

# LUIS J. RUIZ APARICIO, PhD

MANAGER  
Market & Product Development

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## CAREER SUMMARY

- Eighteen years of relevant industrial experience in the metals industry focused in new product & process development for the aerospace market
- Thorough understanding of the metals industry from mill operations to business development
- Expertise in process technology and new product development business case analysis
- Extensive experience in business-to-business interaction through market development activities
- Proven capability leading cross-business unit technology teams for new product development with a large professional network of aerospace OEM's and fabricators

## TECHNICAL EXPERTISE

- Doctoral and Master degrees in Materials Science & Engineering. BS in Chemical Metallurgy
- Strong understanding of manufacturing procedures for Titanium, Cobalt Super alloys and PH grades in aerospace market applications
- Extensive career in steel industry focused on automotive and O&G markets
- Proficient on Physical Metallurgy and Mechanical Behavior with a thorough understanding of the processing/microstructure/property synergism and its effect on materials performance
- Expert in Crystallographic Texture, Microalloying Technology, TMP, Heat Treatments, Welding, Diffusion, and Formability

## RELEVANT EXPERIENCE

MANAGER, MARKET & PRODUCT DEVELOPMENT- Aerospace: 2007 –

*Responsible for developing new alloys and improving commercial existing flat-rolled product alloys as well as developing the market for their adoption in the aerospace market*

- Proficient leader in planning & executing programs to achieve commercialization goals for flat-rolled products
- Leader of cross-functional technical teams for qualification of Ti alloys for aerospace applications, emerging as the leading technical resource for aerospace sheet products
- Leader of commercialization efforts for adoption of alloys in the aerospace market by developing joint ventures with OEM's and Tier 1-2 fabricators
- Maintain industry expertise by presenting results of joint ventures with customers in conferences
- Provide technical support to business development leaders
- Conducted research to support development and improvement of sheet products including Co-based ATI 188 superalloy, PH Steel 17-4 and Ti 15-333

**SR. PRODUCT ENGINEER- Flat-Rolled Products:** Duferco-Farrell Corp., Farrell PA; 2003 –07  
*Responsible for product development endeavors of flat rolled products in a plant environment. Key member of technical development multi-disciplinary teams. Single Point of Contact for all metallurgical issues. Responsible for technology and quality control of slab products from steelmaking suppliers.*

**RESEARCH ASSOCIATE:** University of Pittsburgh, Pittsburgh, PA; 2002-03  
*Conducted research & process engineering responsibilities to reduce costs, enhance quality, and improve performance of steel coatings. Hands-on experience in formability testing and analytical techniques*

**MANAGER, MARKETING DEVELOPMENT:** Reference Metals Co., Bridgeville PA; 2000-02  
*Managed technical program (US\$800,000/year) in a multi-disciplinary environment to promote Nb use in microalloying technology. Designed and supervised research projects in emerging technologies. Increased North America sales 20% by using technical innovations and on-site metallurgical assessments*

**RESEARCH & DEVELOPMENT ENGINEER:** LTV Steel Co., Cleveland, OH; 1998–2000  
*Conducted product development investigations for sheet steel applications, focused on electrical steels. Performed failure analysis of automotive, appliance and electrical steel products.*

## **EDUCATION**

- PhD: Materials Science & Engineering, University of Pittsburgh
- Master: Materials Science & Engineering, University of Florida
- Bachelor: Chemical Metallurgical Engineering, National University of Mexico

## **PROFESSIONAL ACTIVITIES**

- Organizer of “International Symposium on Advanced High Strength Steels for the Ground Transportation Industry” held at MS&T ’06 Intl. Conference; Oct 16, 2006, Cincinnati, OH
- Organizer of “Precipitation in Steels- Physical Metallurgy and Property Development” Symposium at MS&T ’04 International Conference, New Orleans LA, 2003
- Product Physical Metallurgy Committee Chairman, ISS Executive Committee, 2003-04
- Research/Teaching Assistant in Advance Physical Metallurgy and Mechanical Behavior of Materials (Univ. of Pittsburgh, Univ. of Florida)

## **PROFESSIONAL MEMBERSHIPS**

- The Materials Society (TMS)
- American Society for Metals (ASM)
- Society for Automotive Engineers (SAE)

Presentations:

- L. Ruiz-A , R. Wheeler “Coil Roll Forming of a New High Strength Ti Alloy”, AeroMat 2015 Conf., Long Beach CA, May-14
- L. Ruiz-A, W. Beck “Hot Forming Aspects of ATI 425 Alloy”, EuroSPF 2014 Conf., Vaduz, Lietch, 8-14
- L. Ruiz-A, T. Fisk “Cost-Effective Fabrication of Aerospace Tube Using ATI 425 Alloy, ITA Conf, Chicago IL, Oct-14
- L. Ruiz-A “Manufacturing affordability associated with welding and forming of ATI 425 Alloy”, AeroMat 2014 Conf., Orlando FL, Jun-14
- L. Ruiz-A , R. Wheeler “Joining Characteristics of ATI 425 Alloy”, TMS 2014 Conf., San Diego CA, 3-14
- L. Ruiz-A “Cost-affordable manufacturing associated with ATI 425 Alloy, a continuously-processed high-strength Ti Alloy”, EuroSPF 2013 Conf., Speyer Germany; Sep-13
- L. Ruiz-A “Cost-affordable manufacturing associated with high-strength ATI 425 Alloy sheet”, ITA 2013 Conf., Las Vegas NV; Oct-13
- L. Ruiz-A, B. Duval “Cost-affordable manufacturing associated with a continuously-processed high-strength Ti Alloy”, AeroDef Manuf. Conf. 2013; Long Beach CA
- L. Ruiz-A, K. D’Ambrosio “Manufacturing cost reductions associated with the formability of an innovative high-strength Titanium alloy”, TMS 2013 Conf., San Antonio TX; Mar-13
- L. Ruiz-A “Development of Flat Rolled Products using a New High-Strength alpha+beta Ti Alloy”, Euro-Ti 2012 Conf.; Bristol, UK; Mar-12
- L. Ruiz-A “Welding of ATI 425® Titanium Alloy”, AWS Conf., Charlotte NC; Aug-11
- L. Ruiz-A, B. Swale “High Temperature Formability Behavior of ATI 425® Alloy Sheet”, AeroMat 2011 Conf., Long Beach CA; May-11
- L. Ruiz-A “Development of ATI 425 Alloy Sheet Products”, AeroMat 2010 Conf.; Bellevue WA; Jun-10
- L. Ruiz-A “Development of ATI 425® Alloy”, Airtec 2009 Conf., Frankfurt, Germany; Nov-09
- Seminar Series “Physical Metallurgy and Processing of Steel”, Duferco Farrell Corp., Farrell PA, 2003-05
- Seminar Series “Physical Metallurgy of Steels for Coating Applications”, IMSA, Mexico, Nov-02, Feb-03
- “Recent Advances in Microalloying for Pipeline Production”, Tech. Present., IPSCO Regina, Canada, 7/02
- “Niobium in Pipeline Applications”; ISOPE 2002 Conference, Kitakyushu, Japan; May 2002
- “Microalloying technology for the production of HSLA, IF, Multiphase & Structural Steels”, Technical & Commercial Seminar in Japanese steelmaker plants (Kobe, Nippon, NKK, Kawasaki Steel); May-June-02
- “Addition of Nb for Toughness Improvement of Reinforced Bar”, Tech. Present., Deacero and Acero San Luis, Mexico; Feb-02
- “Use of Microalloying Technology in the Production of Structural Steel”, Tech. Present., Chaparral Steel, Dallas TX; Dec-01
- “Production of Hot Rolled Dual Phase Steels with Nb Additions”, Tech. Present., Inland Steel Co. East Chicago IN (Sep-00); National Steel Co., Detroit MI (Mar-01); LTV Steel Co., East Chicago IN (Jun-01); Bethlehem Steel Co., Bethlehem PA; Sep-01
- “Effect of TMP to Improve Formability of Microalloyed Steels Produced by CSP Technology”, NUCOR Berkeley, South Carolina; Nov-00
- “Effect of Transformation Textures in the Development of Cold Rolled and Annealing Textures in IF Steels”, Conference of Metallurgist, J. Jonas Symposium, Ottawa, Canada; Aug-00
- “The Role of Transformation Textures on the Development of Cold Rolled and Annealing Textures in Ultra-Low Carbon Steels”; IF Steels 2000 Conference; Pittsburgh PA, Jun-00
- “Development of Crystallographic Texture in ULC Sheet Steel”; IF Consortium Review Meeting, Jun-98, U. of Pittsburgh, Pittsburgh, PA. (+)
- "The Effect of C-Stabilization on the Texture Development of ULC-Steels during TMP", 39th. Mechanical Working and Steel Processing & Int. Symp. on Flat Rolled Products, Oct-97, Indianapolis IN
- "TMP of Ultra-Low Carbon (IF) Steels", BAMPRI IF Steel Consortium Inaugural Meeting, Feb-97, U. of Pittsburgh, Pittsburgh, PA
- "Thermomechanical Processing of IF Steels", 37th. Mechanical Working and Steel Processing & Int. Symp. on Recovery & Recrystallization, Oct-95, Hamilton, Ontario, Canada
- "Hot Deformation Behavior of Interstitial-Free Steels", Int. Symp. on Low-Carbon Steels for the 90's, Oct-93, Pittsburgh, PA

#### Publications:

- C. I. Garcia, L. Ruiz-A., et al.: "Production of Nb-bearing Microalloyed Steels using Thin Slab Casting Processing Route"; Proceedings of the 1st Intl. Thin Slab Processing Conf., China, Dec. 2002.
- L. Ruiz-A., C. I. Garcia, et al.: "Characterization of the Microstructures of Nb-bearing Microalloyed Steels Produced by the CSP"; Proceedings of the 1st Intl. Thin Slab Processing Conf., China, Dec. 2002.
- K.K. Tanneti, A. Dasari, D. Misra, L. Ruiz-A.: "Superior Formability and Impact Toughness of Hot Rolled Nb-Ti Microalloyed Steels in Relation to V-Nb Microalloyed Steel", 44th MWSP Conf. Proc., Orlando FL, 9/02
- L. Ruiz-A, et al.: "Development of {111} Transformation Texture in Interstitial-Free Steels", Metallurgical and Materials Transaction A; Vol. 32A-No. 9, 9/2001, pp 2325-2334.
- L. Ruiz-A, et al.: "TMP and Development of {111} Transformation Texture in Interstitial-Free Steels", HSLA Steels 2000 Conf. Proc.; 10/2000, Xi'an China, Ed. G. Liu et al., The Chinese Society for Metals, pp 50-60.
- L. Ruiz-A, et al.: "The Role of Transformation Textures on the Development of Cold Rolled and Annealing Textures in Ultra-low Carbon Steels", IF Steels 2000 Conf Proc; 6/2000, Pittsburgh PA, ISS, pp 85-96.
- L. Ruiz-A, C.I. Garcia and A.J. DeArdo: "The Effect of C-Stabilization on the Texture Development of ULC-Steels during TMP", 39th. MWSP & Intl. Symposium on Flat Rolled Products Proceed., 10/97, Indianapolis, IN.
- F.Ebrahimi, L. Ruiz-A: "Diffusivity in the Nb-Ti-Al Ternary Solid Solution", J. Alloy. Compd., 245 ('96), p.1-9
- L. Ruiz-A, M. Hua, C.I. Garcia, A.J. DeArdo: "Thermomechanical Processing of IF Steels", Proceedings of the Conference Thermo-Mechanical Processing (TMP)2, Sept. 4-6, 1996, Stockholm, Sweden.
- L. Ruiz-A, et al.: "Hot Deformation Behavior of Interstitial-Free Steels", Proceed. of the International Symposium on Low-Carbon Steels for the 90's, Oct.18-21, 1993, Pittsburgh, PA; Ed R. Asfahani & G. Tither. pp.419-426
- L. Ruiz-A, F. Ebrahimi: "Diffusivity in the Nb-Al Binary Solid Solution", J. Alloy. Compd., 202 ('93), p.117-123