



INTERNATIONAL JOURNAL OF NANO CORROSION SCIENCE AND ENGINEERING. CURRICULUM VITAE

Name : Abdulhameed Al-Hashem

Date of Birth : 15th May 1957

Nationality : Kuwaiti

EDUCATION :

1987 Ph.D. in Metallurgy and Materials
Engineering, Lehigh University,
Bethlehem, PA., U.S.A.

1982 M.Sc. in Chemical Engineering,

Wayne State

University , Detroit, Michigan, U.S.A.

1980

B.Sc. in Chemical Engineering,
Wayne State University, Detroit,
Michigan, U.S.A.

PROFESSIONAL

CAREER:

- * March 2006-Todate : Director of the Petroleum Research & Studies Center (PRSC), KISR.
- * January 2003-2006 : Senior Research Scientist, Petroleum Production Department, Corrosion Program, PRSC (KISR).
- * March 2001-2003 : Research Scientist, Petroleum Production Department, Corrosion Program, PRSC (KISR).
- * **January 1995 - Feb.2001** : Research Scientist and Manager, Materials Application Department, Kuwait Institute for Scientific Research (KISR).
- * **June 1992 – January 1995** : Associate Research Scientist and Manager, Materials Application Department, Kuwait Institute for Scientific Research (KISR).
- * **February 1991 – Dec. 1992** : Associate Research Scientist, Kuwait Institute for Scientific Research (KISR).
- * **1991 (Jan - March)** : Military Interpreter, US Army, Operation Desert Shield Desert-Storm, Saudi Arabia.

- * **1990 - 1991** : Visiting Research Scientist, Corrosion Laboratory, Lehigh University, USA.
- * **1987 - 1990** : Assistant Research Scientist, Kuwait Institute for Scientific Research (KISR).
- * **1986 - 1987** : Laboratory Assistant, Metallurgy and Materials Engineering Dept., Lehigh University, U.S.A.
- * **March 1983 - 1987** : Research Associate, Kuwait Institute for Scientific Research (KISR).
- * **February 1981 - 1983** : Research Assistant, Kuwait Institute for Scientific Research (KISR).

MEMBERSHIP:

- * Member, The Alumni Association, Lehigh University, PA, USA.
- * Member, National Association of Corrosion Engineers (NACE), USA.
- * Chairman, NACE-International Kuwait Section, Kuwait.
- * Member, International Corrosion Council (ICC), Canada.
- * Member, the American Society for Metals (ASM), USA.

PROJECTS:

Authored and co-authored research proposals in the following areas:

- ◆ **MS-56** Corrosion and Corrosion Cracking of Alloys in Seawater
 Budget = KD560,000
 Duration=5 years
 Status = Completed
 Financiers = KNPC, PIC, ADNOC, KFAS.

- ◆ **MS-73** AC Impedance Spectroscopy in Monitoring Corrosion and Corrosion Related Problems
Budget = KD9000
Duration = 9months
Status = Completed
Financiers = KISR

- ◆ **MS-70** Corrosion Laboratory
Budget = KD8000
Duration = 1year
Status = Completed
Financiers = Local Industries

- ◆ **MS-71** Atmospheric Corrosion Studies for Kuwait
Budget = KD122,000
Duration = 4 years
Status = Completed
Financiers = KFAS, KISR.

- ◆ **PR001C** Atmospheric Corrosion map of Kuwait

Budget = KD319,000

Duration = 10 years

Status=on-going

Financiers = EPC, KFAS, KISR.

- ◆ **PR003K** Marine Microfouling and Corrosion of Metals and Alloys in Seawater

Budget = KD90,535

Duration = 2.5 years

Status = Completed

Financiers = KISR.

- ◆ **PR008K** Economic Effects of Metallic Corrosion in the state of Kuwait

Budget = KD54,900

Duration = 1.5 years

Status = Completed

Financiers = KFAS, KU, KISR.

- ◆ **PR006K** Development of Non-Toxic, Non-metallic Corrosion Inhibitor

Compatible with Arsenic For CO₂ Removal System

Budget = KD19,000

Duration=3 months

Status=Completed

Financier = KISR.

- ◆ **PR007C** Oil Field Scale and Corrosion Inhibition of Downhole and Surface Facilities

Budget = KD192,860

Duration = 3 years

Status = Under preparation

Financiers = KOC-SAT, KFAS, KISR.

- ◆ **PP002P** Seawater Injection Project, North Kuwait

Budget = KD206,000

Duration = 6 months;

Status = Completed

Financier = KOC.

- ◆ **PP003P** Lab and on-site Studies for Effluent Water Disposal and Reinjection- West Kuwait Oil Field.

Budget = KD230,000

Duration = 9 months

Status = Completed

Financier = KOC.

- ◆ **PP007C** Oilfield Injection Water Quality and Corrosivity Assessment for Reservoir Response, North Kuwait -Pilot Trials

Budget : KD222,440/-

Duration: 2.5 years

Status : Completed

Financier: KOC

- ◆ **PR011C** Studies of Corrosion Rates as a function of Water Cut UG Oilfield-West Kuwait.

Budget : KD46,000/-

Duration : 1 year

Status : Completed

Financiers: KOC

- ◆ **PR005C** Marine fouling and Corrosion of Metals and Alloys in Arabian Gulf Seawater -Field Study.

Budget : KD65,000/-

Duration 2 years

Status : Completed

Financiers : KFAS/KISR.

- ◆ **PR009C** Synergism of Corrosion, Scale and Biocide Inhibitors on the Corroison behaviour of Carbon Steel Under Downhole Conditions.

Budget : KD32,500/-

Duration : 1.5 years

Status : On-going

Financiers : KFAS/KISR.

- ◆ **WD002** Research and Development on Desalination by Reverse Osmosis:

Materials Selection and Corroison

Budget: KD344,690/-

Duration: 4 years

Status: Completed

Financiers : KFAS/KISR.

PF016C Testing Operation of Jet Recycle System for Treatment of Oily

Sludge.

Budget : KD36,700/-

Duration: 3 months

Status: On-going

Financier : Jet Recycle Inc and Japan Oil Engineering Co.

PP011C Seawater Injection Project- North Kuwait, (Phase I).

Budget : KD504,000/-

Duration : 12 months

Status : Completed

Financier : KOC

PP014C Disposal of Chemically Treated of-Specification Injection Water ,
North Kuwait-Phase I.

Budget : KD24,380/-

Duration : 6 months

Status : Completed

Financier : KOC

PP017C Assessment and Control of Parameters in Seawater System.

Budget :KD1,040,000/-

Duration : 12 months

Status : Completed

Financier : KOC

PP019C Technical Support and Monitoring of Effluent Water Transfer System (EWTS) and Minagish Water Injection Plant (MWIP)- West Kuwait.

Budget : KD476,730/-

Duration : 6 months

Status : Completed

Fianancier : KOC

PC004C Cavitation Erosion of Fiberglass Reinforced Plastic Pipes in Sea and Effluent Waters.

Budget : KD12,500/-

Duration : 24 months

Status : Completed

Fianancier : Saudi Aramco

PC003C Flow Dependent Corrosion of Alloys Utilized in Seawater Applications.

Budget : KD 78,440/-

Duration : 24 months

Status : Completed

Fianancier : KFAS, KISR

PP020C Laboratory and On-site Studies on Produced Effluent for Secondary Recovery Disposal Purposes in South East Kuwait Fields.

Budget :KD353,560/-

Duration : 18 months

Status : Completed

Fianancier : KOC

PP023C Seawater Quality and Injection Parameters in North Kuwait Oil Fields (Subiya, Sabriya and Raudhatain)

Budget :KD3,989,854/-

Duration : 48 months

Status : On-going

Fianancier : KOC

PP024C Performance Assessment of Waters (Aquifer and Effluent) for Minagish Water Injection Plant (MWIP)- West Kuwait

Budget :KD2,117,364/-

Duration : 48 months

Status : On-going

Fianancier : KOC

PP030C Performance Assesement of Aquifer Water for the Wara Pilot Injection Plant-South East Kuwait

Budget: KD 700,000.

Duration: 24 months

Status: On-going

Fianacier: KOC

CONSULTANCY:

- Consultant for the Chemical Engineering Department at King Saud University, Riyadh, KSA on "Survey and Characterization of Atmospheric Corrosion in Saudi Arabia" project, since April, 2001.

TEACHING EXPERIENCE:

Provided theoretical and practical training courses to industry engineers and university students in the following subjects:

- Corrosion Engineering
- Localized Forms of Corrosion
- Seawater Corrosion
- Corrosion Engineering -Sour Service Environment
- Materials Laboratory
- Structure and Properties of Materials.

OTHER ACTIVITIES:

Acting Division Director for the Petroleum, Petrochemicals and Materials Division, Member of the PP&MD committee for the development of KISR's Fourth Strategic Program (TSP), member of the scientific committee for the 2nd Arabian Corrosion Conference, KISR member of the Ministry of Industry and Commerce for Kuwait's standard and specification committee, member of the population committee in the Amiri Diwan, a member in the committee that has set the

requirements for the Petroleum Research and Studies Center, and the chairman of NACE International –Kuwait Section since 2001.

RESEARCH PUBLICATIONS:

1. M. Islam, A. M. Abdullah and A. H. Al-Hashem. 1984. *"The Corrosion Behaviour of Some Heat Exchanger Alloys in Unpolluted and Polluted Kuwait Seawater"*. Proceedings of 9th Int. Congr. Met. Corrosion, Toronto, Canada, 3-7 June, pp. 534-537.
2. A. Al-Hashem and D. Thomas. 1988. *"The Ionic Resistance of Thermoplastic Phenoxy Films"*. Proceedings of the American Chemical Society Division of Polymeric Materials : Science and Engineering Vol. 58, The Third Chemical Congress of North America, Toronto, Ontario, Canada, pp. 168.
3. A. Al-Hashem and D. Thomas. 1988. *"AC Impedance in Predicting the Corrosion Behaviour of Metallic Spots Contained in Phenoxy Films"*. Proceedings of the American Chemical Society Division of Polymeric Materials: Science and Engineering Vol. 58, The Third Chemical Congress of North America, Toronto, Ontario, Canada, pp. 308 - 314.
4. A. Al-Hashem and D. Thomas. 1990. *"The Corrosion Behaviour of Metallic Spots in a Phenoxy Coatings"*. Advances in Localized Corrosion, eds. Isaaca, H.S. et. al., NACE, Houston, Texas, pp. 351.
5. A. Al-Hashem and D. Thomas. 1989. *"AC Impedance in Predicting the Corrosion Behaviour of Metallic Spots Contained in Polymer Films"*, Proceedings of Advances in Corrosion Protection by Organic Coatings, Christ's College, Cambridge, U.K. , April.
6. A. Al-Hashem and D. Thomas. 1989. *"The Effect of Corona Discharge Treatment on the Corrosion Behaviour of Metallic Zinc Spots Contained in Polymeric Coatings"*, Proceedings of the International Conference on Zinc and Zinc Alloy Coated Steel Sheet, Galvatech'89. The Iron and Steel Institute of Japan, Keidanren Kaikan, Tokyo, Japan, September, pp.611.
7. J. Carew and A. Al-Hashem, 1990. *"The Use of Epoxy-Based Coatings for the Protection of Weldments in Cement-Lined Carbon Steel Pipes for Seawater Applications"*, presented at the Third Seminar on Corrosion and Corrosion Prevention in Industry. The Organizing Committee, State Enterprise for Phosphate, Baghdad, Iraq, March 24.
8. A. Al-Hashem and D. Thomas. 1990. *"Optical Microscopy and Electro-chemical Studies of the Corrosion Phenomena of Metallic spots in Polymer Films"*. Proceedings of the 11th International Corrosion Congress, AIM-Associazione Italiana Di Metallurgia, Florence, Italy, April 2-6, Vol. 2, pp. 401 - 407.

9. A. Al-Hashem and D. Thomas. "*Ac Impedance in Predicting the Corrosion Behaviour of Metallic Spots Contained in Polymer Films*". Journal of Coating Technology, Vol. 62, No. 783, pp.51, (1990).
10. A. Al-Hashem, D. Mills and D. Thomas. 1991. "*The Ionic Resistance of Thermoplastic Phenoxy Resins*". Journal of Colour and Chemist's Association (JOCCA), Vol.74, No.1, p.25.
11. A. Al-Hashem and D. Thomas. 1991. "*The Effect of Corona Discharge Treatment on the Corrosion Behaviour of Metallic Zinc Spots Contained in Phenoxy Coatings*". JOCCA, Vol. 74, No. 3, pp. 89 -91.
12. K. Habib, A. Al-Hashem, V. Eling, C. Wu, K. Moore and R. Mehalik. 1990. "*The Effect of C and Co Additions on the Properties of A Fe-B-Si Metallic Glass*" to be presented at Recrystallization' 90 an International Conference on Recrystallization in Metallic Materials held at the University of Wollongong, Australia, January 22-26.
13. V. K. Gouda, A. Al-Hashem, A. Abdullah, W. Riad, "*Effect of Ultrasonically Induced Cavitation on the Behaviour of Nodular Cast Iron in Seawater*", British Corrosion Journal, Vol. 26, No.2, pp.109. 1991.
14. A. Al-Hashem, V. K. Gouda, A. M. Abdullah, and W. T. Riad. "*Cavitation-Corrosion Behaviour of Cast Iron in Aqueous Environment*" 'Corrosion and Its Control Symposium Proceedings, King Saud University, Riyadh, Kingdom of Saudi Arabia, May 16, pp. 191, 1992.
15. R. D. Granata, A. Al-Hashem, M.L. White, H. Leidheiser, and B.W. O'Malley. "*Use of the Corrosion Coulometer Electrochemical Sensor for Monitoring Steel Corrosivity in Microenvironments*", Presented at the annual Meeting of the AICHE in a Symposia on Electrochemical Sensors, November 17. 1991.
16. A. Al-Hashem and K. Habib. "*The Use of Electrochemical Impedance Spectroscopy (EIS) in Studying the Effect of a Retained Solvent on the Corrosion Protection Behaviour of Phenoxy Coatings*", proceedings of Corrosion-Asia Conference, Singapore, September 7, pp. 112 - 1 - 112-7, 1992.
17. A. Al-Hashem and K. Habib. "*The changes in the Electrochemical Impedance Spectra with Retained Solvent Content in Phenoxy Coatings*".Journal of Coating Technolog Vol. 64, No. 813 (1992), pp. 101.
18. V. K. Gouda and A. Al-Hashem, "*Premature Failure of 905L and Sanicro 28 Cooler Tubes in Arabian Gulf Sea Water*" presented in an 'International Conference on Advances in Corrosion and Protection' held at UMIST in Manchester, United Kingdom, in June 28-July 3rd. 1992.
19. K. Habib and A. Al-Hashem, 1993. "*Stress-Corrosion Cracking of Iron-boron-silicon Metallic Glasses*". Corrosion Science, Vol 35, Nos. 1-4, pp. 571 - 576.
20. A. Al-Hashem, H. Shalaby, and V. Gouda, "*A Study of Flow Dependent Corrosion of Nodular Cast Iron in Arabian Gulf Seawater*", Proceeding: 12th International Congress on Metallic Corrosion, Houston, Texas, Vol.5B, pp. 3600-3612, 1993.

21. J. Carew, A. Al-Hashem, W. Riad, M. Othman and M. Islam, "*Weathering Performance of Industrial Atmospheric Coating Systems in the Arabian Gulf*", Paper No. 445, NACE, Houston, Texas, Corrosion '94, 1994.
22. Al-Hashem, H.M. Shalaby and W.T. Riad, "*Microbially Induced Corrosion of 904L in Seawater Under Field and Laboratory Conditions*" IV Corrosion Symposium, Istanbul Technical University, pp.243-250, 25-27, October 1994.
23. Al-Hashem, P.G. Caceres, W.T. Riad and H.M. Shalaby, "*Cavitation Corrosion Behaviour of Cast Nickel-aluminium Bronze in Seawater*", Corrosion, Vol. 51, No. 5, pp. 331 - 342, 1995.
24. H. M. Shalaby, A. Al-Hashem, H. Al-Mazeedi and A. Abdullah, "*Field and Laboratory Study of the Cavitation Behaviour of Cast Nickel-aluminium Bronze in Seawater*", Br.Corro.J., Vol. 30, No. 1, pp. 63, 1995.
25. J. Carew, Al-Hashem, W. Riad, M. Othman, M. Islam, "*Performance of Coatings Systems in Industrial Atmospheres on the Arabian Gulf*" Materials Performance, Vol. 33, pp 24-30, 1994.
26. J. Carew, A. Al-Hashem, M. Othman, "*The Corrosion Performance of Epoxy-based and Chlorinated Rubber Coatings in Arabian Gulf Seawater*", Materials Performance, in press.
27. J. Carew, A. Al-Hashem "*The Corrosion Performance of Epoxy-based Chlorinated Rubber Coatings in Arabian Gulf Seawater*" proceedings of the 8th Asian Pacific Corrosion Control Conference, 6-11 December 1993, Bangkok, Thailand, pp. 121 - 126.
28. A. Al-Hashem, J. Carew, A. Abdullah, H. Al-Mazeedi "*Effect of Ultrasonically Induced Cavitation on the Corrosion Behaviour of Nickel-Aluminium-Bronze Alloy, Microstructural Aspects*" Journal of Fac. Sci., U.A.E. University, Vol. 6, No. 10 (1994), pp. 207.
29. J. Carew, S. Akashah, A. Al-Hashem, "*Prediction Techniques for Materials Performance in Crude Oil Production System*", presented at an International Congress on Computational Methods in Engineering, 2-6 May, Shiraz, Iran, Vol. 2, p. 397, 1993.
30. A. Al-Hashem, A. Abdullah, J. Carew "*New Procedure to Determine the Corrosion Rate of Metals Undergoing Vibration Conditions based on Linear Polarization Methods*" presented at the Fifth International Symposium on Electrochemical Methods in Corrosion Research, EMCR'94, Sept 5-8, Lisbon, Portugal, 1994.
31. J. Carew, A. Al-Hashem, M. Al-Othman "*Performance of Industrial Atmospheric Coating Systems in the Arabian Gulf*" Proc. of the Second NACE Asian Conference, Corrosion ASIA'94, 26-30September. pp 1017- 1 to 12, 1994.
32. A. Al-Hashem and J. Carew, "*The Galvanic Coupling of UNS NO4400 Heat Exchanger Tubes to Carbon Steel*" Corrosion'95, Orlando, Florida, Paper No. 282, Houston, Tx: NACE 1995.
33. A. Al-Hashem and H. Shalaby, "*The Role of Microstructure on the Cavitation Corrosion Behaviour of As-Cast Nickel-Aluminium Bronze*", Corrosion'95, Orelando, Florida, paper No. 283 Houston, Tx, NACE 1995.

34. A. Al-Hashem and J. Carew, "*The Effectiveness of Cathodic Protection of UNS NO4400 Heat Exchanger Tubes for Seawater Service*", British Corrosion Journal. Vol. 30, No.3, pp 1-5.
35. A. Al-Hashem, M. Salman and A. Husain, "*Corrosion Inhibition and Scale Treatment for Downhole Conditions in Kuwait*", Proceedings of New Technologies Applied to Hydrocarbon Production Symposium in Delft, The Netherlands, John Brown-OAPEC publication, pp. 213-230, September 12 - 15 ,1995.
36. H. M. Shalaby and A. Al-Hashem, "*Cavitation Corrosion Behavior of Cast Duplex Stainless Steel in Seawater*", paper No.497 presented at Corrosion'96, March 24 -29, Denver, Colorado, USA.
37. A. Al-Hashem, J. Carew and A. Al-Sayegh "*Erosion-corrosion Performance of Nickel-base alloys in Arabian Gulf Seawater*" paper No.498, presented at Corrosion'96, March 24 - 29, Denver, Colorado, USA.
38. H. M. Shalaby, A. A. Hasan, F. Al-Sabti and A. Al-Hashem "*The Effect of Sulfate-Reducing Bacteria on the Electrochemical Behavior of Highly Alloyed Stainless Steel in Seawater*" Proceedings of the 9th Asian Pacific Corrosion Control Conference, November 5 -10, Kaohsiung, Taiwan, Vol. 1, pp. 423-429, 1995.
39. A. Al-Hashem, W.T. Riad and H. M. Shalaby, "*Effect of Pollutants on the Corrosion Behavior of Al-Brass in Seawater*" Corrosion and Prevention'95 Proceedings, November 12-16, 1995, Perth, Australia, paper No.37.
40. H. M. Shalaby, A. Hasan, F. Al-Sabti and A. Al-Hashem, "*Microbiologically-Induced Corrosion of Selected Alloys in Seawater*", Corrosion and Prevention'95 Proceedings, November 12 -16, 1995, Perth, Australia, paper No. 34.
41. A. Al-Hashem, J. Carew, K. Al-Muhanna and H. M. Shalaby, "*The Use of EIS for the Evaluation of Corrosion Inhibitors for Carbon Steel in MEA Environment*", Corrosion and Prevention '95 Proceedings, 12-16 November 1995, Perth, Australia., paper No. 13.
42. H. M. Shalaby, A. Al-Hashem and K. Al-Muhanna, "*A Study of the Effect of Pollutant Additions on the Corrosion Behavior of Al-Brass in Seawater*", British Corrosion Journal,. Vol. 31, No. 3, 1996.
43. A. Al-Hashem and J. Carew, W. Riad and A. Abdullah "*Evaluation of Corrosion Inhibitors for Carbon Steel in Fresh Monoethanolamine Environment by the Electrochemical Impedance (EIS) and the Rotating Disc Electrode (RDE) Methods*" Proceedings of the seventh Middle East Corrosion Conference February 26-28, Bahrain Vol 1, pp.147 (1996).
44. A. Al-Hashem, H. Shalaby and M. Islam, "*Effect of Cavitation on the Failure of Nickel-Aluminium-Bronze Sleeve Valves in Seawater*" Proceedings of the Fourth Annual Mechanical Engineering Conference and the Second International Mechanical Engineering Conference, Ed. H. Emdad, Shiraz University, Shiraz, Iran, Vol.4, 1996, p.787.
45. A. Al-Sayegh and A. Al-Hashem, "*Flow Induced Corrosion and the Effect of Brush Cleaning on Alloys UNSC71500 and UNS No. 6022 in Warm Polluted Seawater*",

Presented in INTERCORR/96, 1st Global Internet Corrosion Conference, June - September, 1996.

46. A. Al-Hashem, P. Caceres and H.M. Shalaby, "*Cavitation Corrosion Behavior of Some Cast Alloys in Seawater*" in Industrial Corrosion And Corrosion Control Technology, Eds. Shalaby et. al., Proceedings of the Second Arabian Corrosion Conference ,October 12-15, 1996, Kuwait , pp.311-322.
47. F. Al-Matrouk, A. Al-Hashem, F. Al-Kharafi, and M. El-Khafif, "*Impact of Metallic Corrosion on the Kuwait Economy Before and after the Iraqi Invasion: A Case Study*" in Industrial Corrosion And Corrosion Control Technology, Eds. Shalaby et. al., Proceedings of the Second Arabian Corrosion Conference , October 12-15, 1996, Kuwait, pp.567-579.
48. A. Al-Hashem, J. Carew and A. Hasan, "*Electrochemical Screening of Organic Inhibitors for the Corrosion of UNS No 400 in H₂/CO₂ Saturated Monoethanolamine Solution*" presented at Euro Corr'96, September 24-26, 1996, in Nice, France.
49. A. Al-Hashem, J. Carew, K. Al-Muhanna, "*Inhibition of Stainless Steel 316 (UNS S 31600) in H₂/CO₂ Saturated Monoethanolamine Solution*" Proceedings at the 13th International Corrosion Congress, Vol. 4, Paper No. 346.
50. A. Al-Hashem, H. Shalaby, A. Abdullah, P. Caceres. "*A laboratory Study of the Cavitation Corrosion of Duplex Stainless Steel in Seawater*" Corrosion Journal, Vol. 53, pp. 103 (1997).
51. J. Carew, H. Al-Sumait, A. Abdullah and A. Al-Hashem, "*Evaluation of Corrosion Inhibitors for Carbon Steel, Monel 400 and Stainless Steel 321 in Monoethanolamine environment Under stagnant and hydrodynamic conditions*", in Industrial Corrosion And Corrosion Control Technology, Eds. Shalaby et.al., Proceedings of the Second Arabian Corrosion Conference , October 12 - 15, 1996, Kuwait.,pp.493-500.
52. F. Al-Matrouk, A. Al-Hashem and F. Al-Kharafi, "*The Cost of Corrosion to Kuwait Economy*", presented at the 2nd NACE Latin American Region Corrosion Congress, September 9 - 13, 1996, Rio De Janeiro, Brazil.
53. J. Carew, A. Al-Hashem and K. Al-Muhanna, "*Field and Laboratory Investigations of the Corrosion behavior of Al-brass Exchanger Tubes in Flowing Arabian Gulf Seawater*", presented at the 2nd NACE Latin American Region Corrosion Congress, September 9 - 13, 1996, Rio de Janeiro, Brazil.
54. A. Al-Hashem, P. Caceres and H. Shalaby, "*Microstructural and Cavitation Effects on the Failure of Nickel-Aluminium Bronze Seawater Pump*", presented at the 2nd NACE Latin American Region Corrosion Congress, September 9 - 13, 1996 , Rio de Janeiro, Brazil.
55. A. Al-Hashem, H. M. Shalaby and A. Abdullah, "*The Effect of Microstructure on the Initial Stages of the Cavitation Corrosion of Cast Duplex Stainless Steel in Seawater*", Proceedings at the 13th International Corrosion Congress, Vol. 2, Paper No. 192.
56. A. Al-Hashem and W.Riad, "*The Influence of Marine and Industrial Atmospheres on the Corrosion of Carbon Steel, Galvanized Steel, and Copper in Kuwait*", Proceedings of the Fifth Corrosion Symposium, November 6-9, Adana, Turkey (1996): pp 53 - 63.

57. A. Al-Hashem and A. Hasan, "*Determination of Protective Properties of Solvent Based And Water-Based Paint Systems Using The Electrochemical Impedance Spectroscopy (EIS)*", Proceedings of the Fifth Corrosion Symposium, November 6-9, Adana, Turkey, (1996): pp. 150 - 164.
58. A. Al-Hashem, J. Carew and A. Al-sayegh, "*The Sacrificial Cathodic Protection Of UNS C71500 Heat Exchanger Tubes In Arabian Gulf Seawater*", to be Presented at NACE Corrosion'97, March 9-14, New Orleans, LA., Paper No.414.
59. A. Al-Hashem, M. Salman, K. Al-Muhanna, and W. Al-Bazzaz, "*The Effect Of Seasonal Changes On The Selection Of Biocide Inhibitors For Arabian Gulf Seawater For Water Injection Purposes*", presented at NACE Corrosion 97, March 9-14, New Orleans, LA., paper No.395.
60. A. Al-Odwani, M. Al-Tabatabei, J. Carew, and A. Al-Hashem, "*The Corrosion Performance Of High Chromium Stainless Steels And Titanium At A Reverse Osmosis Plant In Arabian Gulf Seawater*", presented at NACE Corrosion 97, March 9-14, New Orleans, LA., paper No.412.
61. A. Al-Hashem, M. Salman, J. Carew and A. Hasan, "*Determination of Corrosion Inhibitors for Carbon Steel in Seawater to be used in a secondary oil recovery system in Kuwait*", Proceedings of the 15th World Petroleum Congress, Published by John Wiley & Sons, October, 1997.
62. A. Al-Hashem and W. Riad, "*The Pitting Corrosion of UNS N04400 in Salt Solutions*", excepted for presentation at the 10th Asia Pacific Corrosion Control Conference (ADCCC), 27 – 31st October, 1997, Bali, Indonesia.
63. J. Carew, A. Al-Hashem and M. Salman, "*Corrosion Inhibitor Selection for Carbon Steel in a Seawater Flooding System*", accepted for presentation at the 10th Asia Pacific Corrosion Control Conference (APCCC), 27 – 31st October, 1997, Bali, Indonesia.
64. A. Al-Hashem, W. Riad and j. Carew, "*Heat Exchanger Tube Performance in a Desalination Water Plant*", accepted for Presentation at the 10th Asia Pacific Corrosion Control Conference (APCCC), in 27 – 31st October, 1997, Balli Indonesia.
65. A. Al-Hashem and F. Al-Matrouk, "*The Cost of Corrosion to the Oil Refining Sector in Kuwait*", accepted for presentation at the 10th Asia Pacific Corrosion Control Conference (APCCC), 27 - 31 October 1997, Balli Indonesia.
66. A. Al-Hashem, J. Carew and A. A. Hasan, "*Environmentally-Friendly Paint Systems: Correlation of Electrochemical Impedance Spectroscopy (EIS) and Field Tests*", accepted for Presentation at Corrosion & Prevention 1997, 9 – 12th November, 1997, Brisbane, Australia.

67. A. Al-Hashem and Q. Al-Rasheed, "*The Economic Effects of Corrosion in the State of Kuwait*", accepted for Presentation at Corrosion and Prevention 1997, 9 – 12th November, 1997, Brisbane, Australia.
68. M. Islam, A. Al-Hashem and J. Carew, "*Failure of Aluminum-Bronze Sleeve Valve in Seawater Effluent Line*", Paper No. 683, accepted for presentation at Corrosion '98, NACE International, Houston, TX.
69. A. Al-Hashem, A. Abdullah and H. M. Shalaby, "*The Effect of Tungsten and Molybdenum Additions on the Cavitation Corrosion Behavior of Duplex Stainless Steel (DSS) in Seawater*", Paper No. 684, accepted for presentation at Corrosion '98, NACE International, Houston, TX.
70. A. Al-Hashem, J. Carew and A. Al-Odwani, "*The Corrosion Performance of Nickel-Based Alloys in a Reverse Osmosis Plant Utilizing Seawater*", Paper No. 685, accepted for presentation at Corrosion '98, NACE International, Houston, TX.
71. A. Al-Hashem, J. Carew and M. Salman, "*Control of Microbially Influenced Corrosion in an Effluent Water Injection System in West Kuwait*", Paper No. 293, accepted for presentation at Corrosion '98, NACE International, Houston, TX.
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