

Curriculum Vitae

Personal Details

Seshendra Karamchedu

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Lgh 51, Grevegardsvagen 14,

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Nationality: Indian

Education

- 11.2010-Present **PhD in Powder Metallurgy**, Chalmers University of Technology, Göteborg, Sweden
- 11.2010-06.2013 **Licentiate of Engineering**, Chalmers University of Technology, Göteborg, Sweden
- 08.2008-09.2010 **MSC in Advanced Engineering Materials**, Chalmers University of Technology, Göteborg, Sweden
- 09.2004-05.2008 **B.Tech in Metallurgy and Materials Technology**, Jawaharlal Nehru Technological University, Hyderabad, India

Related Experience

CHALMERS UNIVERSITY OF TECHNOLOGY, SWEDEN

11.2010-Present Sintering of Chromium Prealloyed Powder Metallurgy Steels

Working on various aspects related to delubrication, Sintering and sinterhardening during processing of chromium prealloyed powder steels

CHALMERS UNIVERSITY OF TECHNOLOGY, SWEDEN

11.2010-05-2013 Delubrication of Chromium Prealloyed Powder Metallurgy Steels

Developing a methodology for monitoring and optimizing the delubrication process through process atmosphere monitoring using sensors commonly used in the industry for components based on chromium prealloyed ferrous powders. Investigation of the influence of delubrication on the surface chemistry of the powder by means of X-ray Photoelectron Spectroscopy and Scanning Electron Microscopy

CHALMERS UNIVERSITY OF TECHNOLOGY, SWEDEN

09.2009-10-2010 Investigation of the effect of alloying on Sinterhardening response in steels based on Astalloy Mo and its diffusion bonded derivatives

Powder Metallurgy steels based on Astalloy Mo powders, diffusion alloyed with Copper or Nickel subjected are investigated for their tensile properties, microstructural response and residual stresses in an attempt to understand the effect of alloying on their response to Sinterhardening

HALDOR TOPSOE, DENMARK

06.2009-09.2009 Characterization of materials for SO₂/SO₃ converter

Materials selection through metallographic investigation and SEM characterization of materials subject to Hot Gas and Molten catalyst corrosion for an SO₂/SO₃ converter

DEFENSE METALLURGICAL RESEARCH LABORATORY, HYDERABAD, INDIA

12.2007-05.2008 Characterization of Aluminium Alloy 2219 for elevated temperature applications

AA2219 alloy thermo-mechanically treated with an intermittent resolutionizing treatment followed by subsequent peak ageing was characterized for elevated temperature stability at 300°C for limited exposure time

Teaching Experience

CHALMERS UNIVERSITY OF TECHNOLOGY, SWEDEN

Teaching assistant for the laborations concerning Metallography, Materials Selection and Design, Monotonic Deformation and for Project course in Materials Characterization and Failure Analysis

Publications

- I. The Effect of Alloying on Sinter-Hardening Response of Aсталoy Mo and Its Diffusion Bonded Derivatives
Sepehr Hatami, Seshendra Karamchedu, Lars Nyborg, Michael Andersson
Proceedings of PM2010 World Congress
- II. Delubrication of PM components based on Cr-prealloyed steel powder- chances and risks
E. Hryha, S. Karamchedu, L. Nyborg
Proceedings of Euro PM 2011, 2011, Vol.3, pp.105-110
- III. Influence of process parameters on the delubrication of PM steels
S. Karamchedu, E. Hryha, L. Nyborg
Powder Metallurgy Progress, 2011, Vol. 11, pp.90-96
- IV. Control of delubrication process for PM components based on prealloyed steel powders
E. Hryha, S. Karamchedu, L. Nyborg
Proceedings of the 2012 Powder Metallurgy World Congress & Exhibition, Japan Powder Metallurgy Association and Japan Society of Powder and Powder Metallurgy (2013)

In preparation/review

- V. Surface chemical reactions on powder surface during delubrication of chromium prealloyed PM steels and their effect on further sintering process
S. Karamchedu, E. Hryha, L. Nyborg

Industrial Training

10.2007-10.2007 *Rashtriya Ispath Nigam Limited, Vishakhapatnam, India*

Short term Industrial Training Program at Vizag Steel Plant Study of modern manufacturing technology practices being used at the steel plant

05.2006-07.2006 *Bharath Heavy Electricals Limited, Hyderabad, India*

Undergraduate industrial Internship at BHEL Hyderabad Summer internship aimed at providing an overview of metallurgical activities at an industrial scale-few of which were learnt about were Casting of Ni-hard rolls, heat treatment, metallography, NDT and welding

Associations and affiliations

Indian Institute of Metals (IIM), National Service Scheme (NSS), Indian Society for Technical Education (ISTE)

Extra curriculars

Keen participant with a civil society BHUMI which is working towards leadership excellence through community upliftment by creating Holistic Sustainable Transformation Models

Participated in state selections for Badminton representing Mahaboobnagar district

Served as a part of the organizing team for the National Level Students' Technical Conference, Metallon'06 organized by the department of Metallurgy and Materials Technology, MGIT