

Abbas Aghajani Resume

E-mail address

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EDUCATION

1986 (High school) Iranian National Mathematics Diploma

1990 (**B. Sc.**) Engineering Material Department, Isfahan University of Technology, Isfahan, Iran.



B. Sc. degree in "Iron and steel Engineering"

1996 (**M.Sc.**) Engineering Material Department, Isfahan University of Technology, Isfahan, Iran.

MSc. by Course and Research in "Corrosion protection"

The title of dissertation "Corrosion Protection of Offshore platforms"

2009 up to now **PhD** student

The title of dissertation "Stray current effects on reinforcement concrete"

EMPLOYMENT

1997 up to now faculty member of Subsea science and technology center of Isfahan University of Technology (IUT)

WORK EXPERIENCE

- 1997-2002 Iranian Aircraft company.
- Design and implementation of cathodic protection systems.
- Many industrial research projects in the field of corrosion and cathodic protection
- Corrosion research group of Materials engineering department, Isfahan University of technology (1997 up to now)
- Partners in construction marine equipment, Subsea science and technology center of Isfahan University of technology (1997 up to now)
- Design Iranian cathodic protection roadmap for the next five years
- Several projects related to stray current problems in cathodic protection system and electrified transit systems.
- Concrete corrosion, degradation in concrete power poles
- Stray current ageing effects on concrete power poles
- Design and implementation cladding system for corrosion protection of oil risers of Iranian offshore platforms in Persian Gulf
- Design and manufacturing lift pumps for extraction oil in Iranian offshore platforms which located in Persian Gulf
- Correcting and collecting existing cathodic protection standards of Khozestan distribution Gas Company

FIELDS OF RESEARCH

1. Corrosion protection
2. Cathodic protection
3. Stray current corrosion problems
4. Concrete corrosion
- 5-coating

Journal papers

- 1-A.Aghajani, "In Situ Corrosion Protection of Oil Risers and Offshore Piles" Material Performannce, April 2008
- 2- Saatchi-Aghajani, "Interference Problems in Cathodic Protection of Complex Installation" Material Performannce, Dec. 2005
- 3-A. Aghajani, "Bend Test of Concrete Power Poles", Materials Performance, Sep. 2020, Vol 59, No.9, Page 2-5.
- 4-R. Alibek, M. Atapour, A. Aghajani, R. Ashari, "Microstructure and electrochemical properties of $\text{IrO}_2+\text{RhO}_x+\text{ZrO}_2$ coated titanium anodes", *Electrochimica Acta* 329 (2020) 135158.
- 5-A. Aghajani, B. Aghajani, "Control of Environmental Degradation of Concrete Power Poles", *Materials Performance*, November 2018, VOL. 57, NO. 11, Page 2-5.
- 6-A. Aghajani, " Cathodic Protection Problem for a Gas Pipeline near a Compressor Station", *Materials Performance*, January 2017, VOL. 56, NO. 1, page 2-4.
- 7-a. Aghajani, " Degradation of a Thrust Bearing in a Lift Pump on an Electromotor Offshore Platform", June 2017, *Materials Performance*, VOL. 56, NO. 6, page 2-4.
- 8-A. Aghajani, M. Atapour, and R. Alibek, "Passivation of Zinc Anodes in Marine Conditions", *Materials Performance*, Septemper 2016, VOL. 55, NO. 9, Page 2-4.
- 9-A.Aghajani, A. Saatchi, "Application Electrochemical ImPedance in investigation concrete structure", *Zang jornal*, Winter 2013.
- 10-A. Aghajani, A. Saatchi "Study of the effects of high voltage stray current on concrete using electrochemical impedance spectroscopy", *Journal of Transportation (Pajouheshnameh Ham va Naghl)*, Winter 2013.
- 11-A. Aghajani, A. Saatchi, " Effects of AC stray current on concrete structures" , *Amirkabir Scientific and reseasch journal*, 2014, No. 2.
- 12-A. Aghajani, A. Saatchi, "The effect of stray currents on reinforced concrete in urban and industrial facilities", *Zang Journal*, Winter 2013.
- 13-A. Aghajani, M. Golozar, " Effects of alternating stray current and enviromental factors on concrete power poles" *Omrane-modarres Scientific and research Journal*, paper code 1894, Summer 2014, Vol 14, No. 2.
- 14-A. Aghajani, V. Mirzaeian, " Review of corrosion and degradation of power distribution system" *3rd International Engineering Materials and Metaaurgy Conference and Exhibition (iMat2014)*, Winter 2015
- 15-A. Aghajani, M. Urgan, " Effects of DC stray current on concrete permeability", *Journal of Materials in Civil Engineering*, Spring 2015.
- 16- A. Aghajani, M. Urgan, "Effects of Highly Polluted Atmospheres on Power Distribution Systems", *Materials Performance*, December 2014, page 2-4, VOL. 53, NO. 12.
- 17-A. Aghajani, A. Saatchi, "Failure of Impressed Current Anode Supports on Jetty Piles", *Materials Performance*, March 2015, page 2-3, VOL. 54, NO. 3.
- 18-A. Aghajani, A. Saatchi, "Correcting Nonuniform CP Potential Distribution and Interference Problems in a Gas Compressor Station", *Materials Performance*, April 2014, page 2-5, VOL. 53, NO. 4.

- 19-A. Aghajani, A. Saatchi, "Stray Alternating Current and Environmental Effects on Concrete Power Poles", *Materials Performance*, August 2013, page 2-6, Vol. 52, No. 8.
- 20-A. Aghajani, M. Golozar, "Stray Alternating Current Problems in Concrete Power Poles", page 2-5, May 2013, Vol. 52, No. 5.
- 21-A. Aghajani, M. Golozar, "Protecting Concrete Power Poles from Stray Alternating Current", *Materials Performance*, October 2013, page 2-5, Vol. 52, No. 10.
- 22-M. Shirani, A. Aghajani, " A review on recent applications of brushless DC electric machines and their potential in energy saving", *Energy Equipment and Systems*, Jan. 2015, Vol 3, No.3.
- 23- A. Saatchi, A. Aghajani, F. Alavi, " A New Case of High Pressure underground Gas Pipeline Failure" *Material Performannce*, March. 2006
- 24-A. Aghajani, A. Saatchi, "Coating Resistance Measurement on Buried Steel Gas Pipelines In Municipal Areas, *Material Performance*, June 2009
- 25-A. Aghajani, "Corrosion and wear on the clutch plates of armored vehicles", *Zang Journal*, Iranian Corrosion Association, Summer 2008
- 26-A. Aghajani, A. Saatchi, "Stray current corrosion protection of electrified transit system (Metro) by using reverse current switch" *Zang Journal*, Iranian Corrosion Association, Spring 2009
- 27- A. Aghajani, A. Saatchi, "Stray current analysis in Metro network", *Zang Journal*, Iranian Corrosion Association, spring 2009
- 28-A. Aghajani, M. A. Golozar, "Hot corrosion in fire side of boiler tubes", *Zang Journal*, Iranian Corrosion Association, winter 2009
- 29-A. Aghajani, A. Saatchi, M. A. Golozar, "Stress Corrosion Cracking in Gas Pipelines and their controlling methods", *Zang Journal*, Iranian Corrosion Association, winter 2010
- 30- A. Aghajani, A. Saatchi, "Corrosion Considerations in Grounding Design" *Zang Journal*, Iranian Corrosion Association, winter 2011

Conference Papers

- 1- A. Aghajani, "Impress current cathodic protection of concrete structures in marine condition", 7th Marine Industries Conference, Tehran, Iran, 24-25 January 2006,
- 2- A. Aghajani, "Methods for preventing corrosion of inside of pipelines", 7th Marine Industries Conference, Tehran, Iran, 24-25 January 2006
- 3- A. Aghajani, "Improving corrosion, erosion, cavitation resistance of impellers and casings in lift pumps of offshore platforms", Tehran International Congress on Manufacturing Engineering (TICM2005), Tehran, Iran, December 12-15, 2005
- 4- M. R. Saeri, A. Aghajani, Nilforosh, "Surface preparation for aluminum welding", Welding conference, Sharif university, Tehran, Iran, 1996
- 5- A. Aghajani, " Welding stray current corrosion in offshore platforms", Specialized workshop on Marine structures, Sharif university, Tehran, Iran, 25 April 1997
- 6- A. Aghajani, Destructive and nondestructive inspection of aluminum welding for WPS and PQR", 4th National Conference of Iran Welding & inspection, Tehrn, Iran, 1-2 March 1998
- 7- A. Aghajani, "Cthodic protection of underwater marine pipelines", 2nd International conference on Coasts, Ports and Marine Structures, Tehran, Iran, 2-5 December 1997

- 8- A. Aghajani, "Corrosion protection of offshore platforms in tidal, splash and atmospheric zone" 5th National Iranian Corrosion congress, 2-4 September 1998
- 9- A. Aghajani, " Environmental effects on polymer matrix composites", 4th International Conferences on Coasts, Ports and Marine Structures (ICOPMAS2010), Bandar-abbas, Iran, 2001
- 10- A. Aghajani, " Cathodic protection design and monitoring of offshore platforms", 4th International Conferences on Coasts, Ports and Marine Structures (ICOPMAS2010), Bandar-abbas, Iran, 2001
- 11- A. Aghajani, " Coating Repair of offshore platforms and oil risers in splash zone by using composite polymers and metal cladding" 8th National Symposium of Marine Industries,
- 12- A. Aghajani, "Application corrosion inhibitors for coating repair in splash zone of offshore platforms and oil risers" 7th International Conference on Coasts, Ports and Marine Structures, Tehran, Iran, 27-29 November, 2007
- 13- A. Aghajani, "Cathodic protection of marine concrete structures by using sacrificial anodes" 7th International Conference on Coasts, Ports and Marine Structures, Tehran, Iran, 27-29 November, 2007
- 14- A. Aghajani, "Corrosion and failure defects in lift pumps of offshore platforms" 8th National Symposium of Marine Industries, Boshar, Iran, 1-3 November 2007
- 15- A. Saatchi, A. Aghajani, " Cathodic protection problems in Iranian Complex Structures", 1st Iranian Pipe and Pipeline Conference, Tehran, Iran, 2008
- 16- A. Aghajani, A. Saatchi, "Corrosion Protection of bottom of large oil storage tanks" 1st Iranian Pipe and Pipeline Conference, Tehran, Iran, 2008
- 17- A. Aghajani, M. Narimani, "Corrosion monitoring of marine cathodic protection systems through telecommunication systems" 9th National Symposium of Marine Industries, Nour, Iran, 23-25 October 2008
- 18- A. Aghajani, " Modern methods of quality inspection of buried pipelines in the coastal", Nour, Iran, 23-25 October 2008
- 19- A. Aghajani, A. Saatchi, "Problems of Iranian Cathodic Protection Systems", The first seminar on the optimization of cathodic protection of pipelines for natural gas transmission and distribution, Ahvaz, Iran, 1 March 2010
- 20- A. Saatchi, A. Aghajani, "Compatible coatings with cathodic protection condition" The first seminar on the optimization of cathodic protection of pipelines for natural gas transmission and distribution, Ahvaz, Iran, 1 March 2010

Published Books

Sacrificial cathodic protection design

Supervised undergraduate in the following fields

AC current corrosion, Aluminum welding, cathodic protection