Sankara Papavinasam, Ph.D., Fellow of NACE, Fellow of ASTM

Dr. Papavinasam has led several joint industry projects as well as individual client projects, with more than 50 companies, developing solutions and insights to control internal corrosion, external corrosion, and microbiologically influenced corrosion of oil and gas production facilities, and transmission pipelines. He is currently consulting with oil and gas companies in Canada, India, Peru, Saudi Arabia, and USA.

He has published over 100 papers, authored several client reports, written 1 book (Corrosion Control in the Oil and Gas Industry), edited 2 books, contributed to 5 book chapters, developed 7 software products, received 2 patents, led development of 7 industry standards, organized 4 conferences, coordinated 3 workshops, and appeared as subject matter expert before National Academy of Sciences committee, Washington DC, USA and Canadian Senate committee, Canadian Parliament, Ottawa, Canada on crude oil corrosivity.

EXPERIENCE

2013-Contg.	President, CorrMagnet Consulting Inc., Ottawa, Ontario, Canada	
2008-2014.	Adjunct Research Professor, Department of Civil and Environmental Engineering, Carleton University, Ottawa, Ontario, Canada	
1994-2013 2013-2013 2008-2012 1996-2013 1994-1996	CANMET, Ottawa/Hamilton, Ontario, Canada Acting Program Manager (Oil and Gas Pipelines) Group Leader, Materials Assessment Group (Corrosion and Characterisation) Research Scientist NSERC Visiting Fellow	
1993-1994	Scientist, India/Sweden Research Project on Biosensors, Centre for Protein Engineering and	
1991-1993	Biomedical Research, Madras, India. Principal Investigator, Department of Science and Technology, Young Scientist's Research Project, "Studies on the Kinetics and Mechanism of Electropolymerisation of Conducting Polymers by Electrochemical Techniques", Bangalore University, Bangalore, India.	
1990-1991	Lecturer, Department of Chemistry, St. Joseph's College, Bangalore, India.	
	EDUCATION	
1990	Doctor of Philosophy, Bangalore University, Bangalore, India. "Studies on Some Aspects of the Corrosion and its Inhibition of Pb-Sb Alloy, Pb, Cu and Al in Aggressive Media and the Electrodeposition of Zn-Ni Alloy from a Chloride Bath".	
1986	Master of Philosophy, Annamalai University, Chidambaram, India. "Kinetics and Mechanism of Oxidation of Benzaldehydephenylhydrazone by Phenyl Iodine (III) Acetate".	
1984	Master of Science, Madurai Kamaraj University, India.	
1982	Bachelor of Science, Madurai Kamaraj University, India.	
AWARDS AND FELLOWSHIPS		
2016	NACE International, Technical Achievement Award	
2013	ASTM Francis L. LaQue Memorial Award (Highest by ASTM G01: Corrosion Committee)	
2013	Natural Resources Canada, Department Award for Outstanding Contribution to the	

development of Science on "Corrosivity of Crude Oils"

2013	Natural Resources Canada, Minerals and Metals Sectors' Sector Award for Exceptional
2010	Contribution to Science
2012	NACE Materials Performance readers' choice, Corrosion Innovation of the Year Award for "Bio-Corrosion Probe"
2012 2011	Natural Resources Canada, MMS, CanmetMATERIALS Division Award for Science ASTM International Fellow
2011	ASTM International Award of Merit
2009	JPCL Editor's Award for the paper, "Testing Coatings for Pipeline – New Laboratory
2005	Methodologies to Simulate Field Operating Conditions of External Pipeline Coatings", Journal Protective Coating and Liners.
2008	NACE International Fellow
2005	Minerals and Metals Sector Award for the contribution leading to the Development of two new ASTM Standards, G184 and G185 for evaluating corrosion inhibitors to control internal corrosion using rotating cage and rotating cylinder electrode respectively.
2005	Minerals and Metals Sector Team Award to the development of Intelligent System for Pipeline Infrastructure Reliability (ISPIR) (with W Revie W. Zheng, G. Gu, G. Roy, G. Shen, G. Williams, A. Doiron)
2003	CANMET-MTL Divisional Award for Advancing Technology for Managing Corrosion
2003	NACE International, Northern Area, Outstanding Service Award
2003	CIM/CANMET Technology Transfer Team Award
2000	ASTM Committee G01: Corrosion of Metals Award for outstanding contribution on the new standard, "Evaluating and Qualifying Oilfield and Refinery Corrosion Inhibitors in the Laboratory"
1999	Natural Resources Canada, Minerals and Metals Sector Award in recognition to the exceptional contribution to the CANMET/Industry Consortium on "Development of Standardised Methodologies for Evaluation and Qualification of Inhibitors for Sour Service".
1998	CANMET Materials Technology Laboratory Team Recognition Award for achievement in "Designing, Fabricating, and Testing an Atmospheric Pressure Rotating Cage System"
1996	Best paper award, First International Conference on Molecular Association, ICMA 96, India.
1994	NSERC (Natural Sciences and Engineering Research Council of Canada) Postdoctoral Fellowship.
1992	Best Paper Award for paper Published in The Journal of Electrochemical Society of India, 41, 1992, P.43-50.
1991	Young Scientist Research Project, Department of Science and Technology, Government of India.
1988	Best Paper Award for paper Published in The Journal of Electrochemical Society of India, 37, 1988, P.200-206.
1985	Department of Science and Technology Research Fellowship, Department of Chemistry, Bangalore University, Bangalore, India
	Y T A D T D GYYYD

LEADERSHIP

2017-Contg.	Technology Coordinator, TMG N1, NACE International, Houston (to oversee
	development of corrosion control standards for oil and gas production and refinery industries)
2017	Co-Chair, ASTM Symposium on "Recent Advances in Electrochemical Techniques for
	Corrosion Monitoring and Laboratory Corrosion Measurements", Atlanta, GA, USA,
	Nov. 13-14, 2017
2017	Round Table Participant, "Regulations and Standards in Corrosion", CorCon 2017, Mumbai,
	India, September 19, 2017.

2017	Round Table Participant, "Corrosion Monitoring", CorCon 2017, Mumbai, India, September 18, 2017.
2017	Tutorial Co-Organiser, "10-Year Progress on Internal Corrosion Control of Oil and Gas Pipelines: What has Changed and What remains the same", April, 3, 2017
2017	Organizer, "Pipeline Integrity Management (External Corrosion Control) Workshop, SSPC 2017, Pune, India, February 17, 2017.
2017 2015-2017	Technical Panel Discussion – Panel Participant, SSPC 2017, Pune, India, February 15, 2017. Associate Technology Coordinator, TMG N1, NACE International, Houston
2014-Contg.	Instructor, STEM-Corrosion in the Oil and Gas Industry, Online Course,
	www.CorrMagnet.com
2014	Keynote address, "Role of Corrosion Management in Controlling Internal Corrosion of the Oil and Gas Production Infrastructures", InterCorr 2014, organised by ABRACO, Fortaleza, Brazil, May 19-23, 2014.
2014	Subject Matter Expert, Round Table Discussion, "Pipeline Corrosion Issues Related to
2014	Carbon Capture, Transportation, and Storage", Materials Performance, 53 (5) 2014, p. 24-27. Chair, TEG 453x Symposium, "Carbon Capture and Storage", NACE 2014.
2013	Appeared before Canadian Senate Committee on "Safe Transportation of Hydrocarbons in
	Canada" as subject matter expert to explain the inhibitory nature of crude oil under pipeline transportation conditions (http://www.parl.gc.ca/content/sen/committee/411/ENEV/36EV-
	49937-e.HTM)
2013-2015.	Chair, NACE STG 31: Oil and Gas Production – Corrosion and Scale Inhibition
2013	Co-Chair, Banff Pipeline Workshop 2013, Banff, Canada, http://banffworkshop.com
2013	Subject Matter Expert, Round Table Discussion, "Managing Corrosion of Pipelines that Transport Crude Oils", Materials Performance, 52 (5) 2013, p. 28-30.
2012, 2013	Appeared before National Academy of Sciences, Washington DC, to explain inhibitory
	nature of crude oils under pipeline transportation conditions, The National Academies of
	Press, TRB Special Report 311: Effects of Diluted Bitumen on Crude Oil Transmission
2012	Pipelines (2013)
2012	Co-chair, NACE Northern Area Eastern Conference, Oct. 28-31, 2012, Toronto, Ontario, Canada
2012	Interviewed by Canadian Newspaper, Globe and Mail "Study eats into oil-sands opponents"
	corrosion claims", Nov. 23, 2012 (http://www.theglobeandmail.com/report-on-
	business/industry-news/energy-and-resources/study-eats-into-oil-sands-opponents-corrosion-
	claims/article5578801/)
2012	Interviewed by EnergyWire, Washington DC, "Scientists find conventional crudes similarly
0044	corrosive to oil sands mix", Dec. 10, 2012 (http://www.eenews.net/stories/1059973549)
2011	Co-chair, NACE Northern Area Eastern Conference, Aug. 15-18, 2011, Ottawa, Ontario, Canada
2011	Instructor, 5-M Course, University of Zulia, Maracaibo, Venezuela
2009	Session Chair, "Recent Advances in Pipeline Coatings", NACE 2009, March 22-26, 2009,
	Atlanta, Georgia, USA
2009	Instructor, 5-M Course, University of Zulia, Maracaibo, Venezuela
2008-2010	Program Coordinator - Science, NACE International
2008	Coordinator, Second Canada-India Workshop on "Pipeline Integrity: Developing an
	Integrity Management Plan", Sept. 25-26, 2008, Calgary, Alberta, Canada
2008	Session Vice-Chair, "External Pipeline Coatings and Performance under High Operating Conditions", NACE 2008, March 16-20, 2008, New Orleans, Louisiana, USA

2007 Co-chair, NACE Northern Area Eastern Conference, Sept. 24-26, 2007, Ottawa, Ontario, Canada 2007 Coordinator, First Canada-India Workshop on "Pipeline Integrity", November 24, 2007, Mumbai. India 2006-2008 Chairman, NACE STG 62: Corrosion Monitoring and Measurements Session Chair, NACE 2005, "Sour Gas Corrosion for Oil and Gas Production". 2005 2004-Cont. Vice-Chair, ASTM International G01: Corrosion Subcomittee Session Vice Chair, NACE 2004, "Corrosion Related Issues in Oil and Gas Production 2004 Systems Resulting From the Presence of H₂S and Other Sulfur Containing Compounds", March 28 - April 1, 2004. 2003 Session Chair, NACE 2003, San Diego, "Advances in Electrochemistry in Corrosion Monitoring", March 16-20, 2003 Chairman, American Society for Testing and Materials (ASTM) G01-11: Electrochemical 2002-Cont. Techniques in Corrosion 2002 Session Chair: Coating and Cathodic Protection, International Pipeline Conference, October 1-4, Calgary, Canada 2001 Rapporteur Banff Workshop "Managing Pipeline Integrity" Session #3: Upstream Pipelines: Inspection, Corrosion, & Integrity Management, April 9-12, Banff, Alberta. Invited to talk on, "Experience and Success of PICon" at NACE 059X Group, CO2 Corrosion 2001 in Oil and Gas Production, March 13, Houston, Texas. Invited to demonstrate, "Hydrodynamics of Rotating Cage" at NACE 213X Group, Open 2001 Forum on the Flow Effects on Corrosion, March 12, Houston, Texas. 2000-02 **ASTM G01.11. Vice-Chairman,** "Electrochemical Measurements in Corrosion Testing 2000-2012 **Co-organiser**, **PICon** (Pipeline Integrity Internet Icon) – An online journal to publish papers on pipeline integrity 2000 Co-Chair, First Internet Conference on Pipeline Reliability (PICon), http://www.nrcan.gc.ca\PICon **ASTM G01.05.11.01.Technical** Chairman: Multiphase Corrosion Inhibitor Testing **2000**-Cont. (Published: ASTM G170, G184, G185, G202, and G208) **Instructor,** CIM (The Canadian Institute for Mining, Metallurgy, and Petroleum) Course: 1999 Corrosion and Corrosion Control, Quebec City 1999 Rapporteur Banff Workshop Session #4B: Risk Management and Assessment 1999 Committee member: NACE Northern Area Eastern Conference and Exhibition, October 24-27, 1999, Ottawa. Vice-Chairman: NACE T-3U, "Computers in Corrosion" 1998 1998-2001 Education Chairman, NACE Canadian National Capital Section (CNCS). Organised six NACE Courses with over 75 students from Canada, U.S., Trinidad, and Saudi Arabia

QUOTED IN OIL AND GAS COMPANY WEBPAGES

Corrosion and Corrosion Control in Pipelines, Calgary

Instructor, CIM (The Canadian Institute for Mining, Metallurgy, and Petroleum) Course:

1998

"Fact Vs Fiction: Dispelling the Myths of Transporting Dilbit", **Enbridge**, March 24, 2014, http://blog.enbridge.com/2014/March/Dilbit-safe-for-pipelines.aspx, ""We did not see any difference whatsoever. We could not differentiate it from other types of oil," research scientist Sankara Papavinasam, a research scientist with Natural Resources Canada, told the Globe and Mail in November 2012".

"Science Trumps Fiction on Oil Sands Corrosion Claims" **ExxonMobil** Perspectives, Nov. 29, 2012, http://www.exxonmobilperspectives.com/2012/11/29/science-trumps-fiction-on-

<u>oil-sands-corrosion-claims-2/</u> "...According to lead researcher Sankara Papavinasam, <u>quoted in The Globe and Mail</u>, "We did not see any difference whatsoever" between crude oil from oil sands and other crudes...".

MEMBERSHIP

2008-Cont. Canadian Standard Association (CSA) – Pipeline Coating Technical Sub Committee on CSA

Z245.20 (Fusion-bonded epoxy), Z245.21 (Polyolefin), Z245.22 (Insulator), and Z245.30

(Field-applied coatings) standards.

2001-Cont. SSPC (The Society for Protective Coatings)

1999-Cont. ASTM International

1997-Cont. The Electrochemical Society, Inc.

1996-Cont. NACE International

CONFIDENTIAL/CLIENT REPORTS

Written over 100 confidential/client reports to several oil and gas production and transmission pipelines as well as their service companies including: Gas Technology Institute, Pipeline Research Council International, EnCana (Cenovus/Pan Canadian)*, Enbridge Pipelines*, Mobil Oil Canada*, TransCanada Pipelines, Imperial Oil, AEC Pipelines*, Chevron, Gulf Canada Limited, Saudi Aramco, Southern California Gas Company, Consumer Gas, El Paso Corporation, Dominion Transmission Inc., Devon Canada Corporation*, Petro Canada, Numac, Korean Gas Corporation, Nalco Energy Chemicals*, Baker Petrolite, Shaw Pipe Protection*, Specialty Polymer Coatings (SPC)*, Suncor Energy*, 3M Canada, Reilly Industries, CANUSA, PolyGuard, Denso, Polythermic, and OZ Industries.

*Mutliple reports/projects

Client reports and their titles are confidential in nature, but some generic topics of reports are listed below:

- 1. Review of design, materials, and operational conditions to develop internal corrosion flow diagram for an oilsand extraction facility (2015)
- 2. Review of operational and monitoring history of oilsands production facility (SAGD) and develop potential damage mechanisms, internal corrosion types, and corrosion rate (2015)
- 3. Contribute to the development of corrosion control document to manage corrosion of oilsand production (SAGD) facility (2015)
- 4. Review of materials for an oilsand production (SAGD) facility and recommended appropriate materials based on experience gained in similar facility (referred to as equivalency study); creation of corrosion loop circuits and recommendation of locations for sampling and monitoring activities for integrity operational window (IOW) monitoring (2014)
- 5. Review of the corrosion characteristics of oilsand production (SAGD) facility (2014)
- 6. Elucidation of corrosivity and inhibitory nature of crude oils under oil transmission pipeline operating conditions (2014)
- 7. Review and comment on application submitted to Regulatory Board to construct and operate oil transmission pipeline (internal corrosion control portion of submission only) (2012)
- 8. Review and comment on application submitted to Regulatory Board to construct and operate gas transmission pipeline (external and internal corrosion control portion of submission only) (2012)
- 9. Elucidation of corrosivity and inhibitory nature of crude oils under pipeline operating conditions (2012)
- 10. Investigation on the effect of operating temperature variations on internal corrosion rates of oil transmission pipeline (2011)
- 11. Examination of the effect of sulfate-reducing bacteria (SRB) on internal corrosion rate of oil transmission pipeline (2011)

- 12. Analysis of data-trend from internal corrosion monitoring techniques on oil transmission pipelines (2010)
- 13. Evaluation of inline inspection data from three different runs performed over a 4-year time interval in an oil transmission pipeline (2010)
- 14. Development of corrosion rate prediction based on field data analysis of oil transmission pipelines (2000)
- 15. Analysis of field operating condition variations of oil and gas production pipelines and their effects on internal corrosion (2000)
- 16. Validation of internal corrosion prediction model using field data obtained from oil and gas production facilities (2000)
- 17. Development of a method for controlling pitting corrosion of high water-cut and multiphase oil and gas production pipelines based on field operating conditions (1998)
- 18. Analysis of internal corrosion failure incidences of oil and gas production pipelines (1998)
- 19. Elucidation of correlation between external pipeline coating performance and corrosion and stress-corrosion cracking susceptibility (1998)
- 20. A 10-year assessment of performance of external coatings and cathodic protection of gas transmission pipelines (1998)
- 21. A 5-year assessment of performance of external coatings and cathodic protection of oil transmission pipelines (1998)
- 22. Review of pipeline failure analysis reports and identification for opportunities to improve performance (1996)

PUBLICATIONS

BOOKS

- 1. S. Papavinasam, "Corrosion Control in the Oil and Gas Industry", 1,020 pages (October 2013), Gulf Professional Publication (Imprint of Elsevier), ISBN: 978-0-1239-7022-0.
- 2. "Corrosivity of Crude Oil under Pipeline Operating Conditions", Ed. S. Papavinasam, J. Kish, S. Williamson, J. Been, B. Buchanan, and D. Boisvert, 168 pages (2012), NACE International, ISBN: 157-590-2575
- 3. "Advances in Electrochemical Techniques for Corrosion Monitoring and Measurement", Ed. S. Papavinasam, N. Berke, and S. Brossia, 240 pages (2009), ASTM International Publication, STP 1506, ISBN: 978-0-8031-5522-0

BOOK CHAPTERS

- 1. S. Papavinasam, Chapter 3, "Corrosion Management" in Trends in Oil and Gas Corrosion Research and Technologies Production and Transmission" Ed. A.M. El-Sherik, Woodhead Publishing Limited (Imprint of Elsevier), ISBN 978-0-08-101105-8, P. 53-77 (2017).
- 2. S. Papavinasam, Chapter 28, "Advancements in Modelling and Prediction Pitting Corrosion" in Trends in Oil and Gas Corrosion Research and Technologies Production and Transmission" Ed. A.M. El-Sherik, Woodhead Publishing Limited (Imprint of Elsevier), ISBN 978-0-08-101105-8, P. 663-688 (2017).
- 3. S. Papavinasam, Chapter 3: "Electrochemical Polarization Techniques", in "Techniques for Corrosion Monitoring", Ed. L. Yang, Woodhead Publishing Limited, ISBN, 1-84569-187-3, p.47 to 85 (2008).
- 4. S. Papavinasam, Chapter 14: "Rotating Cage and Jet Impingement Techniques", in "Techniques for Corrosion Monitoring", Ed. L.Yang, Woodhead Publishing Limited, ISBN, 1-84569-187-3, p.322 to 343 (2008).
- 5. S. Papavinasam, Chapter 59, "Corrosion Inhibitors" Uhlig's Corrosion Handbook, Ed. R.W. Revie, ISBN 0-471-15777-5, John Wiley & Sons, Inc, N.Y. 2000, p.1089-1105.

6. S. Papavinasam, Chapter 67, "Evaluation and Selection of Corrosion Inhibitors" Uhlig's Corrosion Handbook, Ed. R.W. Revie, ISBN 0-471-15777-5, John Wiley & Sons, Inc, N.Y., 2000, p.1169.

PATENTS

- 1. S. Papavinasam, D. Gould, R.W. Revie, A. MacLeod, and M. Attard, "Biological Activity Probe for the Detection of Sulphide and Sulphide Producing Microorganisms", Canadian Patent, 2,376,549, January 5, 2010.
- 2. S. Papavinasam, D. Gould, A. MacLeod, R.W. Revie, and M. Attard, "Biological Activity Probe", U.S. Patent 6,673,222, January 6, 2004.

INTERNAL CORROSION CONTROL - PAPERS

Modeling

- 1. L. Yan, X. Pang, S. Papavinasam, N. Zaver, M. Arafin, "Material-Biodiesel Compatibility Survey of Industry Experience", NACE Corrosion Conference 2017, paper #: 9434.
- 1. S. Malarvizhi, R. Shyamala, and S. Papavinasam, "Assessment of Microbiologically Influenced Corrosion of Metals in Biodiesel from Jatropha Curcas", CORROSION 2015, Paper #5772, NACE International, Houston, TX (2015).
- 2. A. D. Turris, M.D. Romero, S. Papavinasam, and L. Ocando, "Synergistic Effect of Sulphate-Reducing Bacteria and CO₂ on the Corrosion of Carbon Steel and Chemical Treatment to Control it", CORROSION 2014, Paper #3749, NACE International, Houston, Texas (2014).
- 3. K.R. Kanimozhi, R. Shyamala, S. Papavinasam, and J. Li, "Effect of Sodium Chloride Concentration on the Corrosion of Carbon Steels and Stainless Steels in CO₂ Environment at Atmospheric Pressure under Turbulent Flow Condition" CORROSION 2014, Paper #4074, NACE International, Houston, Texas (2014).
- 4. K.R. Kanimozhi, R. Shyamala, S. Papavinasam, and J. Li, "Effect of Monoethanolamine (MEA) on the Corrosion Rates of Carbon Steels and Stainless Steels in CO₂ Saturated NaCl Solutions " CORROSION 2014, Paper #4241, NACE International, Houston, Texas (2014).
- 5. T. Haile, S. Papavinasam, and T. Zintel, "Validation of Corrosion Models using Field Data obtained from Oil and Gas Production Pipelines", CORROSION 2013, Paper #2170, NACE International, Houston, Texas (2013).
- 6. A.D. Turris, M. D. Romero, S. Papavinasam, and R. Lastra, "Effect of SRB, CO₂, crude oil, and chemical treatment on the corrosiveness of synthetic produced water", CORROSION 2013, Paper #2213, NACE International, Houston, Texas (2013).
- 7. J. Collier, S. Papavinasam, and C. Shi, "Corrosion Performance of Automotive Fuel Tank Steel Systems in Biodiesel", CORROSION 2013, Paper #2356, NACE International, Houston, Texas (2013).
- 8. J. Collier, S. Papavinasam, J. Li, C. Shi, P. Liu, and J.P. Gravel, "Effect of Impurities on the Corrosion Performance of Steels in Supercritical CO₂", CORROSION 2013, Paper #2357, NACE International, Houston, Texas (2013)
- 9. X. Landry, A. Runstedtler, S. Papavinasam, and T.D. Place, "Computational Fluid Dynamics Study of Solids Deposition in heavy Oil Transmission Pipeline", Corrosion 68(10), p. 904-912 (2012).
- 10. S. Papavinasam, J.Li, A. Doiron, J.P. Gravel, K. Zanganesh, D. Emadi, C. Salvador, A. Shafeen, and A. Pratt, "Materials Issues in CO₂ Capture, Transport, and Storage Infrastucture", CORROSION 2012, Paper #1259, NACE International, Houston, TX (2012).
- 11. S. Papavinasam, A. Doiron, and T. Panneerselvam, "Integration of Localized Internal Pitting Corrosion and Flow Models", CORROSION 2012, Paper #23794, NACE International, Houston, TX (2012).
- 12. A.D. Turris, M. De Romero, T. Haile, S. Papavinasam, and D. Gould, "Correlation between the growth of a mixed culture of SRB isolated from produced water and the corrosion of carbon steel", CORROSION 2012, Paper #1126, NACE International, Houston, TX (2012).

- 13. A. Runstedtler, S. Papavinasam, and T.D. Place, "Solids Deposition Modeling for Heavy Oil Transmission Pipelines", Paper #1, NACE Northern Area Eastern Conference Proceedings, "Corrosivity of Crude Oil under Pipeline Operating Condition", NACE International, ISBN: 1-57590-257-5, Houston, TX (2012).
- 14. S. Papavinasam, P. Rahimi, and S. Williamson, "Corrosion Conditions in the Path of Bitumen from Well to Wheel", Paper #2, NACE Northern Area Eastern Conference Proceedings, "Corrosivity of Crude Oil under Pipeline Operating Condition", NACE International, ISBN: 1-57590-257-5, Houston, TX (2012).
- 15. J. Collier, S. Papavinasam, J. Li, C. Shi, P. Liu, and M. Podlesny, "Comparison of Corrosivity of Crude Oils using Rotating Cage Method", Paper # 6, NACE Northern Area Eastern Conference Proceedings, "Corrosivity of Crude Oil under Pipeline Operating Condition", NACE International, ISBN: 1-57590-257-5, Houston, TX (2012).
- 16. A. D. Turris, S. Papavinasam, M. De Romero, R. Lastra, and W.D. Gould, "Effect of Venezuelan Crude Oil on the Corrosivity of Synthetic Produced Water with SRB and CO₂", Paper #9, , NACE Northern Area Eastern Conference Proceedings, "Corrosivity of Crude Oil under Pipeline Operating Condition", NACE International, ISBN: 1-57590-257-5, Houston, TX (2012).
- 17. S. Papavinasam, J. Li, A. Doiron, K. Zanganesh, D. Emadi, C. Salvador, A. Shafeen, and A. Prett, "Materials Issues in CO2 Capture, Transport, and Storage Infrastructure, NACE, Northern Area Western Conference, Feb. 6-8, 2011, Regina, Saskatchewan, Paper #1.
- 18. M.H.N. Paramesh, A. Anand, S.R. Krishnamurthy, S.R. Mani, and S. Papavinasam, "Corrosivity of Pongamia Pinnata Biodiesel-Diesel Blends on a Few Industrial Metals", Paper #: 18171, NACE 2011, Houston, Texas.
- 19. A. Anand, M.H.N. Paramesh, S.R. Krishnamurthy, S.R. Mani, and S. Papavinasam, "Compatibility of Metals in Jatrupha Oil", Paper #18172, NACE 2011, Houston, Texas.
- 20. S. Papavinasam, A. Doiron, and R.W. Revie, "Model to Predict Internal Pitting Corrosion of Oil and Gas Pipelines", Corrosion 66 (3), 2010, p. 35006 (11 pages).
- 21. S. Papavinasam, J. Krausher, M. Paramesh, A. Anand, S. Mani, and S. Krishnamurthy, "Materials Compatibility in Biofuels", 218th Electrochemical Society (ECS) Meeting in Las Vegas, Nevada (October 10 15, 2010)
- 22. S. Papavinasam, A. Doiron, J. Li, D.Y. Park, and P. Liu, "Sour and Sweet Corrosion of Carbon Steel: General or Pitting or Localized or All of the Above?, NACE Corrosion Conference 2010, Paper #14054.
- 23. H.N. Meenaski, A. Anisha, R. Shyamala, R. Saratha, and S. Papavinasam, "Corrosion of Metals in Biodiesel from Pongamia Pinnata", NACE CORROSION 2010, Paper #14143.
- 24. S. Papavinasam, A. Doiron, and R.W. Revie, "Effect of Surface Layers on the Initiation of Internal Pitting Corrosion in Oil and Gas Pipelines, Corrosion 65 (10), 2009, p.663-673.
- 25. R.D. Kane and S. Papavinasam, "Corrosion and SCC issues in Fuel Ethanol and Biodiesel", NACE CORROSION 2009, Paper #9528.
- 26. A. Demoz, S. Papavinasam, O. Omotoso, K. Michaelian, and R.W. Revie, "Effect of Field Operational Variables on Internal Pitting Corrosion of Oil and Gas Pipelines, Corrosion 65 (11), 2009, p.741-747.
- 27. W. Sun, S. Nesic, and S. Papavinasam, "Kinetics of Corrosion Layer Formation. Part 2: Iron Sulfide/Carbonate Layers in Carbon dioxide/Hydrogen Sulphide Corrosion", Corrosion 64 (7), 2008, p.586-599.
- 28. S. Papavinasam, A. Demoz, K. Michaelian, and R.W. Revie, "Further Validation of Internal Pitting Corrosion Model", Paper #08642, New Orleans, March 16-20, NACE, Houston, Texas, 2008.
- 29. R. Sooknah, S. Papavinasam, and R. W. Revie, "Validation of a Predictive Model for Microbiologically Influenced Corrosion", NACE 2008, Paper 8503, Houston, Texas.
- 30. S. Papavinasam, A. Doiron, V. Sizov, and R.W. Revie, "A Model to Predict Internal Pitting Corrosion of Oil and Gas Pipelines (Part 1), Oil and Gas Journal, 105.44, Nov.26, 2007, pages 68-73.
- 31. S. Papavinasam, A. Doiron, V. Sizov, and R.W. Revie, "A Model to Predict Internal Pitting Corrosion of

- Oil and Gas Pipelines (Part 2), Oil and Gas Journal, 105.45, Dec. 2007, pages 62-67.
- 32. S. Papavinasam, A. Doiron, and R.W. Revie, "Empirical Equations to Predict Conditions for Solid Deposition", Materials Performance, 46 (8), 2007, p.58-60.
- 33. S. Papavinasam, A. Doiron, T. Panneerselvam, and R.W. Revie, "Effect of Hydrocarbons on the Internal Corrosion of Oil and Gas Pipelines" Corrosion 63 (7), 2007, 704-712.
- 34. R. Sooknah, S. Papavinsam, and R.W. Revie, "Modelling the Threat of Microbiologically Influenced Corrosion", Corrosion 2007, Paper #7515.
- 35. S. Papavinasam, A. Doiron, and R.W. Revie, "A Model to Predict Internal Pitting Corrosion of Oil and Gas Pipelines", Corrosion 2007, Paper #7658.
- 36. S. Papavinasam, R. W. Revie, W. Friesen, A. Doiron and T. Panneerselvam, "Review of Models to Predict Internal Pitting Corrosion of Oil and Gas Pipelines", *Corrosion Reviews*, 24 (3–4), 173–230 (2006).
- 37. S. Papavinasam and R. W. Revie, "Integrity Management: Internal corrosion control", CORROSION 2006, Paper #6187, March 12-19, 2006.
- 38. S. Papavinasam and R. W. Revie, "Predicting Internal Pitting Corrosion of Oil and Gas Pipelines: Hydrocarbon-Wet to Water-Wet Transition", CORROSION 2006, Paper #6641, March 12-19, 2006.
- 39. W. Sun, S. Nesic, and S. Papavinasam, "Kinetics of Iron Sulfide and Mixed Iron Sulfide/carbonate scale Precipitation in CO₂/H₂S Corrosion", CORROSION 2006, Paper #6644, March 12-19, 2006.
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