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Selektiv thermisch oxidierte Werkzeugoberflächen im Einsatz beim trockenen Tiefziehen

Selective thermally oxidised tool surfaces for dry deep drawing

Publikationsverzeichnis

List of Publications

a) Beiträge mit wiss. Qualitätssicherung / *Articles with scientific quality assurance*

Simon Schöler, Christoph Kock, Fahrettin Özkaya, Christopher Nowak, Kai Möhwald, Bernd-Arno Behrens, Hans Jürgen Maier (2020): Numerical simulation of the abrasive wear behavior of selectively oxidized α -Fe₂O₃ oxide layers on tool steel surfaces, in JOM 72 4 (2020) 2536-2547. <https://doi.org/10.1007/s11837-020-04172-x>

Özkaya, F.; Yilkiran, D.; Schöler, S.; Hübner, S.; Möhwald, K.; Behrens B.-A. (2019): Dry sheet metal forming through selective oxidized tool surfaces, TMS 2019, 148th Annual Meeting, 10.-14.03.2019, San Antonio, USA

Simon Schöler, Maurice Schmieding, Deniz Yilkiran, Fahrettin Özkaya, Christopher Nowak, Kai Möhwald, Bernd-Arno Behrens, Hans Jürgen Maier (2019): Wear behavior of selectively oxidized α -Fe₂O₃ oxide low-friction layer systems on PM tool steel surfaces, Wear Vol. 426-427 (2017) 1603 – 1615. Elsevier, DOI: [10.1016/j.wear.2019.01.009](https://doi.org/10.1016/j.wear.2019.01.009)

Schöler, S.; Yilkiran, D.; Wulff, D.; Özkaya, F.; Möhwald, K.; Behrens, B.-A.; Maier, H.J. (2018): Selective oxidation of tool steel surfaces under a protective gas atmosphere using inductive heat treatment, ICNFT 2018, 5th International Conference on New Forming Technology. Bremen 19.-21.09.2018

Behrens, B.-A.; Yilkiran, D.; Schöler, S.; Özkaya, F.; Hübner, S.; Möhwald, K. (2018): Wear investigation of selective α -Fe₂O₃ oxide layers generated on surfaces for dry sheet metal forming, 17th International Conference on Metal Forming, 16-19 September 2018, Toyohashi, Japan

Yilkiran, D.; Wulff, D.; Almohallami, A.; Özkaya, F.; Bouguecha, A.; Hübner, S.; Möhwald, K.; Maier, H. J.; Behrens, B.-A. (2017): Wear behaviour of thermally oxidised tool surfaces as low-friction separation layers for dry sheet metal forming, Wear Vol. 376 – 377 (2017) 1789 – 1803. Elsevier, [DOI: 10.1016/j.wear.2017.01.084](https://doi.org/10.1016/j.wear.2017.01.084)

b) Sonstige / *Other*

Simon Schöler, Fahrettin Özkaya, Christoph Kock, Hans Jürgen Maier, Bernd-Arno Behrens (2020): Selective thermally oxidised tool surfaces for dry deep drawing, Dry Met. Forming OAJ, FMT 6 (2020), 001-029

Fahrettin Özkaya, Simon Schöler, Christoph Kock, Sven Hübner, Bernd-Arno Behrens, (2019): Development of a tool concept with selectively oxidised inserts for dry deep drawing, Dry Met. Forming OAJ, FMT 5 (2019), 046-049

Schöler, S.; Wulff, D.; Yilkiran, D.; Behrens, B.-A. (2018): heat treatment as an alternative tempering method for the selective oxidation of 1.2379 tool steel surfaces, Dry Met. Forming OAJ, FMT 4 (2018), 13-17

Yilkiran, D.; Wulff, D.; Özkaya, F.; Hübner, S.; Holländer, U.; Maier, H.-J.; Behrens, B.-A. (2017): Wear Testing of Thermally Oxidised Tool Steel Specimens with α -Fe₂O₃ Layers, Dry Met. Forming OAJ FMT 3 (2017) 45-49

Almohallani, A.; Arghavani, M.; Böhmernann, F.; Freiße, H.; Herrmann, M.; Mousavi, S.A.; Schöler, S.; Scholz, P.; Tenner, J.; Teller, M.; Umlauf, G.; Wulff, D.; Yilkiran, D.; Maier, H. J. (2017): How Dry is Dry? – A Critical Analysis of Surface Conditions Used in Dry Metal Forming, Dry Met. Forming OAJ FMT 3 (2017) 90-94

Yilkiran, D.; Almohallami, A.; Wulff, D.; Hübner, S.; Vucetic, M.; Maier, H.-J.; Behrens, B.-A. (2016): New Specimen Design for Wear Investigations in Dry Sheet Metal Forming, Dry Metal Forming Open Access Journal, FMT 2 (2016), 62-66

D. Yilkiran, D. Wulff, A. Almohallami, U. Holländer, S. Hübner, K. Möhwald, B.-A. Behrens, H.J. Maier (2016): Selectively Oxidised Tool Steel Surfaces for Sheet Metal Forming, Proceedings of the 12th International Conference The „A“ Coatings 2016, 31.03.16 – 01.04.16, Hannover; Berichte aus dem IFW Band 3/2016

Wulff D., Yilkiran D., Holländer U., Lützenkirchen-Hecht D., Wagner R., Hübner S., Möhwald K., Maier H.-J., Behrens B.-A. (2015): Selective oxidation of 1.2379 tool steel surfaces – An approach for Dry Metal Forming , Dry Metal Forming Open Access Journal FMT 1 (2015), 72-78

Amer Almohallami, Deniz Yilkiran, Daniel Wulff, Sven Hübner, Milan Vucetic, Hans Jürgen Maier, Bernd-Arno Behrens (2015): Numerical Modelling of the Tribology of a Selective Oxidised 1.2379 Tool Steel Surface Developed for Dry Metal Forming, Dry Met. Forming OAJ FMT 1 (2015) 91-95,

D. Wulff, U. Holländer, D. Lützenkirchen-Hecht, R. Wagner, D. Yilkiran, B.-A. Behrens, H.J. Maier (2015): in 11th DELTA User Meeting & Annual Report, Dortmund

c) Erteilte Patente / *Issued patents*

DE102013115005.3: Verfahren zum Erzeugen einer oxidierten Oberfläche einer Metalllegierung, insbesondere Bauteilen, und solche Bauteile Erfinder: Holländer, Möhwald, Maier, Neumann, Behrens

DE102016114450.9: Verfahren zum Oberflächenbeschichten eines Bauteils sowie Beschichtungseinrichtung zur Durchführung des Verfahrens Erfinder: Maier, Holländer, Wulff, Behrens, Yilkiran