

# WISSENSCHAFTLICHE VERÖFFENTLICHUNGEN UND VORTRÄGE

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## Beiträge in Fachzeitschriften

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T. Stolzke, A. Stadler, C. Gulden, (2014)

*InDUR Nonlinear and SiFe - Special AC Filter and DC Power Inductors based on State-of-the-Art Powder Materials and Silicon Iron Steel*

Bodo's Power Systems Magazine, Nov. 2014, p. 56-59

S. Herzog, A. Stadler, C. Gulden, (2014)

*MaxFlux – Magnetically Biased Inductor - Utilising the core to its fullest!*

Bodo's Power Systems Magazine, June 2014, p. 30-34

A. Stadler, C. Gulden, (2014)

*InDUR - New Power Inductors with Minimum Size and Weight for DC and AC Filter Applications*

Bodo's Power Systems Magazine, Jan. 2014, p. 36-38

A. Stadler, (2013)

*The Copper Losses of Gapped Inductors with Litz-Wire Windings*

Journal of Microelectronics, Elec. Components and Materials – Informacije MIDEM, vol. 43, no. 4, 2013

A. Stadler, R. Huber, T. Stolzke, C. Gulden, (2013)

*Analytical Calculation of Copper Losses in Litz-Wire Windings of Gapped Inductors*

IEEE Transactions on Magnetics, vol. 50, no. 2, Feb. 2014

A. Stadler, T. Stolzke, C. Gulden, (2013)

*Nonlinear Power Inductors for Large Current Crest Factors*

Journal of Engineering, Hindawi Publishing Corporation, vol. 2013, id. 687581, p. 1-6

H. Roßmanith, M. Albach, J. Fischer, A. Stadler, (2012)

*Improved Characterization of the Magnetic Properties of Hexagonally Packed Wires*

EPE Journal, vol. 22, no. 4, 2012

A. Stadler, (2011)

*A Generalized Model for Rate-Independent Ferromagnetic Hysteresis Phenomena*

Journal of Physics: Conference Series, vol. 268, no. 1, 2011

M. Albach, M. Döbrönti, H. Roßmanith, D. Exner, A. Stadler, (2010)

*Wicklungsverluste in Spulen und Trafos aus HF-Litze*

Elektronik Industrie, Okt. 2010, S. 32-34, Hüthig Verlag

M. Albach, J. Patz, H. Roßmanith, D. Exner, A. Stadler, (2010)

*Optimale Wicklung = optimaler Wirkungsgrad, Vergleich der Verluste in Litzen und Runddrähten*

Elektronik power, Ausgabe 04/2010, S. 38-77

A. Stadler, (2010)

*Simulation und Messung der Kernverluste weichmagnetischer Materialien: Ein praktisches Verfahren zur Berechnung der Kernverluste bei beliebigen Kernformen mit Hilfe der Finite Elemente Methode (FEM)*

Südwestdeutscher Verlag für Hochschulschriften, März 2010, ISBN 3838115058

A. Stadler, M. Albach, A. Lindner, (2010)

*A Practical Method to Measure Electrical AC Conductivity of MnZn Ferrites Using Conventional Toroids*

IEEE Transactions on Magnetics, vol. 46, no. 2, Feb. 2010

M. Albach, A. Stadler, M. Spang, (2007)

*The Influence of Ferrite Characteristics on the Inductance of Coils With Rod Cores*

IEEE Transactions on Magnetics, vol. 43, no.6, June 2007, p. 2618-2620

A. Stadler, M. Albach, T. Dürbaum, (2006)  
*Optimum EMC Design of Flyback and Load Resonant Converters Using Toroids with Air Gaps*  
Electrical Power Quality and Utilisation Journal EPQU 2005, vol. XI, no. 2, p. 15-22

A. Stadler, M. Albach, (2006)  
*The Influence of the Winding Layout on the Core Losses and the Leakage Inductance in High Frequency Transformers*, IEEE Transactions on Magnetics, vol. 42, no. 4, Apr. 2006, p. 735-738

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## Beiträge auf internationalen Konferenzen und Seminaren

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L. Reißnweber, A. Stadler, (2019)  
*Extension of a Calculation Model based on the Pi Line Theory for Transient Voltage Distribution in Inductors by Complex Permittivity and Frequency-Depending Complex Permeability*  
21<sup>st</sup> Conf. on Power Electronics and Appl. EPE'19-ECCE Europe, Sept. 2019, Genova, Italy, paper 531

M. Albach, A. Stadler, (2019)  
ECPE Cluster-Schulung „Induktivitäten in der Leistungselektronik“, Juli 2019, Nürnberg, Deutschland

A. Stadler, (2019)  
ECPE Cluster-Seminar „Power Factor Correction (PFC) und Active Frontend – Schaltungen Bauelemente, Regelung“, Mai 2019, Augsburg, Deutschland

A. Stadler, (2019)  
14<sup>th</sup> Seminar “Power Electronics for Photovoltaics and Battery Systems”: Power Inductors  
28<sup>th</sup> Intersolar Europe Conference, May 2019, Munich, Germany

L. Reißnweber, A. Stadler, (2019)  
*Calculation Model for the Transient Voltage Distribution in Inductor Windings Effected by High dv/dt*  
PCIM Conference, May 2019, Nuremberg, Germany

A. Stadler, (2019)  
*The Role of Soft Magnetic Materials for Improved Power Transmission in High Power Applications*  
Annual Meeting of the ZVEI Transformers and Power Supplies Division 2019, March 2019, Nuremberg, Germany

A. Stadler, (2019)  
*Requirements for the Inductive Components*  
ECPE Wide Bandgap Systems Integration User Training, Feb. 2019, Graz, Austria

L. Reißnweber, A. Stadler, (2018)  
*Induktive Bauelemente für zukünftige Mittelspannungs-Leistungselektronik*  
Treffen des Industriearbeitskreises Mittelspannungs-Leistungselektronik, Sept. 2018, Berlin, Deutschland

M. Albach, A. Stadler, (2018)  
ECPE Cluster-Schulung „Induktivitäten in der Leistungselektronik“, Juli 2018, Nürnberg, Deutschland

A. Stadler, (2018)  
*Requirements for the Inductive Components*  
ECPE Wide Bandgap Systems Integration User Training, June 2018, Bremen, Germany

A. Stadler, (2018)  
*The Role of Soft Magnetic Materials for Improved Power Transmission in High Power Applications*  
8<sup>th</sup> International Conference on Magnetism and Metallurgy WMM18, June 2018, Dresden, Germany

A. Stadler, (2018)  
13<sup>th</sup> Seminar “Power Electronics for Photovoltaics and Battery Systems”: Power Inductors  
27<sup>th</sup> Intersolar Europe Conference, June 2018, Munich, Germany

A. Stadler, (2017)  
*Requirements for the Inductive Components*  
ECPE Tutorial: Wide Bandgap User Training, Nov. 2017, Barcelona, Spain

A. Stadler, (2017)  
*Induktive Bauelemente und deren Herausforderungen für die MS-Leistungselektronik bei Industrie und Bahn*  
Symposium Mittespannungs-Leistungselektronik, Sept. 2017, Nürnberg, Deutschland

M. Albach, A. Stadler, (2017)  
ECPE Cluster-Schulung „Induktivitäten in der Leistungselektronik“, Juli 2017, Nürnberg, Deutschland

A. Stadler, (2017)  
*Requirements for the Inductive Components*  
ECPE Wide Bandgap Systems Integration User Training, July 2017, Nuremberg, Germany

A. Stadler, (2017)  
12<sup>th</sup> Seminar “Power Electronics for Photovoltaics and Battery Systems”: Power Inductors  
26<sup>th</sup> Intersolar Europe Conference, May 2017, Munich, Germany

A. Stadler, (2016)  
*Is a Fast Power Loss Determination of Inductors Possible by means of an Analysis of the (Voltage) Step Response?*  
STS Expert Seminar, Sept. 2016, Stockach, Germany

M. Albach, A. Stadler, (2016)  
ECPE Cluster-Schulung „Induktivitäten in der Leistungselektronik“, Sept. 2016, Nürnberg, Deutschland

A. Stadler, (2016)  
OTTI Seminar “Power Electronics for Photovoltaics”: Power Inductors  
25<sup>th</sup> Intersolar Europe Conference, June 2016, Munich, Germany

A. Stadler, (2016)  
*Messtechnische Erfassung von Daten für Modelle von Induktivitäten*  
ECPE Cluster-Seminar mit Praxiskurs: Messen, Prüfen und Charakterisieren von induktiven Bauelementen in der Leistungselektronik, Juni 2016, Nürnberg, Deutschland

A. Stadler, T. Stolzke, C. Gulden, (2015)  
*Optimized Filter Inductors for a 1MW Windmill Demonstrator with an Objective to Reduced Converter Size*  
17<sup>th</sup> Conf. on Power Electronics and Appl. EPE'15-ECCE Europe, Sept. 2015, Geneva, Switzerland

M. Albach, A. Stadler, (2015)  
ECPE Cluster-Schulung „Induktivitäten in der Leistungselektronik“, Juli 2015, Nürnberg, Deutschland

A. Stadler, C. Gulden, N. Blacha, (2015)  
*Fortschrittene induktive Komponenten der Leistungselektronik*  
Belecker Fachtage 2015, Juni 2015, Warstein-Belecke, Deutschland

A. Stadler, (2015)  
OTTI Seminar “Power Electronics for Photovoltaics”: Power Inductors  
24<sup>th</sup> Intersolar Europe Conference, June 2015, Munich, Germany

T. Stolzke, A. Stadler, C. Gulden, (2015)  
*Calculating Phase Currents for High Frequency Three Phase Inductors via the Inductance Matrix*  
PCIM Conference, May 2015, Nuremberg, Germany

A. Stadler, T. Stolzke, C. Gulden, (2015)  
*Design and Simulation of Thermally Optimized Filter Inductors for a 1MW Windmill Demonstrator*  
PCIM Conference, May 2015, Nuremberg, Germany

A. Stadler, (2014)  
*The Optimum Choice of Stranded Wire for Lead-outs and Bridge Connections of High Frequency Transformers*  
50<sup>th</sup> Int. Conference on Microelectronics, Devices and Materials MIDE 2014, Oct. 2014, Ljubljana, Slovenia

A. Stadler, T. Stolzke, C. Gulden, (2014)  
*High Frequency High Current Filter Inductors with Minimum Thermal Resistance*  
16<sup>th</sup> Int. Power Electronics and Motion Control Conference PEMC 2014, Sept. 2014, Antalya, Turkey

A. Stadler, C. Gulden, (2014)  
*A New Generation of Modular Power Inductors with Minimum Thermal Resistance*  
16<sup>th</sup> Conf. on Power Electronics and Appl. EPE'14-ECCE Europe, Aug. 2014, Lappeenranta, Finland

M. Albach, A. Stadler, (2014)  
ECPE Cluster-Schulung „Induktivitäten in der Leistungselektronik“, Juli 2014, Nürnberg, Deutschland

A. Stadler, (2014)  
*OTTI Seminar “Power Electronics for Photovoltaics”: Power Inductors*  
23<sup>rd</sup> Intersolar Europe Conference, June 2014, Munich, Germany

A. Stadler, (2014)  
*High Frequency Eddy Current Losses in Transformer Lead-Outs*  
16<sup>th</sup> IEEE Conference on Electromagnetic Field Computation CEFC 2014, May 2014, Annecy, France

A. Stadler, T. Stolzke, C. Gulden, (2014)  
*Design and Simulation of High Power Filter Inductors with Minimized Thermal Resistance*  
PCIM Conference, May 2014, Nuremberg, Germany

A. Stadler, (2014)  
*The AC Resistance of High Frequency Transformer Lead-Outs*  
9<sup>th</sup> International Conference on Computation in Electromagnetics, CEM 2014, Mar. 2014, London, UK

M. Albach, A. Stadler, (2013)  
ECPE Seminar „Induktivitäten in der Leistungselektronik“, Sept. 2013, Nürnberg, Deutschland

M. Albach, A. Stadler, (2013)  
ECPE Seminar „Induktivitäten in der Leistungselektronik“, Juli 2013, Nürnberg, Deutschland

A. Stadler, C. Gulden, (2013)  
*Copper Losses of Litz-Wire Windings Due to an Air Gap*  
15<sup>th</sup> European Conference on Power Electronics and Applications EPE, Sept. 2013, Lille, France

A. Stadler, R. Huber, T. Stolzke, C. Gulden, (2013)  
*Analytical Calculation of Copper Losses in Litz-Wire Windings of Gapped Inductors*  
19<sup>th</sup> Conf. on the Computation of Electromagnetic Fields Compumag, June 2013, Budapest, Hungary

A. Stadler, (2013)  
*The Optimization of High Frequency Inductors with Litz-Wire Windings*  
8<sup>th</sup> Int. Workshop on Compatibility in Power Electronics, CPE 2013, June 2013, Ljubljana, Slovenia

A. Stadler, (2013)  
*OTTI Seminar “Power Electronics for Photovoltaics”: Power Inductors*  
22<sup>nd</sup> Intersolar Europe Conference, June 2013, Munich, Germany

A. Stadler, R. Huber, T. Stolzke, C. Gulden, (2013)  
*The Simulation of Copper Losses in Litz-Wire Windings Considering Air Gap Fringing Fields*  
PCIM Conference, May 2013, Nuremberg, Germany

A. Stadler, (2012)  
*High Power Transformers*  
UK Magnetics Society Seminar "Magnetic Materials for the 21<sup>st</sup> Century", Oct. 2012, Hanau, Germany

A. Stadler, (2012)  
*Nonlinear Inductance Simulation by a Method of Summation*  
6<sup>th</sup> Joint European Magnetic Symposia JEMS 2012, Sept. 2012, Parma, Italy

A. Stadler, C. Gulden, T. Stolzke, (2012)  
*Nonlinear Inductors for Active Power Factor Correction Circuits*  
15<sup>th</sup> International Power Electronics and Motion Control Conf. EPE-PEMC, Sept. 2012, Novi Sad, Serbia

A. Stadler, (2012)  
*OTTI Seminar "Power Electronics for Photovoltaics": Power Inductors*  
21<sup>st</sup> Intersolar Europe Conference, June 2012, Munich, Germany

A. Stadler, T. Stolzke, C. Gulden, (2012)  
*Nonlinear Power Inductors for Large Current Crest Factors*  
PCIM Conference, May 2012, Nuremberg, Germany

A. Stadler, C. Gulden, (2012)  
*Efficient Nonlinear Inductors for PV Inverters and Active PFC*  
7<sup>th</sup> Int. Conference on Integrated Power Electronics Systems CIPS, Mar. 2012, Nuremberg, Germany

A. Stadler, (2011)  
*Thermische Simulation von Hochleistungs-Induktivitäten*  
ECPE Seminar „Induktivitäten in der Leistungselektronik“, Okt. 2011, Nürnberg, Deutschland

A. Stadler, C. Gulden, T. Stolzke, (2011)  
*Design and Simulation Method to Adjust the Non-Linear Inductance Curve of a DC Reactor with Solar Inverter Application*  
20<sup>th</sup> Soft Magnetic Materials Conference SMM 20, Sept. 2011, Kos, Greece

H. Roßmanith, M. Albach, J. Patz, A. Stadler, (2011)  
*Improved Characterization of the Magnetic Properties of Hexagonally Packed Wires*  
14<sup>th</sup> European Conference on Power Electronics and Applications EPE, Aug. 2011, Birmingham, UK

A. Stadler, C. Gulden, (2011)  
*Improved Thermal Design of a High Frequency Power Transformer*  
14<sup>th</sup> European Conference on Power Electronics and Applications EPE, Aug. 2011, Birmingham, UK

A. Stadler, (2011)  
*OTTI Seminar "Power Electronics for Photovoltaics": Power Inductors*  
20<sup>th</sup> Intersolar Europe Conference, June 2011, Munich, Germany

**Best Paper Award**  
A. Stadler, (2011)  
*Radiated Magnetic Field of a Low-Frequency Ferrite Rod Antenna*  
7<sup>th</sup> International Workshop on Compatibility in Power Electronics CPE 2011, June 2011, Tallinn, Estonia

A. Stadler, C. Gulden, (2011)  
*Thermal Management and Simulation of a High Frequency Power Transformer*  
PCIM Conference, May 2011, Nuremberg, Germany

A. Stadler, C. Gulden, (2010)

*The Calculation of Eddy Current Losses in Tube Wound High Current Transformer Windings*

14<sup>th</sup> Int. Power Electronics and Motion Control Conference EPE-PEMC, Sept. 2010, Ohrid, Macedonia

A. Stadler, (2010)

*High Power Transformers and Chokes at Medium Frequency – Trends and Requirements on Soft Magnetic Materials*

4<sup>th</sup> International Conference on Magnetism and Metallurgy WMM10, June 2010, Freiberg, Germany

A. Stadler, (2010)

*OTTI Seminar "Power Electronics for Photovoltaics": Power Inductors*

19<sup>th</sup> Intersolar Europe Conference, June 2010, Munich, Germany

A. Stadler, (2010)

*A Generalized and Very Accurate Model for Rate-Independent Ferromagnetic Hysteresis Phenomena*

5<sup>th</sup> International Workshop on Multi-Rate Processes and Hysteresis in Mathematics, Physics, Engineering and Information Sciences, June 2010, Pécs, Hungary

A. Stadler, C. Gulden, (2010)

*Efficient Water Cooled Transformer for High Frequency Induction Heating Applications*

PCIM Conference, May 2010, Nuremberg, Germany

A. Stadler, (2009)

*Wassergekühlter Hochleistungstrafo modernster Bauart*

ECPE Seminar „Induktivitäten in der Leistungselektronik“, Okt. 2009, Nürnberg, Deutschland

### **Best Student Presentation Award**

A. Stadler, M. Albach, A. Lindner, (2009)

*A Practical Method to Measure Electrical AC Conductivity of MnZn Ferrites Using Conventional Toroids*

19<sup>th</sup> Soft Magnetic Materials Conference SMM 19, Sept. 2009, Torino, Italy

A. Stadler, (2009)

*High-Power Density Transformers – Design Challenges for Induction Heating Systems*

PCIM Conference, May 2009, Nuremberg, Germany

A. Stadler, M. Albach, (2007)

*The Prediction and Measurement of Different Loss Mechanisms in Ferrite Cores*

ECPE Seminar “Passive Components in Power Electronics”, Nov. 2007, Nuremberg, Germany

M. Albach, A. Stadler, M. Spang, (2006)

*The Influence of Ferrite Characteristics on the Inductance of Coils with Rod Cores*

10<sup>th</sup> Joint MMM/Intermag Conference, Jan. 2007, Baltimore, Maryland, USA

A. Stadler, M. Albach, A. Bucher, (2006)

*Calculation of Core Losses in Toroids with Rectangular Cross Section*

12<sup>th</sup> Int. Power Electronics and Motion Control Conference EPE-PEMC, Sept. 2006, Portoroz, Slovenia, paper T2-407

A. Bucher, T. Dürbaum, D. Kübrich, A. Stadler, (2006)

*Comparison of Different Design Methods for the Parallel Resonant Converter*

12<sup>th</sup> International Power Electronics and Motion Control Conference EPE-PEMC, Sept. 2006, Portoroz, Slovenia, paper T2-404

A. Stadler, M. Albach, (2006)

*Analytical Calculation of Stray Fields Generated by Ferrite Rods in EMI Suppression Applications*

PCIM Conference, May 2006, Nuremberg, Germany

A. Stadler, M. Albach, H. Roßmanith, G. Schubert, (2006)  
*EMV-Integration in den Layout-Prozess am Beispiel einer Kombination von Mikrostreifen- und Triplate-Leitungen*  
Internationale Fachmesse und Kongress für Elektromagnetische Verträglichkeit, EMV 2006, März 2006, Düsseldorf, Deutschland

A. Stadler, M. Albach, H. Roßmanith, G. Schubert, (2006)  
*The Influence of Ground and Floating Planes on the Electromagnetic Coupling Between Board Tracks*  
17<sup>th</sup> International Symposium on Electromagnetic Compatibility, EMC Zurich in Singapore, Feb. 2006, Singapore, paper 179

A. Stadler, M. Albach, H. Roßmanith, G. Schubert, (2006)  
*Design Methodology to Limit Electromagnetic Coupling Between Board Tracks on PCB Level in Realtime*  
17<sup>th</sup> Int. Symposium on Electromagnetic Compatibility, EMC Zurich in Singapore, Feb. 2006, Singapore, paper 60

A. Stadler, M. Albach, F. Macary, (2005)  
*The Minimization of Copper Losses in Core-Less Inductors: Application to Foil- and PCB-based Planar Windings*  
11<sup>th</sup> European Conference on Power Electronics and Applications EPE, Sept. 2005, Dresden, Germany, paper 200

A. Stadler, M. Albach, S. Chromy, (2005)  
*The Optimization of High Frequency Operated Transformers for Resonant Converters*  
11<sup>th</sup> European Conference on Power Electronics and Applications EPE, Sept. 2005, Dresden, Germany, paper 77

A. Stadler, M. Albach, F. Macary, (2005)  
*The Minimization of Copper Losses in Core-Less Inductors: Application to Foil- and PCB-based Planar Windings*  
15<sup>th</sup> Conference on the Computation of Electromagnetic Fields Compumag, June 2005, Shenyang, Liaoning, China, vol. 1, p. 218-219

A. Stadler, M. Albach, S. Chromy, (2005)  
*The Optimization of High Frequency Operated Transformers with E-Cores*  
15<sup>th</sup> Conference on the Computation of Electromagnetic Fields Compumag, June 2005, Shenyang, Liaoning, China, vol. 3, p. 72-73

A. Stadler, M. Albach, F. Macary, (2005)  
*Minimum Loss Design for Core-Less Foil Inductors*  
PCIM Conference, June 2005, Nuremberg, Germany, p. 159-163

A. Stadler, M. Albach, S. Chromy, (2005)  
*The Optimization of High Frequency Operated Transformers with E-Cores - Application to Resonant Converters*  
PCIM Conference, June 2005, Nuremberg, Germany, p. 228-233

A. Stadler, M. Albach, T. Dürbaum, (2005)  
*The Minimization of Magnetic Stray Fields from Transformers with Air Gapped Toroids*  
4<sup>th</sup> Int. Workshop on Comp. in Power Electronics CPE 2005, June 2005, Gdynia, Poland, p. 123-125

A. Stadler, M. Albach, D. Kübrich, (2005)  
*The Optimization of Transformers with Air Gapped Toroids*  
20<sup>th</sup> Applied Power Electronics Conference, APEC 2005, Austin, Texas, p. 1938-1943, paper 10356

T. Dürbaum, D. Kübrich, K. Schetters, A. Stadler, (2005)  
*Influence of Non Linear Magnetic Inductance in Passive Mains Harmonic Reduction Circuits*  
20<sup>th</sup> Applied Power Electronics Conference, APEC 2005, Austin, Texas, p. 1170-1175, paper 10731

A. Stadler, M. Albach, S. Chromy, (2004)  
*The Minimization of Magnetic Stray Fields from UI-Cores with Air Gaps*  
11<sup>th</sup> International Power Electronics and Motion Control Conference EPE-PEMC, Sept. 2004, Riga,  
Latvia, paper A101452

M. Albach, A. Stadler, (2004)  
*The Minimization of Magnetic Stray Fields from Toroids with Air Gaps*  
IEEE Symposium on Electromagnetic Compatibility, Aug. 2004, Santa Clara, USA, p. 881-886

T. Flohr, S. Schaller, A. Stadler, W. Brandhuber, M. Niethammer, K. Klingenbeck, P. Steffen, (2001)  
*An Efficient Fourier Method for 3-D Radon Inversion in Exact Cone-Beam CT Reconstruction*  
SPIE: Medical Engineering, 2001

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## Sonstige Vorträge

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### Kundenschulungen bei der STS Spezial-Transformatoren Stockach GmbH & Co. KG

#### STS Grundlagenseminar 2008-2014

Jährlich im März/Apr., ca. 30-40 Teilnehmer (Kunden der STS GmbH & Co. KG)

Vortragsthemen (A. Stadler):

- Grundlagen von Transformatoren und Drosseln
- Kern- und Cu-Verluste im Transformator – Skin- und Proximity-Effekt
- Grundlagen der thermischen Berechnung von Transformatoren

#### STS Spezialseminar 2008-2014

Jährlich im Sept./Okt., ca. 50-80 Teilnehmer (Kunden der STS GmbH & Co. KG)

Vortragsthemen (A. Stadler):

- Messung und Simulation von Kernverlusten in weichmagnetischen Materialien
- Praktischer Aufbau zur messtechnischen Bestimmung der Kernverluste in der Leistungselektronik
- Dimensionierung und Aufbau von verteilter Luftspalt in amorphen Schnittbandkernen
- Hocheffiziente Leistungsdrosseln für Solar-Wechselrichter
- Mittelfrequenztransformatoren für dezentrale Antriebe in Schienenfahrzeugen
- Streufelder von induktiven Bauteilen
- Kupferverluste in Resonanzdrosseln mit großen Luftspalten
- Praktische Lösungen für integrierte magnetische Bauelemente
- Die Herausforderungen neuester Leistungshalbleiter an die induktiven Bauteile
- InDUR – Ein Meilenstein in der Entwicklung von Leistungsdrosseln