

## Standardisierungen

VDE SPEC 90028 V1.0 (de): *Methode zur Erstellung digitaler Zwillinge von Prozessenergiequellen für das elektrochemische Präzisionsabtragen*

DIN SPEC 91481:2024-02: *Classification of recycled plastics of polyamides by Data Quality Levels for use and (digital) trading*

<https://dx.doi.org/10.31030/3515186>

DIN SPEC 17028:2021-04: *Additive Fertigung - Methode zur zerstörungsfreien Ermittlung von mechanischen Eigenschaften von additiv gefertigten Kunststoffteilen*

<https://dx.doi.org/10.31030/3244819>

DIN SPEC 91399:2018-12: *Methode zur Bestimmung von Prozesseingangsgrößen für das elektrochemische Präzisionsabtragen - Anforderungen, Kriterien, Festlegungen*

<https://dx.doi.org/10.31030/3007935>

## Publikationen

R. Petermann, P. Clauß, P. Damm, G. Meichsner, **M. Hackert-Oschätzchen**: *Experimental derivation of process input parameters for electrochemical precision machining of a powder metallurgical tool steel*, In: Materials research proceedings, Volume 41, 2024

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A. Thielecke, **M. Hackert-Oschätzchen**, G. Meichsner, T. Berger, S. Loebel, A. Martin, R. Schulze, A. Schubert: *Simulation-based analysis of electrical current induction in a device for electrochemical precision machining of Nd Fe B permanent magnets*, In: Materials research proceedings, Volume 41, 2024

<https://doi.org/10.21741/9781644903131-264>

P. Damm, M. Adinehvand, M. Beutner, G. Meichsner, G. Hahn, D. Zimmermann, M. Steffens, **M. Hackert-Oschätzchen**: *Analysis of the influence of the initial surface integrity on the result of burnished high torque splined shafts*, In: Materials research proceedings, Volume 41, 2024

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V. Artiushenko, S. Lang, C. Lerez, T. Reggelin, **M. Hackert-Oschätzchen**: *Resource-efficient Edge AI solution for predictive maintenance*, Procedia Computer Science, 232, 2024

10.1016/j.procs.2024.01.034

A. Riefer, **M. Hackert-Oschätzchen**, P. Plänitz, G. Meichsner: *Characterization of iron(III) in aqueous and alkaline environments with ab initio and ReaxFF potentials*, The Journal of Chemical Physics, 160, 2024

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C. Michaelis, E. Koslowski, **M. Hackert-Oschätzchen**, A. Giese, C. Hamers, C. Schwarz: *Gas/hydrogen blends as fuel to produce secondary aluminium*, International Aluminium Journal, 1-2, 2024

ISSN 0002-6689

A. Martin, T. Berger, S. Loebel, R. Schulze, A. Thielecke, **M. Hackert-Oschätzchen**, A. Schubert: *Accuracy of pulsed electrochemical machining of NdFeB rotor magnets*, In: Proceedings of the 19th International Symposium on Electrochemical Machining Technology, Editors: D. Bähre, T. Hall, M. Zeiner, 2023

ISBN 978-3-00-077159-0

J. Hülsmann, T. Fraune, B. Dodawatta, F. Reuter, M. Beutner, V. Beck, **M. Hackert-Oschätzchen**, C. D. Ohl, K. Bettenbrock, G. Janiga, J. Wippermann, M. Wacker: *Integrated biophysical matching of bacterial nanocellulose coronary artery bypass grafts towards bioinspired artery typical functions*, In: Scientific Reports, Volume 13, 2023

<https://doi.org/10.1038/s41598-023-45451-2>

A. Riefer, **M. Hackert-Oschätzchen**, G. Meichsner, P. Plänitz: *Derivation of parameter sets for the ReaxFF+ method for modeling an electrochemical machining process*, In: Procedia CIRP, Volume 117, 2023

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- A. Thielecke, **M. Hackert-Oschätzchen**, N. Komilov, G. Meichsner, T. Petzold, S. Loebel, A. Martin, R. Schulze, A. Schubert: *Simulation-based analysis of electrical current induction in electrochemical precision machining of Nd-Fe-B permanent magnets*, In: Procedia CIRP, Volume 117, 2023  
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- P. Damm, G. Meichsner, C. Lerez, **M. Hackert-Oschätzchen**: *Design of a user-friendly human machine interface for jet electrochemical machining*, In: Materials research proceedings, Volume 28, 2023  
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- A. Thielecke, G. Meichsner, **M. Hackert-Oschätzchen**: *Digital twin for the determination of process input variables for electrochemical precision machining according to DIN SPEC 91399*, In: Materials research proceedings, Volume 28, 2023  
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- J. Döring, V. Voropai, A. Thielecke, O. Maiß, M. Müller, G. Meichsner, **M. Hackert-Oschätzchen**, J. Häberle, C. H. Lohmann, J. Bertrand: *Steigerung des Torsionswiderstands der Konussteckverbindung durch einen angepassten Fertigungsprozess der CoCrMo Hüftkugel*, In: 12. Kongress der Deutschen Gesellschaft für Biomechanik (DGfB), 2022
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- G. Meichsner, L. Boenig, **M. Hackert-Oschätzchen**: *Experimental Characterization of Resource Efficient Process Chains for Electrochemical Precision Machining of Form-bore Patterns*, In: Procedia CIRP, Volume 95, 2020  
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<https://doi.org/10.1016/j.procir.2020.02.299>

C. Döbberthin, R. Müller, G. Meichsner, F. Welzel, **M. Hackert-Oschätzchen**: *Experimental analysis of the shape accuracy in electrochemical polishing of femoral heads for hip endoprosthesis*, In: *Procedia Manufacturing*, Volume 47, 2020

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S. Loebel, **M. Hackert-Oschätzchen**, G. Meichsner, T. Petzold, M. Zinecker, A. Schubert: *Modelling of Precise Electrochemical Machining for Nickel-based Centrifugal Impellers*, In: *Proceedings of the 15th International Symposium on Electrochemical Machining Technology*, Editors: D. Bähre, A. Ernst, 2019

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S. Schröder, A. Martin, V. Kahle, **M. Hackert-Oschätzchen**, A. Schubert: *Removal rate and surface roughness in plasma-electrolytic polishing of 1.4441 stainless steel*, In: *Proceedings of the 15th International Symposium on Electrochemical Machining Technology*, Editors: D. Bähre, A. Ernst, 2019

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M. Yahyavi Zanjani, **M. Hackert-Oschätzchen**, A. Martin, G. Meichsner, J. Edelmann, A. Schubert: *Process Control in Jet Electrochemical Machining of Stainless Steel through Inline Metrology of Current Density*, In: *Micromachines*, Volume 10(3), 2019

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- R. Morgenstern, A. Martin, N. Lehnert, I. Scharf, **M. Hackert-Oschätzchen**, A. Schubert, T. Lampke: *Localized anodization of the aluminum alloy en AW-7075 T6 by closed electrolytic free jet*, In: IOP Conference Series: Materials Science and Engineering, Volume 480, 2019  
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- T. Petzold, **M. Hackert-Oschätzchen**, A. Martin, A. Schubert: *Simulation-based Design of an Electrolyte System for Electrochemical Machining with Differentially Switched Currents*, In: Proceedings of the 6th International Conference on Competitive Manufacturing, 2019  
ISBN: 978-0-7972-1779-9
- S. Loebel, **M. Hackert-Oschätzchen**, G. Meichsner, M. Zinecker, A. Schubert: *Simulation-based Design of Electrochemical Machining Processes for Microstructuring of High-strength Materials*, In: Proceedings of the 14th International Symposium on Electrochemical Machining Technology, Editors: T. Bergs, T. Herrig, S. Harst, A. Klink, 2018  
ISBN 978-3-86359-667-5
- A. Martin, T. Petzold, **M. Hackert-Oschätzchen**, G. Meichsner, A. Schubert: *Experimental Derivation of Process In-put Parameters for Electrochemical Machining with Differentially Switched Currents*, In: Proceedings of the 14th International Symposium on Electrochemical Machining Technology, Editors: T. Bergs, T. Herrig, S. Harst, A. Klink, 2018  
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- G. Meichsner, **M. Hackert-Oschätzchen**, S. Loebel, L. Boenig, A. Schubert, M. Putz: *Characterization of the Lateral Working Distance in Precise Electrochemical Machining of Differently Heat Treated Steel*, In: Proceedings of the 14th International Symposium on Electrochemical Machining Technology, Editors: T. Bergs, T. Herrig, S. Harst, A. Klink, 2018  
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- M. Penzel, I. Schaarschmidt, **M. Hackert-Oschätzchen**, A. Schubert: *Numerical Investigation of Electrolyte Flow in a Multi-Cathode System for Electrochemical Machining*, In: Proceedings of the European COMSOL Conference, 2018
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- N. Lehnert, A. Martin, J. W. Mwangi, **M. Hackert-Oschätzchen**, A. Schubert, R. Morgenstern, T. Lampke: *Multiphysics Simulation of Localised Anodisation of Aluminium*, In: Proceedings of the 18th euspen International Conference, 2018  
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- P. Steinert, R. Paul, I. Schaarschmidt, M. Zinecker, **M. Hackert-Oschätzchen**, T. Muschalek, J. Esslinger, A. Schubert: *Analysis of Mixing Chambers for the Processing of Two-component Adhesives for Transport Applications*, In: Proceedings of the European COMSOL Conference, 2017
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