

Nilesh R. Raykar

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PhD, IIT Bombay, India and Monash
University, Australia, 2014
M.Tech.(Mech), IIT Bombay, 1990
B.E.(Mech.), VJTI, Mumbai, 1988



Academic Experience:

- Professor, Mechanical Engg. Dept., SPCE, Mumbai (May 2015 – present)
- Associate Professor (ad hoc), Mechanical Engg. Dept., SPCE, Mumbai (2013-15)

Industry Experience:

- Sr. Dy. General Manager/DGM/AGM, Design and Engg., L&T, Powai (2004-09)
- Sr. Manager/Manager/Asst. Manager, Design and Engg., L&T, Powai (1998-2004)
- Executive Product Engineer, Design and Engg., L&T, Powai (1990-1998)

Worked for 19 years (1990-2009) in Heavy Engineering Division of Larsen and Toubro, Powai, in the field of design and special analysis of critical high pressure/temperature vessels and boilers. Gained rich experience of engineering different types of key process equipment for national and international projects.

Current Research Interests:

- Modelling of hydrogen assisted stress corrosion cracking (HASCC)
- Investigating influence of fatigue, fracture and creep in design of high pressure process equipment and piping systems
- Fracture Mechanics based evaluation of industrial machines and equipment
- Application of finite element method (FEM) to conduct design study / failure analysis of industrial mechanical systems.

List of Awards and Prizes:

- Best PhD thesis Award among PhD students graduating at 52nd convocation by IIT Bombay under joint PhD program administered by IITB Monash Research Academy (2014)
- Ashok Chaturvedi memorial prize for ranking first amongst M.Tech. students in Mechanical Engineering Department of IIT Bombay (1990)
- G. R. Tongaonkar Prize and Merwanji Famji Panday Scholarship for ranking first at B.E. (Mech) examination held by University of Mumbai (1988)
- Jodha Lalwani Memorial Prize for securing highest number of marks in the subjects of Machine Design-I & II at B.E. (Mech) examination held by Univ. of Mumbai (1988)

List of Publications:

Refereed Journals

1. Raykar N. R., Maiti S.K., Raman Singh R. K., Aryan Saurav (2013), 'Study of hydrogen concentration dependent growth of external annular crack in round tensile specimen using cohesive zone model', *Engineering Fracture Mechanics*, 106, 49-66.
2. Raykar N. R., Raman Singh R. K., Maiti S.K., Choudhary Lokesh (2012), 'Investigation of hydrogen assisted cracking of a high strength steel using circumferentially notched tensile test', *Material Science and Engineering A*, 547, 86-92.
3. Raykar N. R., Maiti S.K., Raman Singh R. K. (2011), 'Modelling of mode-I stable crack growth under hydrogen assisted stress corrosion cracking', *Engineering Fracture Mechanics*, 78(18), 3153-3165.

International Conferences

1. Raykar N. R., Maiti S. K. (2014), Modelling of hydrogen concentration dependent annular crack growth in round tensile specimen (Abstract accepted for presentation), in "11th World Congress on Computational Mechanics (WCCM2014), Barcelona, Spain".
2. Raykar N. R., Maiti S.K., Raman Singh R. K. (2012), Influence of hydrostatic stress distribution on the modelling of hydrogen assisted stress corrosion crack growth, in "Proceedings of 10th World Congress on Computational Mechanics (WCCM2012), Sao Paulo, Brazil".
3. Muhammed Najeem, Raykar N. R., Sadekar G. K. (2006), Application of plastic analysis in nozzle design of high pressure process equipment, in "Proceedings of International Conference on pressure vessels and piping, Chennai, India".
4. Raykar Nilesh, Shenoy B. J. (1998), Analysis of interconnected piping in waste heat recovery system, in "Proceedings of International seminar on piping engineering and construction, Pune, India".

List of Training Programs Conducted:

1. Coordinator and faculty for one week training course (FDP) under TEQIP on "Piping Engineering" in collaboration with Aker Solutions, India, at SPCE, Mumbai. The training was attended by 15 participants from academia and industry (11-15 May 2015).
2. One day lecture sessions on "Fracture Mechanics and its Applications for Reliability and Safety Assurance" to engineers of Indian Navy at INS Shivaji, Lonavala (14 Nov. 2014).
3. Co-coordinator and faculty for 1 week training course (under TEQIP) on "Advanced Pressure Vessel Design and Analysis" in collaboration with L&T at SPCE, Mumbai. The training was attended by 23 participants from academia and industry (26-30 May 2014).
4. Three days corporate training program conducted on "Pressure Vessel Design and Analysis" for a team of 15 engineers from Larsen & Toubro Limited, Vadodara (02-04 Jan. 2014).