



## Charles Hatchett Award-Winning Papers 1979-2015



<b>2015</b>	B. Kuhn, M. Talik, L. Niewolak, J. Zurek, H. Hattendorf, P. Ennis, W. Quadakkers, T. Beck and L. Singheiser "Development of High Chromium Ferritic Steels Strengthened by Intermetallic Phases" Mater. Sci. Eng. A, 594, 372-380, 2014
<b>2014</b>	(a) A. Iza-Mendia, M.A. Altuna, B. Pereda and I. Gutierrez "Precipitation of Nb in Ferrite After Austenite Conditioning, Part I: Microstructural Characterization" Metall. Mater. Trans. A, <u>43A</u> , 4553-4570, 2012  (b) M.A. Altuna, A. Iza-Mendia and I. Gutierrez "Precipitation of Nb in Ferrite After Austenite Conditioning, Part II: Strengthening Contribution in High-Strength Low-Alloy (HSLA) Steels" Metall. Mater. Trans. A, <u>43A</u> , 4571-4586, 2012
<b>2013</b>	J. Lu, O. Omotoso, J.B. Wiskel, D.G. Ivey and H. Henei "Strengthening Mechanisms and Their Relative Contributions to the Yield Strength of Microalloyed Steels" Metall. Mater. Trans. A, <u>43A</u> , 3043-3061, 2012
<b>2012</b>	K. Taylor, R. Bodnar, T. Nelson, S. Jansto, H. Tsosie, Z. Hu, S. Mostovoy and P. Nash "Evaluation of Low and Medium-Carbon Nb-Microalloyed Plate Steels for Wind Tower Applications" Int. Symp. on Recent Developments in Plate Steels, AIST, 139-150, 2011
<b>2011</b>	C.L. Miao, C.J. Shang, G.D. Zhang and S.V. Subramanian "Recrystallization and Strain Accumulation Behaviors of High Nb-Bearing Line Pipe Steel in Plate and Strip Rolling" Mater. Sci. Eng. A, <u>527</u> , 4985-4992, 2010
<b>2010</b>	S. Bremer, V. Flaxa and F.M. Knoop "A Novel Alloying Concept for Thermo-Mechanical Hot-Rolled Strip for Large Diameter HTS (Helical Two-Step) Line Pipe" 7 <sup>th</sup> International Pipeline Conference ASME, 489-485, 2008
<b>2009</b>	(a) K.A. Alogab, D.K. Matlock, J.G. Speer and H.J. Kleebe "The Influence of Niobium Microalloying on Austenite Grain Coarsening Behavior of Ti-modified SAE 8620 Steel" ISIJ Int., <u>47(2)</u> , 307-316, 2007  (b) K.A. Alogab, D.K. Matlock, J.G. Speer and H.J. Kleebe "The Effects of Heating Rate on Austenite Grain Growth in a Ti-Modified SAE 8620 Steel with Controlled Niobium Additions" ISIJ Int., <u>47(7)</u> , 1034-1041, 2007
<b>2008</b>	T. Urabe, Y. Ono, T. Fujita, Y. Yamasaki and Y. Hosoya "State-of-Art Nb-Bearing Cold-Rolled Steel Sheet for Automotive Application" International Symposium on Niobium Microalloyed Sheet Steel for Automotive Application TMS (The Minerals, Metals & Materials Society), 409-425, 2006
<b>2007</b>	C.P. Reip, S. Shanmugam and R.D.K. Misra "High Strength Microalloyed CMn (V-Nb-Ti) and CMn (V-Nb) Pipeline Steels Processed through CSP Thin-Slab Technology: Microstructure, Precipitation and Mechanical Properties" Mater. Sci. Eng. A <u>424</u> , 307-317, 2006
<b>2006</b>	S. Hashimoto, S. Ikeda, K. Sugimoto and S. Miyake "Effects of Nb and Mo Addition to 0.2%C-1.5%Si-1.5%Mn Steel on Mechanical Properties of Hot Rolled TRIP-Aided Steel Sheets" ISIJ Int., <u>44(9)</u> , 1590-1598, 2004
<b>2005</b>	(a) Y. Yamabe-Mitarai, Y. Gu and H. Harada "Compressive Strength and Creep Properties of Ir-Nb-Zr Alloys between 1473 and 2073 K" Metall. Mater. Trans. A, <u>34A</u> , 2207-2215, 2003  (b) Y.F. Gu, Y. Yamabe-Mitarai, S. Nakazawa and H. Harada "Creep Behaviors of an Ir-23Nb Alloy at Ultra-High Temperatures" Metall. Mater. Trans. A, <u>34A</u> , 2217-2221, 2003



## Charles Hatchett Award-Winning Papers 1979-2015



<b>2004</b>	L.J. Baker, J.D. Parker and S.R. Daniel "Mechanism of Bake Hardening in Ultra Low Carbon Steel Containing Niobium and Titanium Additions" Mater. Sci. Technol., <u>18</u> , 541-547, 2002
<b>2003</b>	P. Uranga, A.I. Fernández, B. López and J.M. Rodriguez-Ibabe "Improvement of Microstructural Homogeneity in Thermomechanical Processed Nb Steels by Thin Slab Casting" 43 <sup>rd</sup> MWSP Conf. Proc., ISS, <u>39</u> , 511-529, 2001
<b>2002</b>	F. Appel, U. Brossmann, U. Christoph, S. Eggert, P. Janschek, U. Lorenz, J. Müllauer, M. Oehring and J.D.H. Paul "Recent Progress in the Development of Gamma Titanium Aluminide Alloys" Adv. Eng. Mater., <u>2(11)</u> , 699-720, 2000
<b>2001</b>	(a) K. Hulka, W. Bleck and K. Papamantellos "Relationships between Heat Treatment Conditions, Microstructure and Properties of Niobium Microalloyed TRIP Steel" 41 <sup>st</sup> MWSP Conf. Proc. ISS, <u>37</u> , 67-77, 1999  (b) W. Bleck, S. Kranz, J. Ohlert and K. Papamantellos "Effect of the Testing Temperature on the Mechanical Behavior of Low and High Alloyed Steels Showing the TRIP Effect" 41 <sup>st</sup> MWSP Conf. Proc. ISS, <u>37</u> , 295-305, 1999
<b>2000</b>	(a) A. Schmitz, J. Neutjens, J.C. Herman and V. Leroy "New Thermomechanical Hot Rolling Schedule for the Processing of High Strength Fine Grained Multiphase Steels" 40 <sup>th</sup> MWSP Conf. Proc. ISS, <u>36</u> , 295-309, 1998  (b) J. Neutjens, P. Harlet, T. Bakolas and P. Cantinieaux "Processing and Properties of a New Hot-Rolled High-Strength Fine-Grained Multiphase Steel" 40 <sup>th</sup> MWSP Conf. Proc. ISS, <u>36</u> , 311-321, 1998
<b>1999</b>	(a) A.V. Samant and J.J. Lewandowski "Effects of Test Temperature, Grain Size and Alloy Additions on the Cleavage Fracture Stress of Polycrystalline Niobium" Metall. Mater. Trans. A, <u>28A</u> , 389-399, 1997  (b) A.V. Samant and J.J. Lewandowski "Effects of Test Temperature, Grain Size and Alloy Additions on the Low-Temperature Fracture Toughness of Polycrystalline Niobium" Metall. Mater. Trans. A, <u>28A</u> , 2297-2307, 1997
<b>1998</b>	A. Itman, K.R. Cardoso and H.J. Kestenbach "Quantitative Study of Carbonitride Precipitation in Niobium and Titanium Microalloyed Hot Strip Metal" Mater. Sci. Technol, <u>13</u> , 49-55, 1997
<b>1997</b>	(a) S. Lee, D. Kwon, Y.K. Lee and O. Kwon "Transformation Strengthening by Thermomechanical Treatments in C-Mn-Ni-Nb Steels" Metall. Mater. Trans. A, <u>26A</u> , 1093-1100, 1995  (b) O. Kwon, K.J. Lee, J.K. Lee and K.B. Kang "Modeling of Austenite Evolution and Transformation for MA Strips" Microalloying '95 Conf. Proc., Iron and Steel Society, 251-261, 1995
<b>1996</b>	(a) G.I. Rees, J. Perdrix, T. Maurickx and H.K.D.H. Bhadeshia "The Effect of Niobium in Solid Solution on the Transformation Kinetics of Bainite" Mater. Sci. Eng. A, <u>A194</u> , 179-186, 1995  (b) C. Fossart, G. Rees, T. Maurickx and H.K.D.H. Bhadeshia "The Effect of Niobium on the Hardenability of Microalloyed Austenite" Metall. Mater. Trans. A, <u>26A</u> , 21-30, 1995
<b>1995</b>	E.J. Palmiere, C.I. Garcia and A.J. DeArdo "Compositional and Microstructural Changes which Attend Reheating and Grain Coarsening in Steels Containing Niobium" Metall. Mater. Trans. A, <u>25A</u> , 277-286, 1994



## Charles Hatchett Award-Winning Papers 1979-2015



<b>1994</b>	H. Tamerhiro, Y. Terada, Y. Ogata, T. Yoshino, T. Horokawa, K. Katayama, R. Uemori, H. Ogawa, Y. Horii, H. Kashimura and J.M. Gray "CRA Clad UOE Pipe Produced by Applying TMCP Plate" 12 <sup>th</sup> International Offshore and Arctic Engineering Conf. Proc., Glasgow, ASME, 319-327, June 1993
<b>1993</b>	(a) H. Zou and J.S. Kirkaldy "Carbonitride Precipitate Growth in Ti-Nb Microalloyed Steels" Metall. Trans. A, <u>22A</u> , 1511-1524, 1991  (b) H. Zou and J.S. Kirkaldy "Thermodynamic Calculation and Experimental Verification of the Carbonitride-Austenite Equilibrium in Ti-Nb Microalloyed Steels" Metall. Trans. A, 23A, 651-657, 1992
<b>1992</b>	E. Valdes and C.M. Sellars "Influence of Roughing Rolling Passes on Kinetics of Strain Induced Precipitation of Nb (C,N)" Int. J. Metals Mater. Sci. Tech., <u>7</u> , 622-630, 1991
<b>1991</b>	R. Stephens, D.W. Petrasek and R.H. Titran "Refractory Metal Alloys and Composites for Space Power Systems" Int. J. Refract. Met. Hard Mater., <u>9(2)</u> , 96-103, 1990
<b>1990</b>	W. Bleck, W. Muschenborn and L. Meyer "Recrystallisation and Mechanical Properties of Microalloyed Cold-Rolled Steel" Steel Res., <u>59(8)</u> , 344-351, 1988
<b>1989</b>	S. Akiyama, S. Kiya, K. Goshokubo, K. Yokoyama, K. Hirahara and H. Hoshi "Development of an Improved Corrosion Resistant Ferritic Stainless Steel NAR-FC-3" Nippon Stainless Tech. Rep., <u>21</u> , 31-47, 1986
<b>1988</b>	P. Charlier and L. Becker "Optimizing the Composition of a Microalloyed Steel with 0.45% C to Obtain a Tensile Strength of 1000 MPa without Heat Treatment" Strength of Metals and Alloys Conference (ICSMA 7), Montreal, 1985
<b>1987</b>	(a) J.B. Lambert, P.F. Ziegler and J.J. Rausch "Tribocar 532N - A New Material for Environments Involving Wear and Corrosion" 11 <sup>th</sup> Int. Plansee Seminar 1 Reutte Austria 181-200, May 1985  (b) P.F. Ziegler and J.J. Rausch "Tribocar 532N - A New Material for Environments Involving Wear and Corrosion" J. Mater. Energy Syst., <u>8(1)</u> , 49-57, 1986
<b>1986</b>	(a) R. Reidl, S. Karagoz, H. Fischmeister and F. Jeglitsch "New Developments in the Field of High-Speed Tool Steels" Huttenmann Montash, <u>129(3)</u> , 71-85, 1984  (b) S. Karagoz, R. Reidl, M.R. Gregg and H. Fischmeister "The Role of M C Carbides in High Speed Tool Steels" Progress in Metallography, Riederer-Verlag (Stuttgart), 369-382, 1984
<b>1985</b>	(a) R.K. Amin and F.B. Pickering "Austenite Grain Coarsening and the Effect of Thermomechanical Processing on Austenite Recrystallization" 1-30  (b) R.K. Amin and F.B. Pickering "Ferrite Formation from Thermo-Mechanically Processed Austenite" Thermomechanical Processing of Microalloyed Austenite Conf. Proc. Met. Soc. AIME, 337-402, 1982



## Charles Hatchett Award-Winning Papers 1979-2015



<b>1984</b>	T. Irie, S. Satoh, A. Yasuda and O. Hashimoto "Development of Deep Drawable and Bake Hardenable High Strength Steels by Continuous Annealing of Extra Low Carbon Steels with Nb or Ti and P" Metallurgy of Continuous Annealed Sheet Steel Conf. Proc. Met. Soc. AIME, 155-171, 1982
<b>1983</b>	K.K. Schulze "Preparation and Characterization of Ultra-High Purity Niobium" J. Met., <u>33(4)</u> , 33-41, 1988
<b>1982</b>	M.G. Akben, I. Weiss and J.J. Jonas "Dynamic Precipitation and Solute Hardening in a V Microalloyed Steel and Two Nb Steels Containing High Levels of Mn" Acta Metall., <u>29</u> , 111-121, 1981
<b>1981</b>	C. Ouchi, J. Tanaka, I. Kozasu and K. Tsukada "Control of Microstructure by the Processing Parameters and Chemistry in the Arctic Line Pipe Steels" Micon 78 Proc., Optimization of Processing, Properties and Service Performance through Microstructural Control ASTM STP, 672, 105-125, 1979
<b>1980</b>	B. Serin, Y Desalos, P. Maitrepierre and J. Rofes-Vernis "Transformation Characteristics and Properties of Low-Carbon Nb-B Steels" Mem. Sci. Rev. Metall., <u>75</u> , 369, 1978
<b>1979</b>	G.R. Speich and D.S. Dabkowski "Effect of Deformation in the Austenite and Austenite-Ferrite Regions on the Strength and Fracture Behavior of C, C-Mn-Cb and C-Mn-Mo-Cb Steels" The Hot Deformation of Austenite Conf. Proc., AIME, 557-597, 1979