

Abrasion and erosion resistance of cermets : a review

Kübarsepp, Jakob; Juhani, Kristjan; Tarraste, Marek Materials 2022 / art. 69 <https://doi.org/10.3390/ma15010069> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Abrasive erosion of chromium carbide based cermets

Pirso, Jüri; Viljus, Mart; Kübarsepp, Jakob 9th Nordic Symposium on Tribology NORDTRIB 2000 : Porvoo, Finland, 11-14 June 2000. Vol. 3 2000 / p. 959-967 : ill

Abrasive erosion of ductile and brittle materials

Järvpõld, Neeme Proceedings of the First National DAAAM Conference in Estonia : Science '95 1996 / p. 50-56: ill

Abrasive erosion of powder materials

Kallas, Paul 1996 http://www.ester.ee/record=b1070451*est

Adapting the energetic erosion theory to hardened steels

Kleis, Ilmar; Remi, Toomas Proceedings of the Estonian Academy of Sciences. Engineering 2004 / 1, p. 45-52 : ill

Ancient buried valleys in the city of Tallinn and adjacent area

Vaher, Rein; Miidel, Avo; Raukas, Anto; Tavast, Elvi Estonian journal of earth sciences 2010 / p. 37-48 : ill
https://www.ester.ee/record=b2246661*est

Applicability of the energetic erosion theory to hardened steels

Kleis, Ilmar; Remi, Toomas OST-03 Symposium on Machine Design 2003 / p. 245-252 : ill

Application of shore sediments accumulated in navigation channel for restoration of sandy beaches around Pärnu City, SW Estonia, Baltic Sea

Tõnisson, Hannes; Männikus, Rain; Kont, Are; Palginõmm, Valdeko; Alari, Victor; Suuroja, Sten; Vaasma, Tiit; Vilumaa, Kadri Journal of marine science and engineering 2024 / art. 394 <https://doi.org/10.3390/jmse12030394> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Assessment of cermets performance in erosive media

Hussainova, Irina; Antonov, Maksim International journal of materials & product technology 2007 / 3/4, p. 361-376 : ill
<https://www.inderscience.com/info/inarticle.php?artid=13085>

Assessment of gradient and nanogradient PVD coatings behaviour under erosive, abrasive and impact wear conditions

Antonov, Maksim; Hussainova, Irina; Sergejev, Fjodor; Kulu, Priit; Gregor, Andre Wear 2009 / p. 898-906 : ill

Assessment of zirconia doped hardmetals as tribomaterials

Hussainova, Irina; Antonov, Maksim; Voltšihhin, Nikolai Wear 2011 / p. 1909-1915 : ill

Behaviour of hard alloys in sliding and erosion wear conditions

Kübarsepp, Jakob; Vainola, Vello; Klaasen, Heinrich; Loel, Rein Proceedings of the 4th International Conference Industrial Engineering - New Challenges to SME : 29-30 April 2004, Tallinn, Estonia 2004 / p. 203-206 : ill

Bioerosion of inorganic hard substrates in the Ordovician of Estonia (Baltica)

Vinn, Olev; Wilson, Mark; Toom, Ursula PLoS ONE 2015 / art. e0134279, p. 1-17 : ill <https://doi.org/10.1371/journal.pone.0134279> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Bioerosion of inorganic hard substrates in the Silurian of Estonia (Baltica)

Vinn, Olev; Toom, Ursula GFF 2016 / p. 306-310 : ill <https://doi.org/10.1080/11035897.2015.1076513> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Borings in phosphatized Cambrian siltstone pebbles, Estonia (Baltica)

Vinn, Olev; Toom, Ursula Geological magazine 2016 / p. 635-642 : ill <https://doi.org/10.1017/S001675681500076X> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Centrifugal accelerators for erosion research and standard wear testing

Kleis, Ilmar; Uuemõis, Haljand; Üksti, Lembit; Pappel, Toivo Wear of materials 1979 : presented at the International Conference on Wear of Materials, Dearborn, Michigan, April 16-18, 1979 1979 / p. 212-218

Characterization of powdermetal matrix composites for erosion wear applications

Veinthal, Renno; Kulu, Priit; Pirso, Jüri; Käerdi, Helmo Extended abstracts of 2006 Powder Metallurgy World Congress : Busan, Korea, September 24-28. 2 2006 / p. 1056

Climate change and coastal processes in the Baltic Sea

Soomere, Tarmo Oxford Research Encyclopedia of Climate Science Oxford 2024
<https://doi.org/10.1093/acrefore/9780190228620.013.897>

Correlation between solid particle erosion of cermets and particle impact dynamics

Hussainova, Irina; Schade, Klaus-Peter Tribology international 2008 / 4, p. 323-330 : ill
<https://www.sciencedirect.com/science/article/abs/pii/S0301679X07001399>

Cross-shore profile evolution after an extreme erosion event—Palanga, Lithuania

Kelpšaitė-Rimkienė, Loreta; **Parnell, Kevin Ellis**; Žaromskis, Rimas; Kondrat, Vitalijus Journal of marine science and engineering 2021 / art. 38, p. 1–15 : ill <https://doi.org/10.3390/jmse9010038> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Decadal-scale impacts of a segmented, shore-parallel breakwater system

Dolphin, Tony; Vincent, C.E.; Bacon, J.C.; Dumont, E.; **Terentjeva, Anna** Coastal engineering 2012 / p. 24-34 : ill
https://www.researchgate.net/publication/236268238_Decadal-scale_impacts_of_a_segmented_shore-parallel_breakwater_system

Did stalked echinoderms bioerode calcareous substrates? A possible boring crinoid attachment structure in a stromatoporoid from the early Silurian (Telychian) of Estonia

Vinn, Olev; Ausich, William I.; Wilson, Mark A.; **Toom, Ursula** Paläontologische Zeitschrift PalZ 2023 / p. 37-41
<https://doi.org/10.1007/s12542-022-00637-3> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Effect of basalt and silica additives on erosive wear resistance of cast ceramics

Baroninš, Janis; **Antonov, Maksim**; **Ivanov, Roman**; Shuliak, Volodymyr; **Hussainova, Irina** Proceedings of the Estonian Academy of Sciences 2016 / p. 144-151 : ill <https://doi.org/10.3176/proc.2016.2.05> https://artiklid.elnet.ee/record=b2768221*est [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Effect of carbon stabilizing elements on WC cemented carbides with chromium steel binder

Tarraste, Marek; **Kübarsepp, Jakob**; **Juhani, Kristjan**; **Mere, Arvo**; **Viljus, Mart** Materials science = Medžiagotyra 2019 / p. 202-206 : ill <https://doi.org/10.5755/j01.ms.25.2.19619> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Effect of erodent particle impact energy on wear of cemented carbides

Antonov, Maksim; Yung, Der-Liang; **Goljandin, Dmitri**; **Mikli, Valdek**; **Hussainova, Irina** Wear 2017 / p. 507-515 : ill
<https://doi.org/10.1016/j.wear.2016.11.032> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Effect of microstructure on the erosive wear of titanium carbide-based cermets

Hussainova, Irina Wear 2003 / p. 121-128

Effect of microstructure on the erosive wear of titanium carbide-based cermets

Hussainova, Irina 14th International Conference on Wear of Materials : 30 March-3 April 2003, Washington, DC, USA. Part 1 2003 / p. 121-128 : ill

Effect of oxidation on erosive wear behaviour of boiler steels

Antonov, Maksim; **Veinthal, Renno**; Huttunen-Saarivirta, E.; **Hussainova, Irina**; **Vallikivi, Ahto**; Lelis, Martynas; **Priss, Jelena** Tribology international 2013 / p. 35-44 : ill <https://doi.org/10.1016/j.triboint.2012.09.011> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Effect of thermo-elastic residual stresses on erosive performance of cermets with core-rim structured ceramic grains

Hussainova, Irina; **Kolesnikova, Anna**; **Hussainov, Medhat**; Romanov, Alexey Wear 2009 / 1/4, p. 177-185 : ill

Erosion and abrasion of chromium carbide based cermets produced by different methods

Hussainova, Irina; **Pirso, Jüri**; **Antonov, Maksim**; **Juhani, Kristjan**; **Letunovitš, Sergei** Wear 2007 / 2, p. 905-911 : ill

Erosion and impact wear resistance of thermal sprayed coatings

Kulu, Priit; **Tarbe, Riho**; **Veinthal, Renno** Surface modification technologies : proceedings of the 20th International Conference on Surface Modification Technologies : September 25-29, 2006, Vienna, Austria 2007 / p. 94-99 : ill

Erosion and impact wear resistance of thermal sprayed coatings [Electronic resource]

Kulu, Priit; **Tarbe, Riho**; **Veinthal, Renno** Proceedings of 15th IFHTSE and 20 SMT Congress : September 2006, Vienna 2006 / [CD-ROM]

Erosion by solid particles : results and trends in Estonia

Kleis, Ilmar; **Tadolder, Jüri**; **Üksti, Lembit** First Baltic-Scandinavian Symposium on Mechanics : abstracts 1990 / p. 32

Erosion by vessel waves

Soomere, Tarmo The Gulf of Finland assessment 2016 / p. 324-325 : ill <http://hdl.handle.net/10138/166296>

Erosion of cermets based on titanium and chromium carbides

Pirso, Jüri; Kübarsepp, Jakob International Conference Balttrib'99 : 21-22 September 1999, Kaunas, Lithuania : proceedings 1999 / p. 206-211 : ill

Erosion of Cr₃C₂-based cermets at room and elevated temperatures

Antonov, Maksim; Hussainova, Irina Proceedings of the 3rd International Conference Industrial Engineering - New Challenges to SME : 25-27 April 2002, Tallinn, Estonia 2002 / p. 137-140 : ill

Erosion studies of the iron boride coatings for protection of tubing components in oil production, mineral processing and engineering applications

Medvedovski, Eugene; **Antonov, Maksim** 44th International Conference & Exposition on Advanced Ceramics and Composites, January 26–31, 2020, Daytona Beach, Florida : Abstract book 2020 / (ICACC-S2-005-2020) ; p. 19 https://ceramics.org/wp-content/uploads/2018/09/ICACC20_Abstracts_WebFinal.pdf

Erosion studies of the iron boride coatings for protection of tubing components in oil production, mineral processing and engineering applications

Medvedovski, Eugene; **Antonov, Maksim** Wear 2020 / art. 203277, 8 p. : ill <https://doi.org/10.1016/j.wear.2020.203277> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Erosion testing of refractory cermets at high temperature [Electronic resource]

Antonov, Maksim; Hussainova, Irina Proceedings of 12th Nordic Symposium in Tribology : NORDTRIB 2006 : Helsingor, Denmark, 7-9 June 2006 2006 / [10] p. [CD-ROM]

Erosion wear behavior of HVOF-sprayed WC/Cr₃C₂-based cermet and martensitic stainless steel coatings on AlSi7Mg0.3 alloy : a comparative study

Korobov, Yuri; **Antonov, Maksim**; Astafiev, Vladimir; Brodova, Irina; Kutaev, Vladimir; Estemirova, Svetlana; Devyatyarov, Mikhail; Okulov, Artem Journal of manufacturing and materials processing 2024 / art. 231 <https://doi.org/10.3390/jmmp8050231> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Erosion wear of PM materials and coatings : prediction and control

Veinthal, Renno; Kulu, Priit; Käerdi, Helmo 17th International Baltic Conference : Materials Engineering 2008 : November 6-7, Kaunas, Lithuania : abstracts of papers 2008 / p. 52-53

Erosion wear testing of boiler steels at elevated temperatures

Priss, Jelena; Klevtsov, Ivan; Dedov, Andrei; Antonov, Maksim 14th International Symposium "Topical problems in the field of electrical and power engineering. Doctoral school of energy and geotechnology. II" : Pärnu, Estonia, January 13-18, 2014 2014 / p. 248-250 : ill

Erosion-corrosion of Cr₃C₂-Ni cermets in salt water

Antonov, Maksim; Stack, Margaret; Hussainova, Irina Proceedings of the Estonian Academy of Sciences. Engineering 2006 / 3-1, p. 176-187 : ill

Erosion-corrosion wear of WC-Co hardmetals in solid-liquid mixture

Viljus, Mart; Pirso, Jüri Materials Engineering & Balttrib 2001 : materials of the X-th International Baltic Conference : September 27-28, Jūrmala, Latvia 2001 / p. 193-197 : ill

Erosion-oxidation of pressure vessel steel P265GH

Huttunen-Saarivirta, E.; Kuokkala, V.-T.; **Antonov, Maksim; Veinthal, Renno**; Tuiremo, J.; Mäkelä, K. Tribologia : Finnish journal of tribology 2012 / p. 11-19 : ill <https://journal.fi/tribologia/article/view/69337>

Erosiooni- ja pörkealased uuringud TTÜs

Kleis, Ilmar Tallinna Tehnikaülikooli aastaraamat 2003 2004 / lk. 306-328 : ill

Erosioonkulumise teooria, selle areng ja hetkeseis

Kleis, Ilmar Mehaanika meil ja mujal 1992 / lk. 126-136 : ill, 2 lk. ill https://www.ester.ee/record=b1050590*est

Erosive wear failures

Antonov, Maksim Failure analysis and prevention, vol. 11 2021 / p. 755–763 <https://doi.org/10.31399/asm.hb.v11.a0006795>

Erosive wear of advanced composites based on WC

Hussainova, Irina; Antonov, Maksim; Zikin, Arkadi Tribology international 2012 / p. 254-260 : ill <https://www.sciencedirect.com/science/article/abs/pii/S0301679X11001630>

Erosive wear of boiler steels by sand and ash

Huttunen-Saarivirta, E.; Kinnunen, H.; Tuiremo, J.; Uusitalo, M.; **Antonov, Maksim** Wear 2014 / p. 213-224 : ill <https://doi.org/10.1016/j.wear.2014.06.007> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Erosive Wear of Stainless Steel-Based Hardfacings with Ex-Situ and In-Situ Synthesized TiC

Yöyler, Sibel; Surženkov, Andrei; Tarraste, Marek; Kolnes, Mart; Juhani, Kristjan Coatings 2025 / art. 658

<https://doi.org/10.3390/coatings15060658>

Erosive wear resistance of HVOF sprayed coatings

Kulu, Priit; Veinthal, Renno; Zimakov, Sergei Engineering Materials & Tribology : BALTMATTRIB - 2003 : 12th International Baltic Conference : October 2-3, 2003, Tallinn, Estonia : abstracts 2003 / p. 64-65

Erosive wear resistance of nature-inspired flexible materials

Kumar, Rahul, 1993-; Antonov, Maksim; Holovenko, Yaroslav; Surženkov, Andrei Tribology letters 2020 / art. 51, 8 p. : ill

<https://doi.org/10.1007/s11249-020-01296-8> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Estimation of erosive and adhesive wear resistance of titanium carbide-base cemented carbides

Annuka, Harri; Kübarsepp, Jakob Proceedings of the First National DAAAM Conference in Estonia : Science '95 1996 / p. 80-87: ill

Evolution of a Katian tropical hardground

Toom, Ursula; Kröger, Björn; Knaust, Dirk; Moghalu, Ogechukwu Ann; Vöröš, Dominik; Vodrážková, Stanislava XI Baltic Stratigraphical Conference : abstracts and field guide 2024 / p. 39 https://www.ester.ee/record=b5696260*est

<https://files.geocollections.info/95c3f9cd-1a5f-428b-a1a6-517682aced9d.pdf>

Exposure of a coastal city to a landslide tsunami : a case study of Cassis, France

Averbukh, Elena; Dussouillez, Philippe; Kharif, Christian; Khvostova, Olga; Kurkin, Andrey; Rochette, Pierre; Soomere, Tarmo

Estonian journal of engineering 2013 / p. 124-142 : ill https://artiklid.elnet.ee/record=b2621595*est <https://doi.org/10.3176/eng.2013.2.03> [Article at Scopus](#)

Fracture mechanism of powder materials and coatings by abrasive erosion

Kulu, Priit; Kallas, Paul; Kübarsepp, Jakob International Conference Structure and Properties of the Brittle and Quasiplastic [i.e. Quasiplastic] Materials : June 14-16, 1994, Riga, Latvia : proceedings 1994 / p. 51-55

High temperature erosion of Ti(Mo)C-Ni cermets

Hussainova, Irina; Pirso, Jüri; Antonov, Maksim; Juhani, Kristjan Wear 2009 / 11, p. 1894-1899 : ill

High temperature erosion-corrosion of wear protection materials

Varga, Markus; Rojacz, Harald; Widder, Lukas; Antonov, Maksim Journal of Bio- and Tribo-Corrosion 2021 / art. 87

<https://doi.org/10.1007/s40735-021-00504-9> [Journal metrics at Scopus](#) [Article at Scopus](#)

High-temperature corrosive-erosive wear of boiler tubes

Ots, Arvo Proceedings of the 7th European Conference on Industrial Furnaces and Boilers 2006 / p.126-136

High-temperature erosion of Cr3-C2-based cermets

Hussainova, Irina; Antonov, Maksim Abstracts of 10th Nordic Symposium on Tribology NORDTRIB 2002 / p. 112

High-temperature erosion of Cr3C2-based cermets [Electronic resource]

Hussainova, Irina; Antonov, Maksim Proceedings of 10th Nordic Symposium on Tribology NORDTRIB 2002 / Ref 21 [CD-ROM]

Impact damage and impact transitions in glass

Hussainova, Irina; Pappel, Toivo OST-99 Symposium on Machine Design : Stockholm, 30th Sept. - 1st Oct., 1999 : proceedings 1999 / p. 59-64: ill

Impact wear tester for the study of abrasive erosion and milling processes

Tarbe, Riho; Kulu, Priit Proceedings of the 6th International Conference of DAAAM Baltic "Industrial Engineering" : 24-26th April 2008, Tallinn, Estonia. [2] 2008 / p. 561-566 : ill <http://innomet.ttu.ee/daaam08/online/Materials%20Engineering/Tarbe-rev.pdf>

Initial adjustment of underwater profiles after nourishment in a mild wave climate : a case study near Klaipėda, the Baltic Sea

Šakurova, Ilona; Kondrat, Vitalijus; Baltranaite, Egle; Gardauske, Vita; Kelpšaitė-Rimkienė, Loreta; Soomere, Tarmo; Parnell, Kevin Ellis Estonian journal of earth sciences 2025 / p. 22 - 33 <https://doi.org/10.3176/earth.2025.02>

Investigation of particle-wall collision

Kleis, Ilmar; Frishman, Feliks; Hussainova, Irina OST-96 Symposium on Machine Design, [Stockholm], May 13-14, 1996 : program, abstracts 1996 / [1] p

Investigation of particle-wall collision and erosion prediction

Hussainova, Irina 1999 http://www.ester.ee/record=b1055069*est

Investigation of particle-wall collision and erosion prediction

Hussainova, Irina 1999 http://www.ester.ee/record=b1371968*est

Karbiidkomposiitide abrasiiv-erosioon- ja hõõrdekulumine

Vainola, Vello; Kübarsepp, Jakob; Klaasen, Heinrich; Loel, Rein Tallinna Tehnikakõrgkooli Toimetised 2004 / lk. 66-71 : ill

Linking wave loads with the intensity of erosion along the coast of Latvia

Soomere, Tarmo; Viška, Maija; Lapinskis, Janis; Räämet, Andrus Estonian journal of engineering 2011 / p. 359-374 : ill

Links between bioerosion and oversized benthic fossils : insights from the Upper Ordovician of Estonia, Baltica

Toom, Ursula; Isakar, Mare; Vinn, Olev; Hints, Olle Lille 2021 : Ordovician of the World : programme with abstracts 2021 / p. 76-77
<https://docplayer.net/219093593-Programme-with-abstracts-2021-virtual-annual-meeting-of-igcp-virtual-annual-meeting-of-igcp-735.html>

Lower Paleozoic bioerosion trace fossils from Estonia, Baltica

Toom, Ursula; Vinn, Olev; Hints, Olle International Geoscience Programme Project 653 - Annual Meeting 2017 : Filling the Gap Between the Cambrian Explosion and the GOBE, 8 October to 12 October, 2017, Yichang, China 2017 / p. 169-170

Managed retreat - is it really an option for mitigation of chronic erosion and storm surge flooding

Healy, Terry; **Soomere, Tarmo** Solutions to coastal disasters 2008 : Tsunamis 2008 / p. 456-462
<https://ascelibrary.org/doi/10.1061/40968%28312%2941>

Mathematical modelling and optimization of erosion and corrosion in tribology = Erosiooni ja korrosiooni matemaatilise modelleerimine ja optimeerimine triboloogias

Casesnoves, Francisco 2018 <https://digi.lib.ttu.ee/i/?11175> https://www.ester.ee/record=b5175834*est

Mathematical models in biotribology with 2D-3D erosion integral-differential model and computational-optimization/simulation programming - a mathematical model construction based on experimental research

Casesnoves, Francisco; Surženkov, Andrei International journal of scientific research in computer science, engineering and information technology 2017 / p. 329-356 : ill <http://ijsrcseit.com/CSEIT17224010>

Mathematical models in mechanical and biomedical tribology with computational simulations/optimization methods

Casesnoves, Francisco; Surženkov, Andrei International journal of scientific research in computer science, engineering and information technology 2017 / p. 62-89 : ill <http://ijsrcseit.com/CSEIT17211>

Measurement of the variation bed shear stress during a wave cycle

Oldekop, Nelly; Liiv, Toomas ICSE-6 : 6th International Conference on Scour and Erosion : Paris, August 27-31, 2012 : proceedings 2012 / p. 152-157

Mechanical properties and features of erosion of cermets

Hussainova, Irina; Kübarsepp, Jakob; Pirso, Jüri Wear 2001 / p. 818-825

Mechanical properties and features of erosion of cermets

Hussainova, Irina; Pirso, Jüri; Kübarsepp, Jakob Abstracts of 13th International Conference on Wear of Materials 2001 / p. 99

Micromechanical properties and erosive wear performance of chromium carbide based cermets

Hussainova, Irina; Jasiuk, Iwona; Sardela, M.; Antonov, Maksim Wear 2009 / p. 152-159 : ill

Microstructure and erosive wear in ceramic-based composites

Hussainova, Irina Wear 2005 / p. 357-365 : ill

Microstructure and erosive wear of ceramic based composites

Hussainova, Irina Abstracts of International Conference on Erosive and Abrasive Wear II : Cambridge, UK, 2003 2003 / p. 31
<https://www.sciencedirect.com/science/article/pii/S0043164804002236>

Modeling of erosion wear of powder composite materials and coatings

Veinthal, Renno; Kulu, Priit; Käerdi, Helmo Surface modification technologies : proceedings of the 20th International Conference on Surface Modification Technologies : September 25-29, 2006, Vienna, Austria 2007 / p. 129-132 : ill

Modified simulation of the oblique impact of a hard particle against a ductile solid

Hussainova, Irina OST-99 Symposium on Machine Design : Stockholm, 30th Sept. - 1st Oct., 1999 : proceedings 1999 / p. 49-58: ill

A non-linear deformation model for particle impact process

Pappel, Toivo; Põdra, Priit; Järvpõld, Neeme Materials science = Medžiagotyra 2009 / p. 32-34

Numerical assessment of guided wave tomography in a pipe bend based on full waveform inversion

Rasgado Moreno, Carlos Omar; Ratassepp, Madis e-Journal of Nondestructive Testing (eJNDT) 2023 <https://www.ndt.net/?id=28371>

On micromechanical problems of erosive wear of particle reinforced composites

Hussainova, Irina Proceedings of the Estonian Academy of Sciences. Engineering 2005 / 1, p. 46-58 : ill

Ordovician bioerosion revolution on Baltica

Toom, Ursula; Vinn, Olev; Hints, Olle Zooming in on the GOBE : 2020 virtual annual meeting of IGCP 653 : International Geoscience Programme Project 653 : The onset of the Great Ordovician Biodiversification Event, September 7-10, 2020 : Abstracts 2020 / p. 50

Performance of hard alloys in abrasive-erosive and sliding wear conditions

Kübarsepp, Jakob; Klaasen, Heinrich; Vainola, Vello Proceedings of the Estonian Academy of Sciences. Engineering 2004 / 4, p. 308-314 : ill

Powder coatings for abrasive wear

Pihl, Toomas 2002 https://www.ester.ee/record=b1733979*est

Prediction of erosive wear of powder materials with hardmetal-type structure

Veinthal, Renno; Käerdi, Helmo; Kulu, Priit The 16th International Federation for Heat Treatment and Surface Engineering (IFHTSE) Congress, Brisbane, Australia, 30.10-02.11.2007 2008 / ? p

Prognosis of abrasive-erosive wear resistance of powder coatings [Electronic resource]

Kulu, Priit 23rd Meeting IRG-OECD, Coimbra, 2002 2002 / p. 14 [CD-ROM]

Põhjaee mehaanilisest uuristustegevusest Eestis

Pirrus, Enn-Aavo Keskkonnatehnika 2003 / 1, lk. 20-22 : ill https://artiklid.elnet.ee/record=b1011985*est

Raudne rannakaitse hävitab randa

Parnell, Kevin Ellis; Soomere, Tarmo; Männikus, Rain; Tõnisson, Hannes Postimees 2020 / lk. 20 : ill

https://www.ester.ee/record=b1072778*est

Research of abrasive erosion wear for Fe-C-Cr-B hard layers

Janauskas, V.; Kreivaitis, R.; Kulu, Priit; Antonov, Maksim; Milcius, D.; Varnauskas, V. Mechanika 2008 / 4, p. 71-76 : ill

<https://mechanika.ktu.lt/index.php/Mech/article/view/15098>

Review of existing devices for erosion-corrosion testing of materials [Online resource]

Baroninš, Janis; Antonov, Maksim; Hussainova, Irina Tartu Ülikooli ASTRA projekt PER ASPERA : Funktsionaalsed materjalid ja tehnoloogiad : [7-8 märts 2017, Tartu : teesid] 2017 / [1] p <http://fmdtk.ut.ee/teesid/>

Sediment transport patterns along the eastern coasts of the Baltic Sea = Settetranspordi mustrid Läänemere idarannikul

Viška, Maija 2014 https://www.ester.ee/record=b4419095*est

Sedimentation dynamics in the littoral zone of Lake Peipsi

Terasmaa, Jaanus; Raukas, Anto; Vaasma, Tiit; Tavast, Elvi Baltica 2013 / p. 95-104 <https://doi.org/10.5200/baltica.2013.26.10> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Sliding and erosion wear of cemented carbides

Kübarsepp, Jakob; Klaasen, Heinrich; Vainola, Vello Engineerings Materials & Tribology 2004 : materials of the XIII-th International Baltic Conference : September 23-24, Riga, Latvia 2004 / p. 120-122 : ill

Slurry erosion wear of TiC-NiMo and WC-Co cermets

Juhani, Kristjan; Pirso, Jüri; Viljus, Mart Proceedings of the 7th International Conference of DAAAM Baltic Industrial Engineering : 22-24th April 2010, Tallinn, Estonia. [II] 2010 / p. 456-461 : ill

Slurry erosion-corrosion of TiC-NiMo cermets

Pirso, Jüri; Kübarsepp, Jakob Proceedings of the International Conference on Powder Metallurgy & Particulate Materials PM2TEC'99 : June 20-24, 1999, Vancouver, Canada 1999 / [7] p

Solid particle erosion : occurrence, prediction and control

Kleis, Ilmar; Kulu, Priit 2008 http://www.ester.ee/record=b2368841*est

Solid particle erosion : occurrence, prognostification and control

Kleis, Ilmar; Kulu, Priit 2005 https://www.ester.ee/record=b2080005*est

Solid particle erosion behavior of ceramics at high and room temperature

Jevgrafova, Natalja; Pappel, Toivo Materials Engineering & Balttrib 2001 : materials of the X-th International Baltic Conference : September 27-28, Jurmala, Latvia 2001 / p. 111-114 : ill

Solid particle erosion of refractories : A critical discussion of two test standards

Varga, Markus; **Antonov, Maksim**; Tumma, Mike Wear 2019 / p. 552–561 : ill <https://doi.org/10.1016/j.wear.2018.12.062> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Solid particle erosion of thermal sprayed coatings

Kulu, Priit; Hussainova, Irina; Veinthal, Renno Wear 2005 / 1/4, p. 488-496 : ill

Some aspects of solid particle erosion of cermets

Hussainova, Irina Tribology international 2001 / p. 89-93

Spark erosion in a metal spheres bed : experimental study of the discharge stability and energy efficiency

Kornev, Iakov; Saprykin, Filipp; Lobanova, Galina; Ushakov, Vasily; **Preis, Sergei** Journal of electrostatics 2018 / p. 111-118 : ill <https://doi.org/10.1016/j.elstat.2018.10.008> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

A sparsely encrusted hardground with abundant Trypanites borings from the Llandovery of the Velise River, western Estonia (Baltica)

Vinn, Olev; **Toom, Ursula** Estonian journal of earth sciences 2016 / p. 19-26 : ill https://artiklid.elnet.ee/record=b2760752*est <https://doi.org/10.3176/earth.2016.01> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

A study of erosion of rotary compressor fans and devices

Kleis, Ilmar; Uuemõis, Haljand Proceedings of the Fifth International Conference on Erosion by Liquid and Solid Impact : Newnham College, Cambridge, UK, 3 - 6 September 1979 1979

Surface fatigue processes at impact wear of powder materials

Kulu, Priit; Veinthal, Renno; Saarna, Mart; Tarbe, Riho WOM : 16th International Conference on Wear of Materials : Montreal, Quebec, Canada, April 15-19, 2007 : delegate manual 2007 / p. 17D.1 <https://www.sciencedirect.com/science/article/pii/S0043164807003894>

Symbiotic worms in the inner aragonitic layer of Leptodesma (Bivalvia) from the Põidoli (Upper Silurian) of Saaremaa Island, Estonia

Vinn, Olev; Wilson, Mark A.; Isakar, Mare; **Toom, Ursula** PalZ 2021 / p. 231–236 <https://doi.org/10.1007/s12542-021-00554-x> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

The abrasive erosion wear resistance of powder coating

Kulu, Priit Tribologia : Finnish journal of tribology 1989 / p. 12-25 https://www.ester.ee/record=b1585989*est

The application of coast geomorphic process concepts to eastern Baltic Sea conditions in a changing climate

Parnell, Kevin Ellis; Soomere, Tarmo 3rd Baltic Earth Conference : Earth system changes and Baltic Sea coasts, To be held in Jastarnia, Hel Peninsula, Poland, 1 to 5 June 2020, Held online, 2-3 June 2020 : Conference proceedings 2020 / p. 143-144 https://archive.baltic.earth/hel2020/material/3rd_BalticEarth_Conference_Proceedings.pdf

The effect of erosion parameters on the erosion rate of ceramics

Hussainova, Irina; Jevgrafova, Natalja Proceedings of the 2nd International Conference, 27-29th April 2000, Tallinn, Estonia / DAAAM International Vienna, DAAAM National Estonia 2000 / p. 183-185 : ill

The effect of fine erodent retained on the surface during erosion of metals, ceramics, plastic, rubber and hardmetal

Antonov, Maksim; Pirso, Jüri; Goljandin, Dmitri; Vallikivi, Ahto; Hussainova, Irina Wear 2016 / p. 53-68 : ill <https://doi.org/10.1016/j.wear.2016.02.018> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

The effect of impact angle on erosion of cermets

Hussainova, Irina; Kübarsepp, Jakob Fundamentals of tribology 2001 / p. 537-542

The effects of impact variables and abrasive particle properties on the erosion of cermets

Hussainova, Irina; Pirso, Jüri; Kübarsepp, Jakob Abstracts of papers from 2nd World Tribology Congress 2001 / p. 73

The effects of impact variables and abrasive particle properties on the erosion of cermets [Electronic resource]

Hussainova, Irina; Pirso, Jüri; Kübarsepp, Jakob WTC 2001 : 2nd World Tribology Congress : Vienna, Austria, 03-07 September 2001 2001 / [4] p. : ill. [CD-ROM]

The hard-particle erosion of engineering ceramics

Pappel, Priit OST-96 Symposium on Machine Design, [Stockholm], May 13-14, 1996 : program, abstracts 1996 / [1] p

The principles of the choice of powder coatings for abrasive erosion wear conditions

Kulu, Priit Tallinna Tehnikaülikooli Toimetised 1991 / lk. 106-114: ill

The resistance of ceramic materials to abrasive erosion

Pappel, Toivo; Üksti, Lembit 9th Nordic Symposium on Tribology NORDTRIB 2000 : Porvoo, Finland, 11-14 June 2000. Vol. 3 2000 / p. 945-950 : ill

The resistance of ceramic materials to hard-particle erosion

Pappel, Toivo; Jevgrafova, Natalja OST-99 Symposium on Machine Design : Stockholm, 30th Sept. - 1st Oct., 1999 : proceedings 1999 / p. 65-70: ill

The solid particle erosion of ceramic materials

Pappel, Toivo; Pappel, Priit OST-98 Symposium on Machine Design, Oulanka, Finland, October 1-3, 1998 : proceedings 1998 / p. 67-72: ill

Theoretische Ansätze zur Erosionsprognose von Elastomeren

Kleis, Ilmar; Pallase, Ado WIK : 7. bis 9. Juni 1989 , Zittau: Konferenzmaterial der IX. Wissenschaftlichen Konferenz für Energiewirtschaft ; Konferenzbeiträge der Session V 1989 / p. 19-20

Transformation of natural and synthetic dyes in pulsed electric discharge in the granular steel bed

Shiyan, Ludmila; Lobanova, Galina; Yurmazova, Tatyana; Machekhina, Ksenia; **Preis, Sergei** Journal of electrostatics 2018 / p. 90-98 : ill <https://doi.org/10.1016/j.elstat.2018.10.003> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Treatment of bending deformations in maritime crash analyses

Körgesaar, Mihkel; Storheim, Martin ASME 2020 : 39th International Conference on Ocean, Offshore and Arctic Engineering, August 3-7, 2020 : Virtual, Online : proceedings papers 2020 / Paper No: OMAE2020-19272, V02AT02A017 ; 9 pages <https://doi.org/10.1115/OMAE2020-19272> [Conference proceedings at Scopus](#) [Article at Scopus](#)

Two almost-forgotten Trypanites ichnospecies names for the most common Palaeozoic macroboring

Knaust, Dirk; Dronov, Andrei V.; Toom, Ursula Papers in palaeontology 2023 / art. e1491, 17 p. : ill <https://doi.org/10.1002/spp2.1491> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Wear behavior of Co-free hardmetals doped by zirconia and produced by conventional PM and SPS routines

Hussainova, Irina; Antonov, Maksim; Voltšihhin, Nikolai; Kübarsepp, Jakob Wear 2014 / p. 83-90 : ill <https://doi.org/10.1016/j.wear.2014.01.014> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Wear behaviour of doped WC–Ni based hardmetals tested by four methods

Yung, Der-Liang; Antonov, Maksim; Veinthal, Renno; Hussainova, Irina Wear 2016 / p. 171-179 : ill <https://doi.org/10.1016/j.wear.2016.02.015> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Wear resistance of sintered composite hardfacings under different abrasive wear conditions

Simson, Taavi; Kulu, Priit; Surženkov, Andrei; Tarbe, Riho; Goljandin, Dmitri; Tarraste, Marek; Viljus, Mart; Traksmäa, Rainer Medžiagotyra = Materials science 2017 / p. 249-253 : ill <https://doi.org/10.5755/j01.ms.23.3.17640> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Where did the Ordovician Bioerosional Revolution begin?

Toom, Ursula; Kröger, Björn; Kuva, Jukka; Laska, W.; **Moghalu, Ogechukwu Ann** ICHNIA 2024 - The 5th International Congress on Ichnology. Celebrating One Ichnology! 2024 / p. 279–280 <https://kirjandus.geoloogia.info/en/reference/49268>

Viis aastakümnet erosioonikulumise uuringuid tehnikaülikoolis : sõnavõtt Ilmar Kleisi ja Priit Kulu monograafia "Solid particle erosion" esitluse ja emeritprofessor Ilmar Kleisi 75. sünnipäeva tähistamisel 15. septembril 2005 mehaanikateaduskonnas

Kulu, Priit Tallinna Tehnikaülikooli aastaraamat 2005 2006 / lk. 396-399

Ülevaade erosioonialastest uuringutest Eestis aastail 1956-1996

Kleis, Ilmar Eesti teadlaste kongress, 11.-15. augustini 1996. a. Tallinnas : ettekannete kokkuvõtteid 1996 / lk. 252 https://www.ester.ee/record=b1052731*est

Абразивная эрозия двухфазных сплавов

Pirso, Jüri; Rauk, Marina Тезисы докладов пятой республиканской конференции "Эрозионностойкие порошковые материалы и покрытия" 1988 / с. 29-31 https://www.ester.ee/record=b1256812*est

Абразивная эрозия керметов

Kallas, Paul; Pirso, Jüri; Juriditski, B.J.; Mihhailov, B.G. Трение и износ в машинах. 14 1987 / с. 48-53

Влияние состава и технологии изготовления на абразивную эрозию твердых сплавов TiC-WC с никкель-молибденовой связкой

Kallas, Paul; Pirso, Jüri; Agošašvili, B.T.; Bujanovski, I.N. Свойства и технология изготовления композиционных материалов 1986 / с. 31-37

Влияние твердости абразива на механизм абразивной эрозии спеченных твердых сплавов

Pirso, Jüri; Kallas, Paul Трение и износ в машинах : сборник статей. 11 1981 / с. 91-102 : илл

https://www.ester.ee/record=b2191149*est <https://digikogu.taltech.ee/et/Item/983b9430-cae0-4a0d-a83d-ddb843ffcaee>

Влияние эрозии поверхности пористых металлов на их гидравлическое сопротивление

Belov, S.; Kulu, Priit; Kallas, Paul; Pavlihin, G. Порошковая металлургия = Powder metallurgy : ежемесячный научно-технический журнал 1980 / с. 19-22 : ил., табл https://www.ester.ee/record=b1645489*est

Влияние эрозии поверхности пористых металлов на их структурные и гидравлические характеристики

Belov, S.; Ksenofontov, A.; Kulu, Priit; Kallas, Paul Порошковая металлургия = Powder metallurgy : ежемесячный научно-технический журнал 1983 / с. 41-47 : ил., табл https://www.ester.ee/record=b1645489*est

Исследование абразивной эрозии металлокерамических твёрдых сплавов типа ВК

Kleis, Ilmar; Uuemõis, Haljand; Tumanov, V.; Tiidemann, Tiit Сборник трудов 1973 / с. 123-128 : илл

Исследование абразивной эрозии при повышенных скоростях удара : автореферат ... кандидата технических наук (05.02.04)

Tiidemann, Tiit 1974 https://www.ester.ee/record=b1339859*est

Исследование абразивной эрозии спеченных вольфрамовых твердых сплавов

Kleis, Ilmar; Tumanov, V.; Uuemõis, Haljand; Tiidemann, Tiit Порошковая металлургия = Powder metallurgy : ежемесячный научно-технический журнал 1974 / с. 98-101 : илл https://www.ester.ee/record=b1645489*est

Исследование износостойкости твердых сплавов на основе TiC-C в условиях эрозионного изнашивания

Bujanovski, I.; Lindo, G.; Tšistjakova, V.; Agošašvili, B.; Pirso, Jüri; Kallas, Paul Износ в машинах и методы защиты от него : тезисы докладов Всесоюзной научной конференции, посвященной 1000-летию г. Брянска (Брянск, 1985 г.) 1985 / с. 180

Исследование материалов на коррозионно-эрозионный износ в условиях работы турбоизмельчителей

Kleis, Ilmar; Sokolov, A.F.; Kuzjukov, A.N. Трение и износ в машинах 1978 / с. 33-41 : илл https://www.ester.ee/record=b2190999*est
<https://www.etera.ee/zoom/121378/view?page=1&p=separate&search=%D0%A2%D1%80%D0%B5%D0%BD%D0%B8%D0%B5%20%D0%B8%20%D0%B8%D0%B7%D0%BD%D0%BE%D1%81%20%D0%B2%20%D0%BC%D0%B0%D1%88%D0%B8%D0%BD%D0%B0%D1%85&tool=search&view=0.0.1964.3047>

Исследование многократно механико-термически обработанной стали Ст. 3 на абразивную эрозию

Tadolder, Jüri; Ingerma, August Износ, усталость и коррозия металлов : сборник статей. 5 1972 / с. 45-48

https://www.ester.ee/record=b2190525*est <https://digikogu.taltech.ee/et/Item/bf437fe1-81f3-4dff-97b2-b8d240135d43>

Исследование некоторых закономерностей абразивной эрозии : автореферат ... кандидата технических наук (162)

Uuemõis, Haljand 1968 https://www.ester.ee/record=b1564193*est

Моделирование эрозионного изнашивания твердых хрупких материалов

Beckmann, G.; Gotzmann, J. Трение и износ в машинах. 13 1985 / с. 103-109 : ил https://www.ester.ee/record=b2191144*est
<https://www.etera.ee/zoom/121375/view?>

Наиболее важные результаты исследований абразивной эрозии, проведенных в Штуттгартском университете

Uetz, H. Износ, усталость и коррозия металлов : сборник статей. 6 1973 / с. 3-22 : илл https://www.ester.ee/record=b2190621*est
<https://digikogu.taltech.ee/et/Item/b72113fb-37ed-41e2-b029-bf4661300cc1>

Некоторые закономерности абразивной эрозии твердых сплавов : автореферат ... кандидата технических наук (325)

Kabral, Hillar-Endel 1970 https://www.ester.ee/record=b1388325*est

Некоторые результаты исследования эрозии металлов в струе влажного абразива

Üksti, Lembit; Kleis, Ilmar Износ, усталость и коррозия металлов : сборник статей. 6 1973 / с. 39-47 : илл

https://www.ester.ee/record=b2190621*est <https://digikogu.taltech.ee/et/Item/b72113fb-37ed-41e2-b029-bf4661300cc1>

Новые механические установки для исследования абразивной эрозии

Kleis, Ilmar; Uuemõis, Haljand Вестник машиностроения : ежемесячный научно-технический и производственный журнал 1971 / с. 13-15 : илл https://www.ester.ee/record=b1446100*est

О закономерностях абразивной эрозии при повешенных скоростях струи

Tiidemann, Tiit; Uuemõis, Haljand; Kleis, Ilmar Износ, усталость и коррозия металлов : сборник статей. 6 1973 / с. 29-38 : илл https://www.ester.ee/record=b2190621*est <https://digikogu.taltech.ee/et/Item/b72113fb-37ed-41e2-b029-bf4661300cc1>

О роли адсорбционного понижения прочности в процессе эрозии в корродирующей среде

Üksti, Lembit Износ, усталость и коррозия металлов : сборник статей. 7 1975 / с. 87-92 : илл https://www.ester.ee/record=b2190702*est <https://digikogu.taltech.ee/et/Item/7b7b4d74-55e0-43cf-b22c-bd484ceb163f>

О характере разрушения твердых сплавов при абразивной эрозии

Kabral, Hillar-Endel; Mosberg, Rudolf Износ, усталость и коррозия металлов : сборник статей. 4 1970 / с. 17-22 : илл https://www.ester.ee/record=b2189975*est <https://digikogu.taltech.ee/et/Item/08de6dd6-c065-4fa4-8684-9b41e91f1bd2/>

Основы инженерной методики расчета деталей на абразивную эрозию

Kleis, Ilmar Республиканская научная конференция : абразивная эрозия : тезисы докладов 1970 / с. 7-8 https://www.ester.ee/record=b1372146*est

Особенности создания эрозионностойких газотермических покрытий на порошковых материалах

Kulu, Priit Свойства и технология изготовления износостойких материалов 1984 / с. 35-40 : ил https://www.ester.ee/record=b1356624*est <https://digikogu.taltech.ee/et/Item/ea022321-1583-4ebc-b2cc-3fb5baef87a9>

Прогнозирование износостойкости порошковых материалов и покрытий в условиях абразивной эрозии

Kulu, Priit; Tammeraid, Ivar; Halling, Jaanus Трение и износ в машинах. 14 1987 / с. 32-40

Прогнозирование износостойкости порошковых материалов и покрытий в условиях абразивной эрозии

Kulu, Priit Трение и износ = Friction and Wear : международный научный журнал 1988 / с. 919-925 : ил https://www.ester.ee/record=b1312784*est

Прогнозирование эрозионного износа эластомеров

Pallase, Ado Триботехнические композиционные материалы на основе термопластичных полиуретанов, технология производства и переработки, опыт внедрения в промышленность : Тезисы докладов Всесоюзного семинара, окт. 1989 г., Днепропетровск 1989 / с.36-36

Прогнозирование эрозионного износа эластомеров

Pallase, Ado Tallinna Tehnikaülikooli Toimetised 1991 / lk. 8-16: ill

Пути повышения эрозионной стойкости порошковой стали

Kulu, Priit Металловедение и термическая обработка металлов : [Ежемесячный научно-технический и производственный журнал] 1987 / с. 23-25 : илл

Разработка эрозионностойких конструкционных элементов из безкольфамовых спеченных сплавов

Valdma, Leo; Pirso, Jüri; Kudrjartsev, Vladimir; Kozjakov, Vladimir Тезисы докладов III Всесоюзного семинара по конструкционным спеченым материалам и изделиям (8-10 апр. 1975 г.) 1975 / с. 49-50

Республиканская научная конференция : абразивная эрозия : тезисы докладов

Balbat, A.; Bernštein, D.; Valdma, Leo 1970 https://www.ester.ee/record=b1372146*est

Связь между микромеханическими свойствами и эрозионной стойкостью порошковых материалов и покрытий

Ivaštšenko, L.K.; Kulu, Priit; Mühlman, J.; Halling, Jaanus Свойства и технология изготовления композиционных материалов 1986 / с. 38-44

Сравнительное испытание порошковых покрытий в различных условиях абразивной эрозии

Kulu, Priit; Rõuk, Arno Тезисы докладов пятой республиканской конференции "Эрозионностойкие порошковые материалы и покрытия" 1988 / с. 56-57 https://www.ester.ee/record=b1256812*est

Центробежный ускоритель ЦУК-3М для определения относительной износостойкости материалов при абразивной эрозии

Kleis, Ilmar Износ, усталость и коррозия металлов : сборник статей. 4 1970 / с. 23-33 : илл https://www.ester.ee/record=b2189975*est <https://digikogu.taltech.ee/et/Item/08de6dd6-c065-4fa4-8684-9b41e91f1bd2/>