analysis of broken cage faults in induction motors

Martinez, Javier; **Belahcen, Anouar**; Arkkio, Antero Proceedings : IECON 2013 - 39th Annual Conference of the IEEE Industrial Electronics Society : Vienna, Austria, 10-14 November, 2013 2013 / p. 2674-2679 : ill <https://ieeexplore.ieee.org/document/6699553>

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 magnetism 2016 / art. 2000804, [4] p. : ill <https://doi.org/10.1109/TMAG.2015.2496207>

Domain decomposition approach for efficient time-domain finite-element computation of winding losses in electrical machines

Lehtikoinen, Antti; Ikäheimo, Jouni; Arkkio, Antero; **Belahcen, Anouar** IEEE transactions on magnetism 2017 / art. 7400609, 9 p. : ill <https://doi.org/10.1109/TMAG.2017.2681045>

Effect of mechanical stress on excess loss of electrical steel sheets

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

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

Martin, Floran; 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

Effects of stator core welding on an induction machine – measurements and modeling

Sundaria, Ravi; Daem, Andries; Osemwinyen, Osaruyi; Lehtikoinen, Antti; Sergeant, Peter; Arkkio, Antero; **Belahcen, Anouar** Journal of Magnetism and Magnetic Materials 2020 / art. 166280 <https://doi.org/10.1016/j.jmmm.2019.166280> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

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>

Finite element analysis of induction motors fed by static frequency converters

Arkkio, Antero Тезисы докладов семинара "Новые разновидности электропривода и возможности их применения" 1990 / с. 17-21: ил https://www.ester.ee/record=b1249397*est

A High-performance open-source finite element analysis library for magnetism in MATLAB

Lehtikoinen, Antti; Davidsson, T.; Arkkio, Antero; **Belahcen, Anouar** 2018 XIII International Conference on Electrical Machines (ICEM

2018) : Alexandroupoli, Greece, 3-6 September 2018 / p. 486–492 : ill <http://doi.org/10.1109/ICELMACH.2018.8507235>

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>

Improved sampling algorithm for stochastic modelling of random-wound electrical machines

Lehikoinen, Antti; Chiodetto, Nicola; Arkkio, Antero; **Belahcen, Anouar** The journal of engineering 2019 / p. 3976–3980 <https://doi.org/10.1049/joe.2018.8093>

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>

Loss model for the effects of steel cutting in electrical machines

Sundaria, Ravi; Nair, D. G.; Lehikoinen, Antti; Arkkio, Antero; **Belahcen, Anouar** 2018 XIII International Conference on Electrical Machines (ICEM 2018) : Alexandroupoli, Greece, 3-6 September 2018 / p. 1260–1266 : ill <http://doi.org/10.1109/ICELMACH.2018.8506822>

Magneto-mechanical modeling of electrical steel sheets

Aydin, Ugur; Rasilo, Paavo; Martin, Florian; 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>

Mixed-order finite-element modeling of magnetic material degradation due to cutting

Sundaria, Ravi; Lehikoinen, Antti; Hannukainen, Antti; Arkkio, Antero; **Belahcen, Anouar** IEEE transactions on magnetics 2018 / art. 7402008, 8 p. : ill <http://dx.doi.org/10.1109/TMAG.2018.2811385>

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

Martin, Florian; 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>

Modeling of hysteresis losses in ferromagnetic laminations under mechanical stress

Rasilo, Paavo; Singh, Deepak; Aydin, U.; Martin, Florian; 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>

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

Upadhya, 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](#)

Reduced basis finite element modeling of electrical machines with multiconductor windings

Lehikoinen, Antti; Arkkio, Antero; **Belahcen, Anouar** IEEE transactions on industry applications 2017 / p. 4252-4259 : ill <https://doi.org/10.1109/TIA.2017.2696509> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

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](#)

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>

3D permeance model of induction machines taking into account saturation effects and its connection with stator current and shaft speed spectra

Martinez, Javier; **Belahcen, Anouar**; Arkkio, Antero IET electric power applications 2015 / p. 20-29 : ill <http://dx.doi.org/10.1049/iet-epa.2014.0013>

A 2D FEM model for transient and fault analysis of induction machines

Martinez, Javier; **Belahcen, Anouar**; Arkkio, Antero Przegląd elektrotechniczny = Electrical review 2012 / p. 157-160 : ill <http://pe.org.pl/articles/2012/7b/41.pdf>

Vibration as fault indicator in electrical machines

Farzam Far, Mehrnaz; **Belahcen, Anouar**; Arkkio, Antero; Roivainen, Janne Doctoral School of Energy and Geotechnology II : closing conference of the project : Pärnu, Estonia, January 12-17, 2015 2015 / p. 120-125 : ill