

KASHIF MIRAJ DEEN

Department of Metallurgy and Materials Engineering
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❖ Professional History (September, 2007 – Present)

- ★ **Lecturer:** Department of Metallurgy & Materials Engineering, CEET, University of the Punjab, Lahore, 54590, Pakistan

❖ Research Interests/Experience

- ★ Advanced Electrochemical Test Methods (Corrosion Engineering)
- ★ Advanced Materials Processing & Characterization
- ★ Failures Analysis & Prevention
- ★ Welding Metallurgy and Electrochemical behavior of Weldments

❖ Research Publications

The list of Publications is provided in **Annexure ‘A’**

❖ Research Projects (Completed)

- ★ Disbondment of 3L epoxy/PE coating & integrity of gas transmission pipeline (PSF/ILG/002/03)
Funded by: Pakistan Science Foundation (PSF), SSGC, & University of the Punjab, Lahore, Pakistan

❖ Research Projects (Current)

- ★ Modification of passive films on Titanium alloys for biomedical applications
- ★ Electrochemical investigation of Yttrium and Nitrogen implanted Inconel alloy passivation and localized corrosion tendencies
- ★ Development & application of HA coating on 316L orthopedic implants & its electrochemical characterization for biocompatibility

❖ Achievements

- ★ **Japanese Government MEXT Research Scholarship (Kenkyu-Sei)** (Research Student) award for 2010
- ★ **Gold Medal & Cash Prize** award by “University of the Punjab”, Lahore, in 114th Annual Convocation 2008 on standing 1st in B.Sc. (Engineering)
- ★ Society of Corrosion Engineers Pakistan (**SOCEP**) **shield of the year 2010**
- ★ **Certificate and award of AUS \$ 5000** as a most competitive researcher from the Non-OECD countries in 18th International Corrosion Congress, (20-24 Nov, 2011) organized by Australasian Corrosion Association, Perth, Australia

❖ Educational History

★ M.Sc. Metallurgy and Materials Engineering

(In process, Final Year), CEET, University of the Punjab, Lahore, Pakistan

★ **B.Sc. Engineering (Metallurgy & Material Science)**

January 2003 – August 2007

Institute of Chemical Engineering and Technology, University of the Punjab, 54590, Lahore, Pakistan

Grade: A⁺ (90.687%) ***Gold Medalist**

B.Sc. Thesis: Corrosion analysis of **SA516 Gr70** steel and its weld joint by using DC electrochemical techniques

Module Studied: Metallurgical Engineering Principles, Extractive Metallurgy, Polymeric & Composite Materials, Materials Science, Process Engineering, Mechanical Properties of Engineering Materials, Non-Metallic Materials, Thermodynamic and Kinetics, Physical Metallurgy, Metal Shaping & Treatment, Ceramic Materials, Surface Engineering & Tribology, Corrosion Engineering

★ **Industrial Training**

Heavy Mechanical Complex, Texila, Pakistan

Pattern Making, Steel Foundry, Cast Iron Foundry, Machine Shop, Fabrication Shop, NDT Laboratory, Forge Shop, Assembly Shop, Heat Treatment Laboratory

★ **Undergraduate Level (F.Sc. Equivalent to ‘A’ Level)**

Sep 1999 – Aug 2001

Government College of Science, Wahdat Road, Lahore, Pakistan

Grade: A (72.636%)

Major Subjects: Mathematics (A), Physics (A), Chemistry (A)

★ **Upper Secondary School (Matriculation Equivalent to ‘O’ level)**

April 1997 – July 1999

Government Central Model School, Samanabad, Lahore, Pakistan

Grade: A (75.647%)

Major Subjects: Mathematics, Physics, Chemistry, Biology

❖ **Courses**

1. **Cathodic Protection System for Underground Pipelines (Advance Level)**

03-07 July, 2007, Institute of Chemical Engineering and Technology, university of the Punjab, Lahore, Pakistan

2. **Fundamentals of Corrosion and Cathodic Protection**

19-23 June, 2007, Institute of Chemical Engineering and Technology, university of the Punjab, Lahore, Pakistan

❖ **Memberships/ Registration**

1. Registered Engineer (**METAL/2105**) Dated 07th November 2008, “Pakistan Engineering Council” ACT 1976, PAKISTAN
2. Member and research fellow of “Society of Corrosion Engineers Pakistan” (**SOCEP**)
3. Member of Pakistan Institute of Chemical Engineers (**PIChE**)

❖ **References**

Prof. Dr. Rafiq Ahmad

Principal, College of Engineering and Emerging Technologies, University of the Punjab, 54590, Lahore, Pakistan

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Annexure A

Kashif Miraj Deen (K. M. Deen)

Lecturer, Department of Metallurgy & Materials Engineering, CEET, University of the Punjab, Lahore, Pakistan

International Publications

2012

1. **Failure investigation of wheel gear hub assembly of an aircraft**
Engineering Failure Analysis, In Press, doi:10.1016/j.engfailanal.2012.01.004

2011

1. **Remaining life assessment of platforming reactor vessels**
Engineering Failure Analysis, Volume 18, Issue 4, June 2011, Pages 1247-1252
2. **Failure of Crude Oil Heater Tubes**
Journal of the Pakistan Institute of Chemical Engineers, Volume 39, No. 1 (2011)

2010

1. **Microstructural study and electrochemical behavior of low alloy steel weldment**
Materials & Design, Volume 31, Issue 6, June 2010, Pages 3051-3055
2. **Failure investigation of heat exchanger plates due to pitting corrosion**
Engineering Failure Analysis, Volume 17, Issue 4, June 2010, Pages 886-893
3. **Microstructural and Electrochemical Characterization of Ni/Ti₂N Composite Coating for Sintered NdFeB Permanent Magnets**
Key Engineering Materials DOI:10.4028/www.scientific.net/KEM.442.255, (Volume 442), Advanced Materials XI, June 2010
4. **Failure analysis of heat exchanger fluid vapor phase vent lines in a Polyester plant**
Engineering Failure Analysis, Volume 17, Issue 2, March 2010, Pages 447-454
5. **Corrosion failure analysis of spent caustic drainage line pipe**
Engineering Failure Analysis, Volume 17, Issue 1, January 2010, Pages 128-134
6. **Impeding corrosion of sintered NdFeB magnets with titanium nitride coating**
Materials and Corrosion 2010, 61, No. 2, Copyright © 2010 WILEY-VCH Verlag GmbH & Co. KGaA, Weinheim
7. **Failure Analysis of Water Pump Shaft**
Journal of Failure Analysis and Prevention, Volume 10, Number 2, 161-166, DOI: 10.1007/s11668-010-9332-0, @ ASM International 2010

2009

- 1. Multilayer ceramic coating for impeding corrosion of sintered NdFeB magnets**

Journal of Rare Earths, Volume 27, Issue 6, December 2009, Pages 1003-1007

International Conferences (Peer Reviewed)

- 1. Anti-Corrosion Behavior of Ni/Ti₂N Composite coated Sintered NdFeB permanent magnets**

18th International Corrosion Congress (ICC) Conference, Perth Convention Exhibition Centre, 20-24 November, 2011, Perth, Western Australia, Australia

- 2. Surface morphology and electrochemical behavior of titanium nitride deposited NdFeB sintered magnets**

11th International Symposium on Advanced Materials (ISAM-2009), National Center for Physics, Quaid-e-Azam University Campus, Islamabad, Pakistan

National Publications

- 1. Corrosion Inhibition Evaluation of Alpha- Beta Brass In Tap Water**

Journal of Pakistan Institute of Chemical Engineers, Vol. XXXVII, Page 67-70, ISSN 1813 – 4092

- 2. Corrosion Protection Evaluation of Mild Steel Painted Surface by Electrochemical Impedance Spectroscopy**

Journal of Quality and Technology Management, Volume V, Issue 1 June, 2009, ISSN 1816-2185

- 3. Localize corrosion study of 316L bioimplant in simulated body fluids**

Engineering Horizon, Issue No. 275, Vol-XXIV, No.6, CPL-154, Page 27-31

- 4. Characterization of Grade 316 Stainless Steel as a Biomaterial by Electrochemical Analysis**

Journal of Pakistan Engineering Congress (JPEC), 2010

National Conferences/Proceedings

- 1. Electrochemical & Metallurgical Characterization of 316L Stainless Steel Weldment in Physiological Solutions**

National Science Conference; Roadmap of Cutting Edge Technologies, Organized by Pakistan Academy of Sciences, January 10-12, 2012

- 2. Effect of Heat Treatment Cycles on Electrochemical behavior of Aluminum 2219**

National Science Conference; Roadmap of Cutting Edge Technologies, Organized by Pakistan Academy of Sciences, January 10-12, 2012

- 3. Effect of Surface Profile on Electrochemical behavior of API X-70 in Simulated crude Oil Environment**
National Science Conference; Roadmap of Cutting Edge Technologies, Organized by Pakistan Academy of Sciences, January 10-12, 2012
- 4. Corrosion of Alpha Brass in Plain Water in Sodium Benzoate Containing Inhibitor**
3rd Symposium on Engineering Sciences, ICET, University of the Punjab, Lahore, 54590, Pakistan, 10th March 2010
- 5. Characterization of Intentional Sensitization in TIG-Welded AISI 316L Austenitic Stainless Steel**
3rd Symposium on Engineering Sciences, ICET, University of the Punjab, Lahore, 54590, Pakistan, 10th March 2010
- 6. Corrosion Study of Alpha Brass in Plain Water and in the Aqueous Solution of Ethylene Glycol**
Digital Innovation, International Conference & Exhibition (DICE), 2010, IST, Islamabad, Pakistan
- 7. Study of Medical Grade 316L Stainless Steel weldment in different simulated fluids**
3rd Symposium on Engineering Sciences, ICET, University of the Punjab, Lahore, 54590, Pakistan, 10th March 2010

Invited Lectures

- 1. Basics of Electrochemical Impedance Spectroscopy; a tool for coating performance evaluation**
Pakistani Chapter of National Association of Corrosion Engineers (NACE), Corrosion Control Centre on World Corrosion Awareness Day (24th April 2011) held at SNGPL, Lahore, Pakistan
- 2. Advance Electrochemical Techniques for Corrosion Testing**
Corrosion & Corrosion Control Symposium 2011, October 27, 2011, University of the Punjab, Lahore, Pakistan