

## **Bio-data**



1. **Name** : Dr. MANOJ KUMAR SINGH

2. **Date of birth** : 2-2-1964 (2<sup>nd</sup> February 1964)

3. **Current Position & Address (with with E-mail & Phone no.) :**

Professor, AcSIR, Sr. Principal Scientist & Head,  
Material Testing Section, TG-2, Tech. Block,

CSIR-Central Institute of Mining & Fuel Research Institute,

Barwa Road, Dhanbad – 826015, Jharkhand (India).

**Phone:** +91-326-2296003/13/27 (O) Extn-4276 & +91-9431168908 (M),

**E-mail:** mkscimfr@gmail.com

4. **Educational Qualification:** (Graduation & above)

S. No.	Degree/Certificate	Year of Passing	University / Institution	Subjects	Scholarship/ awards
1.	PhD	2008	University of Reading, UK	Thesis: Residual Life Estimation of Steel Wire Ropes Used for Hoisting in Indian Mines	GBP 30,000 (RTEF Scholarship)
2.	M. Tech (Mineral Engg)	1991	ISM Dhanbad	Mineral Engineering papers	GATE Qualified
3.	B. Sc. Engg (Mechanical Engg)	1988	Ranchi University / BIT Sindri	Mechanical Engineering papers	National Scholarship

## 5. Work Experience:

S. No.	Designation	Institution/company	From	To	Nature of Work
1.	Scientist “B”	Central Mining Research Station, Dhanbad	10-05-1990	9-05-1995	Research & Development work in Mining & allied fields
2.	Scientist “C”	Central Mining Research Station, Dhanbad	10-05-1995	9-05-2000	
3.	Scientist “EI”	Central Mining Research Station, Dhanbad	10-05-2000	9-05-2005	
4.	Principal Scientist & HOD	Central Institute of Mining & Fuel Research, Dhanbad	10-05-2005	9-05-2011	
5.	Sr. Principal Scientist, HOD & Professor, AcSIR	Central Institute of Mining & Fuel Research, Dhanbad	10-05-2011	Continuing	

## 6. Area of Specialization:

- Design and development of Engineering equipment;
- Mechanical integrity of vital components of mine winding systems through non-destructive evaluation;
- Quality assessment of newly manufactured mining and allied engineering components in general, but wire ropes in particular;
- Failure analysis of wire ropes;
- Life expediency of wire ropes and mining components.

## 7. Honours / Awards Received:

- a) **INSA Award, 2000** - INSA awarded a sum of Rs. 10,000 for presenting a paper abroad;
- b) **Guest of Honour, 2007** - by the president of “Triveni 07, BIT Sindri” and performed the duty as judge for a seminar entitled as “Appropriate Technology for Rural Development of Jharkhand on Feb. 11, 2007;
- c) **Two Award for filing Patent, 2007** – This award was given by Director, Central Mining Research Institute for filing a patent;
- d) **Four Award for filing Patent, 2008** – This award was given by Director, Central Institute of Mining Research for filing a patent;
- e) **Theme of a paper recommended to mining industry, 2008** - Paper presented in a National Conference on “Emerging Trends in Mining and Allied Industries” (ETMAI) organised by NIT Rourkela was included in the list of recommendation that represent the major outcomes of

deliberations stated as “Innovation and introduction of Nano-technology in the mining field should be emphasized and encouraged in coming future”.

- f) **Honoured as Reviewer of** International Journal of Mechanical Engineering and Automation, <http://journal.sapub.org/imea> by M/s Scientific Academic Publisher, USA on 31.10.2012;
- g) **Honoured as Reviewer of** International Journal of Materials Engineering, USA <http://journal.sapub.org/ijme> by M/s Scientific Academic Publisher, USA on 31.10.2012;
- h) **Appointed Reviewer of** International Journal of Mechanics and Applications, USA <http://journal.sapub.org/mechanics> M/s Scientific Academic Publisher, USA on 1.11.2012;
- i) **Appointed AICTE Adviser** (All India Council of Technical Education) for year 2012-13;
- j) **Appointed Think Tank Member** of IETP ( Institutional Education Tuning Program) for year 2012-13.
- k) **Honoured as Reviewer of** Journal of Safety Engineering, USA [http://journal.sapub.org/safety\\_on\\_1.11.2012](http://journal.sapub.org/safety_on_1.11.2012);
- l) **Honored as Editor-in-Chief of** Journal of Safety Engineering, USA [http://journal.sapub.org/safety\\_on\\_16.5.3013](http://journal.sapub.org/safety_on_16.5.3013) for two years;
- m) **Honoured as Editor-in-Chief of** International Journal of Materials Engineering, USA [http://journal.sapub.org/ijme\\_on\\_1.1.2014](http://journal.sapub.org/ijme_on_1.1.2014) for one year;
- n) **Honored as Chairman, The Institution of Engineers, Dhanbad Local Center (2014)**
- o) **Chief Guest in “Tech Udbhav 2015” celebrated by IETE Students chapter at BIT, Sindri**

## 8. Fellowships / Scholarships:

- a) **National Merit Scholarship, 1976** - This award was given under the National Scholarships Scheme of the *Ministry of Human Resource Development, Government of India* on the basis of competition held in district to support matriculation study;
- b) **National Merit Scholarship, 1982** - This award was given under the National Scholarships Scheme of the *Ministry of Human Resource Development, Government of India* on the basis of the Higher Secondary Examination result;
- c) **National Merit Scholarship, 1984** - This award was given under the National Scholarships Scheme of the *Ministry of Human Resource Development, Government of India* on the basis of the B. Sc. Engineering result;
- d) **Graduate Aptitude Test Examination, 1988** - Based on the recognition of the examination a scholarship was given by the *Ministry of Human Resource Development, Government of India* for M. Tech. study;
- e) **RTEF Scholarship, 2000** - A sum of GBP 30,000 as Scholarship from University of Reading, UK for Ph.D. study;
- f) **CSC Grant Travel, 2000** - Commonwealth Science awarded a sum of GBP 1000 for presenting a paper abroad;

## 9. No. of Research Publications: 30

- Papers in journals: 9 (Nine)
  - I. **Singh M K, Kumar B R, Pamnani M, Anand M & Shandilya S (2014)** FEA Analysis of Crack Propagation of a Cage Shackle used in Mine Cage Suspension Gear Geomintech: The Indian Mineral Industry Journal, Iss-No 7 July- Sept / ENTMS 2014 PP 104-108;
  - II. **Tanweer Md., Singh M.K. & Kashyap S.K.**, “Prediction of setting load applied to hydraulic props in coal mines through fuzzy logic technique”, International Journal of Rock Mechanics & Mining Sciences (IJRMMS) (Communicated.)
  - III. Singh U., **Singh M. K.** & Singh M. (2013) Analysis study on surface and sub surface imperfections through magnetic particle crack detection for nonlinear dynamic model of some mining components, Journal of Mechanical Engineering Research Vol. 4(5), pp. 185-191, <http://www.academicjournals.org/JMER>,

- IV. Singh U., **Singh M. K.** & Singh M. (2013) Failure analysis of bridle chain used for hoisting in mines, Journal of Chemical Engineering and Materials Science, DOI 10.5897/JCEMS13.01.50, ISSN 2[4]-6605@2013 Academic Journal, vol. 4(3) pp. 38-45 (<http://www.academicjournals.org/JCEMS>);
  - V. **Singh M. K.**, Mahto A., Thakur R. N. & Sinha A. (2007) Failure Analysis of Wire Rope used for Hoisting in Mining – A Case Study, Journal of Failure Analysis and Prevention, USA. DOI 10.1007/s11668-007-9022-8 (Available Online [www.springerlink.com](http://www.springerlink.com)) & 11668. ISSN 1547-7029 (7) 77-152 (2007) Volume 7 Issue 2 April 2007 P87-91;
  - VI. **Singh M K**, Thakur R N & Mahto A (2007) An Insight Into Premature Failure Of A Few Safety Equipment –Their Causes And Remedies, The Indian Mining & Engineering Journal & MineTECH'07 Volume – 46 No. 09 P35-40.
  - VII. **Singh M. K.**, Mahto A. & Thakur R. N. (2006 & 2007) Tools For Data Collection In Failure Analysis Of Wire Rope Used For Hoisting In Mines, published on in the Journal 'R & D Quality Quest', ISSN 0972 -5512, Vol. 8.2 (Aug 06) & 9.1 (Feb 07) p15-21;
  - VIII. **Singh M K** & Basu A K (2002 & 2003) Relationship between Tensile Strength and Torsion of a Steel Wire Rope Under Different Operational States in an Indian Mine, Published in Wire Journal International, USA: 2003. 36 6 p. 62-67 and Presented at the Wire & Cable Technical Symposium (WCTS to held at Wire Expo 2002 in Chicago, IL 8-13 June 2002;
  - IX. Basu A K, **Singh M K** & Ganguli K K (1999) An Analytical Study into Cases of Failure of Mining Safety Equipment, Journal of Mine, Metal and Fuel, vol XLVII 1999, special issue on MINE SAFETY, page 273-278;
- In conference proceedings: 21 (Twenty one)
    - I. **Singh M.K.** & Tanweer Md. (2016 & 2014), “Non-destructive assessment of vital haulage components with special reference to man riding system”, All India Seminar on Advances in Mine Transport System (AMTS), Jan. 20-21 2016, Dhanbad. & presented in All India Seminar on Mining – Recent Advances, Challenges And Scenario Beyond 2015 (MRACSB15-2014), during November 8-9, 2014 at NIT Rourkela.
    - II. **Singh M. K.** & Singh P. K. (2014) FAILURE ANALYSIS OF A SNAPPED TRACK ROPE OF 64MM DIA, FLC USED IN AN AERIAL ROPEWAY SYSTEM, accepted for publication in 6<sup>th</sup> Asian Mining Congress, Feb. 23-27 2016, Kolkata;
    - III. Kashyap S.K. & **Singh M.K.** (2016), “Non-destructive investigation of shaft winding engines components of jitpur colliery”, All India Seminar on Advances in Mine Transport System (AMTS), Jan. 20-21 2016, Dhanbad. (Communicated.)
    - IV. **Tanweer Md., Singh M.K.** & Kashyap S.K. (2016), “Application of fuzzy logic model for estimation of setting load in hydraulic props to enhance safety in underground coal mines”, 6<sup>th</sup> Asian Mining Congress, Feb. 23-27 2016, Kolkata . (Communicated.)
    - V. **Singh M. K.**, Roy L. B.& Kumar R. (2012) A Few Case Study with Special Reference to NDE of Mine Hoisting System in India, CD of National Seminar & Exhibition on Non-destructive Evaluation (NDE – 2012) organised by Indian

Society for Non-destructive Testing, Delhi Chapter at Hotel Clarks Inn, Pacific Business IV, Sahibabad NCR Delhi on December 10-12, 2012;

- VI. **Singh M. K.** & Singh U (2012) Testing of Materials - a special reference to Cage suspension gear used for hoisting in mines, Proceedings of All India Seminar on "Advances in Materials & Material Selection in Design" (AMMSD-2012) Organised by Mechanical Engineering Division, The Institution of Engineers (India) Kanpur Local center on August 24-25 2012
- VII. **Singh M. K.**, Maity S N and Mahto A. (2008) Application of Nanotechnology in Indian Mining – an emerging opportunity, Proceeding of a National Conference on “Emerging Trends in Mining and Allied Industries” (ETMAI - 2008) held on February 2 – 3, 2008 at N.I.T., Rourkela P604-617.
- VIII. Singh M. K. & Maity S. N. (2007) Appropriate Solution of Water Problem in the State of Jharkhand – A Panacea (*Ramban*) presented in a seminar entitled as “Appropriate Technology for Rural Development of Jharkhand” conducted by BIT Sindri on Feb. 11, 2007;
- IX. Mahto A., Ritolia S. K. & **Singh M. K.**, (2007) Testing and Examination of Steel Wire Ropes, Mine Cage and Haulage Gear Components, published in the Proceedings of National Workshop on ‘Test House, Testing Procedures and Facilities in Indian Coal and Non – coal Sector’ organised by DGMS on Jan 2007 at Kolkata, p G1-11.
- X. Singh M. K., Mahto A., Thakur R. N., Ritolia S. K. & Sinha A (2006) Failure Analysis of A Snapped Track Rope of 64mm Dia, FLC Used in an Aerial Ropeway System, Presented in the International Technical Conference organised by The Wire Association International (WAI), USA held at New Delhi on 5-7 October 2006
- XI. **Singh M. K.**, Mahto A., Thakur R. N. & Sinha A. (2006) Failure Analysis of Wire Rope used for Hoisting in Mining – A Detective Approach, Presented in Proceedings of the Conference on “Advances in Mechanical Engineering (AMIE – 2006) held at Jamia Milia Islamia, New Delhi on January 20-21, 2006, Page No. 122 – 132;
- XII. **Singh M. K.**, Mahto A. & Thakur R. N. (2006) Tools For Data Collection In Failure Analysis Of Wire Rope Used For Hoisting In Mines, published in the proceedings of an International conference proceedings on “Reliability and Safety Engineering” to be held on Dec. 18-20, 2006 organised by IIT Kharagpur, at Chennai, p 400-406.
- XIII. **Singh M. K.**, Mahto A., Pathak V. N., & Bandopadhyay C. (2005) Failure of Wire Ropes used for hoisting in Indian Mines – A Few Case Studies, Presented in International Symposium on “ Advances in Mining Technology and Management (27im -2005) held at IIT, Kharagpur on November 30- December-2,2005, Page No. 365 – 370;
- XIV. Basu, A K & **Singh, M K** and Pathak V N (2001) Role of NDE in Quality Evaluation of Mining Engineering Machinery/Components, Proceedings of National Seminar on ‘ Mine Ventilation, Safety and Environment’ from 29-30 Nov, 2001 held at CMRI, Dhanbad, P 343-352;
- XV. Basu, A K & **Singh, M K** (2000) Selection of Wire Ropes for economic use; Proceedings of World conference MassMin 2000 held at Brisbane, Qld, Australia, 29 October – 2 November 2000: 903 – 910;

- XVI. **Singh M. K.**, Basu A. K. & Choudhary S. P. (1999) Failure of Wire Ropes - A Few Case Studies, proceedings of the International conference on 'Mining – Challenges of the 21<sup>st</sup> Century' at New Delhi during Nov. 25-27, 1999. Trans. PP 681-690;
- XVII. Pathak V. N., **Singh M. K.** & Choudhary S. P. (1999) Quality Evaluation of Mining & Engineering components by Non-destructive Evaluation, proceedings of the International conference on 'Mining – Challenges of the 21<sup>st</sup> Century' at New Delhi during Nov. 25-27, 1999. Trans. PP 719-724;
- XVIII. Basu, A K & **Singh, M K**, Mandal N. & Singh T. N. (1999) The Impact of the Surface Quality Factor in the Performance Behaviour of Steel Wire Ropes for the Mines, Conference proceedings of The Wire association International, Inc. Wire & Cable Technical Symposium (WCTS), 69<sup>th</sup> Annual Convention, Atlanta, Georgia, USA, May 1999, Trans. PP211- 216;
- XIX. Basu, A K & **Singh, M K** (1999) Waste problems in some Metallurgical Industries – Their Abatement and Control, proceedings of the International conference on 'Mining – Challenges of the 21<sup>st</sup> Century' at New Delhi during Nov. 25-27, 1999. Trans. PP 673-680.
- XX. Pathak V. N., **Singh M. K.**, Singh R. & Kashyap S. K. & Choudhary S. P. (1995) Routine Condition Monitoring of Mining Engineering component by NDE, Presented in RCM'95 on Sept. 26-27, 1995 at CMRI Dhanbad;
- XXI. **Singh M.K.**, Misra D.D.& Abbas M. (1993) Computer aided simulation of Moonidih Coal Crushing Circuit, presented in ICCAMI 93 held at Madras;
- XXII. Misra D.D., **Singh M.K.**, Kashyap S.K. (1993) Comparative evaluation of Rotary breaker and Deshaling jig, presented in ICCAMI 93 held at Madras;
- XXIII. Pathak V.N., Singh R, **Singh M.K.** and Choudhary S.P. "Application of Non-destructive Evaluation in Mining Industry" organised by I.S.N.T., Bombay Chapter at BARC, Bombay
- XXIV. Kashyap S. K., **Singh M. K.**, Choudhary S. P., Mahto A & Mehta K. D. "Non-destructive Assessment of defect size through fracture Mechanics" organised by CMRI Dhanbad.

- Invited/key-note addresses:

- I. **Invited for** delivering lecture on "NDT Theory" before foreign delegates during short course programme on "Maintenance of Mining Equipment during 09.09.2013 – 20.09.2013" by the Director of ISM, Dhanbad;
- II. Being the **Hony. Secretary** of IEI, Dhanbad Local Center, the following organising secretary's addresses were delivered on the relevant topics during the period 2010-2012:
  - **World Water Day 2011** - A Seminar on "Water for Cities: Responding to the Urban Challenges" on May 14, 2011 at HRD Building, BCCL, Dhanbad;
  - **World Telecommunication and information Day 2011** – Observed on May 17, 2011 on the theme " Better Life in Rural Communities With ICTs" at CIMFR, Dhanbad;
  - **World Environment Day 2011** – Observed on June 5, 2011 on the theme "Forests: Nature at your Service" at CIMFR;
  - **International Year of Chemistry 2011** – Observed on September 10, 2011 at CIMFR-Digwadih campus along with a seminar on "Chemistry for Sustainable Development of Coal Based" Technology;

- **44<sup>th</sup> Engineers' day 2011** - Observed on September 15, 2011 at CIMFR, Dhanbad along with a seminar on “Engineering Preparedness for Disaster Mitigation”;
  - **World Habitat Day 2011** – Observed on October 17, 2011 at ISM, Dhanbad on the theme “Cities and Climate Change”.
  - **A Seminar 2012** - Organised jointly with IETE students Chapter, BIT Sinri on the topic “Convergence of Engineering Education through Information & Communication Technology” on February 20, 2012 at BIT, Sindri
  - **World Water Day 2012** - A lecture on “Water and Food Security” on May 14, 2011 at Camp office, IEI, DLC, Dhanbad;
  - **World Telecommunication and information Day 2012** – Observed on May 17, 2012 on the theme “ Women and Girls in ICT” at ISM, Dhanbad;
  - **World Environment Day 2012** – Observed on June 5, 2012 on the theme “Green Economy: Does it Include you” at ACC, Sindri
  - **44<sup>th</sup> Engineers' day 2012** - Observed on September 15, 2012 at JRD Tata Auditorium, Dhanbad along with a seminar on “Appropriate Climate-Responsive Technology for Inclusive Growth and Sustainable Development”;
  - **World Habitat Day 2012** – Observed on October 1, 2012 at BIT, Sindri, Dhanbad on the theme “Changing Cities and Building Opportunities”;
- III. Being the **Chairman** of IEI, Dhanbad Local Center, the following chairman’s addresses were delivered on the relevant topics during the period 2014-2016:
- One-day Workshop on “ Advances Web Technologies” on March 15, 2015 at BIT, Sindri in association with BIT, sindri
  - **World Water Day 2015** – observed on the theme “Water and Sustainable Development” followed by a seminar on “Action plan to meet the challenges of water crisis in present scenario” on March 22, 2015 at Kalyan Bhawan, Jagjivan Nagar, Dhanbad in association with BCCL, Dhanbad;
  - **World Telecommunication and information Day 2011** – Observed on May 17, 2015 on the theme “ Telecommunications/ICT – Drivers of Innovations Communities With ICTs” at CIMFR, Dhanbad;
  - **World Environment Day 2011** – Observed on June 5, 2011 on the theme “Seven Billion Dreams. One Planet. Consume with Care” at ACC Sindri, Dhanbad;
  - **48<sup>th</sup> Engineers' day 2015** - Observed on September 15, 2011 on the theme “Engineering Challenges for Knowledge Era” at Management studies center, ISM, Dhanbad;
  - **World Habitat Day 2015** – Observed on October 5, 2015 at ISM, Dhanbad on the theme “Public spaces for all”.
- List of best 05 publications:
    - I. **Singh M K**, Kumar B R, Pamnani M, Anand M & and Shandilya S (2014) FEA Analysis of Crack Propagation of a Cage Shackle used in Mine Cage Suspension Gear Geominetech: The Indian Mineral Industry Journal, Iss-No 7 July- Sept / ENTMS 2014 PP 104-108;
    - II. Singh U., **Singh M. K.** & Singh M. (2013) Failure analysis of bridle chain used for hoisting in mines, Journal of Chemical Engineering and Materials Science, DOI 10.5897/JCEMS13.01.50, ISSN 2[4]-6605@2013 Academic Journal,vol. 4(3) pp. 38-45 (<http://www.academicjournals.org/JCEMS>);
    - III. **Singh M. K**, Maity S N and Mahto A. (2008) Application of Nanotechnology in Indian Mining – an emerging opportunity, Proceeding of a National Conference on “Emerging Trends in Mining and Allied Industries” (ETMAI - 2008) held on February 2 – 3, 2008 at N.I.T., Rourkela P604-617.

- IV. **Singh M. K.**, Mahto A., Thakur R. N. & Sinha A. (2007) Failure Analysis of Wire Rope used for Hoisting in Mining – A Case Study, Journal of Failure Analysis and Prevention, USA. DOI 10.1007/s11668-007-9022-8 (Available Online [www.springerlink.com](http://www.springerlink.com)) & 11668. ISSN 1547-7029 (7) 77-152 (2007) Volume 7 Issue 2 April 2007 P87-91;
- V. **Singh M K** & Basu A K (2002 & 2003) Relationship between Tensile Strength and Torsion of a Steel Wire Rope Under Different Operational States in an Indian Mine, Published in Wire Journal International, USA: 2003. 36 6 p. 62-67 and Presented at the Wire & Cable Technical Symposium (WCTS to held at Wire Expo 2002 in Chicago, IL 8-13 June 2002;

**10. Number of Books authored/edited: 1**

Proceedings of an All India seminar on “Advances in Mine Transport system – 2016” (AMTS 2016) organised by The Institution of Engineers (Indai), Dhanbad Local Center in association with DGMS, Dhanbad on January 20-21, 2016, at community hall, BCCL, Dhanbad.

**11. (a) No. of Patents granted / applied for: 09 (Nine)**

Title	Inventors	Country	Publication Date	Filing Date	Grant Date	Patent No.
1.Mobile size separator for coal/run-of-mines	Maity S N, Singh M K & Sinha A	India (Republic of)	19-Sep-2006	02-Sep-2006	26-Feb-2007	0392DEL2007
2.Mobile disaster vehicle useful for emergency evacuation from pothole/pit particularly in mines	Maity S N, Singh M K & Mahto A	India (Republic of)	22-Nov-2006	07-Nov-2006		0266NF2006
3.A novel device useful for locking flanges of pipe joint	Maity S N, Singh M K & Mahto A	India (Republic of)	22-Nov-2006	07-Nov-2006	21-Mar-2007	0611DEL2007
4.A novel device for desalination of sea water by using natural forces	Maity S N & Singh M K	India (Republic of)	22-Nov-2006	07-Nov-2006	28-Mar-2007	0672DEL2007



5. An improved light composite tubular support useful for quick setting against tunnel roof	Maity S N & Singh M K	India (Republic of)	08-Jan-2007	29-Dec-2006	03-May-2007	0958DEL2007
6. Novel test rig useful for evaluation of cement / resin capsule & roof bolt on the surface simulating the underground mine condition	Maity S N, Singh M K & Sinha A;	India (Republic of)	08-Jan-2007	29-Dec-2006	13-Nov-2007	2381DEL2007
7. A novel prestressed rail sleeper particularly useful for underground haulage track	Maity S N & Singh M K	India (Republic of)	21-Feb-2007	02-Feb-2007	03-May-2007	0956DEL2007
8. A light and detachable canopy for protecting the miners in the immediate front face of a tunnel drivage (0110nf2007)	Maity S N & Singh M K	India (Republic of)	19-Feb-2007	02-Feb-2007	21-Aug-2007	1627DEL2007
9. Road dust collecting	S. K. Chaulya, M. K.	India (Republic of)		10-Aug-2010	02-Nov-2010	2619DEL2010

and briquetting system for coal mines	Singh	of)				
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**(b) Technologies developed, Licensed and/or commercialized:**

Technology for Road dust collecting and briquetting system for coal mines has been transferred to TATA Motor for commercialization.

**12. Foreign visits:**

Country	From	To	Venue	Purpose
United Kingdom of Great Britain	01.10.2000	15.12.2000	University of Reading, UK	For PhD registration (Part-time-working-away)at University of Reading, UK followed by research course.
United Kingdom of Great Britain	31.07.2003	14.08.2003	University of Reading, UK	For facing an interview and former registration promoted to Ph.D. registration in August 2003 thereafter
United Kingdom of Great Britain	23.04.2007	25.05.2007	University of Reading, UK	For finalising structure of thesis and data analysis
United Kingdom of Great Britain	02.03.2008	09.03.2008	University of Reading, UK	To face PhD. Viva-voce examination.

**13. Details of Professional memberships:**

S.No.	Position	Period	Name of Professional Bodies
i	Fellow	Life	The Institution of Engineers (India)
ii	Executive member	2008-2010	The Institution of Engineers (India) Dhanbad Local Center
iii	Hony. Secretary	2010-2012	
	Executive member	2012-2014	
	<b>Chairman</b>	2014-2016	
iv	Member	Life	Indian Society of Mechanical Engineers, ISME (I)
v	Member	Life	ISAMPAE, ISM Dhanbad

vi	Executive member	Onward	Indian Society for Advancement of Material and Process (ISAMPAE) ISM Dhanbad
vii	Principal Executive Member	2012 (Onward)	Wire rope products section committee, MED 10 (Bureau of Indian Standards)
vii	Think Tank Member	2012-13	IETP ( Institutional Education Tuning Program)
viii	Advisor	2012-13	AICTE
ix	Reviewer	1.11.2012	International Journal of Mechanics and Applications, USA <a href="http://journal.sapub.org/mechanics">http://journal.sapub.org/mechanics</a>
x		1.11.2012	Journal of Safety Engineering, USA <a href="http://journal.sapub.org/safety">http://journal.sapub.org/safety</a>
xi		31.10.2012	International Journal of Mechanical Engineering and Automation, USA <a href="http://journal.sapub.org/imea">http://journal.sapub.org/imea</a>
xii		31.10.2012	International Journal of Materials Engineering, USA <a href="http://journal.sapub.org/ijme">http://journal.sapub.org/ijme</a>
xiii	Member	Life (2013)	Ultrasonics Society of India
xv	Editor-in-Chief	16.05.2013	Journal of Safety Engineering, USA <a href="http://journal.sapub.org/safety">http://journal.sapub.org/safety</a>
xvi	Editor-in-Chief	1.1.2014	International Journal of Materials Engineering, USA <a href="http://journal.sapub.org/ijme">http://journal.sapub.org/ijme</a>

#### 14. Major contributions: ( Max. 150 words)

- Nine patents were granted / applied. Technology for Road dust collecting and briquetting system for coal mines has been transferred to TATA Motor for commercialization. An experience of 25 years in the field of quality assessment of mining and allied engineering equipment by Destructive & Non-destructive evaluations in general, but failure analysis of the steel wire ropes in particular, more than 10,000 technical reports were prepared and served industry against safe use of those equipments in the installation. These reports also help to import elimination of costly cage suspension gear equipments. More than 100 project reports related to safe use of the mine hoisting system and man riding systems in the installation which meliorated mine productivity and improved the purchasing capacity of society. Being reviewer, editor and editor-in-chief of different international journals uplifted our institute on the international platform; As Secretary in 2010 -2012 followed by Chairman (2014-2016) of the Institution of Engineers, Dhanbad Local Center the knowledge of society on burning problem of society and world as whole has been uplifted. As Think Tank Member of IETP and AICTE Adviser in 2012-13 took part in nation building program in the field of education.

#### 15. Technologies and Products/ Services: Nil

#### 16. Designs and Prototype Developed: Nil

17. Honours and awards won for technological contributions or sociological impact of R&D: Nil

