# **CURRICULUM VITAE**

Abdelrhman Ibrahim Hassan, PhD

### **Tabbin Institute for Metallurgical Studies (TIMS)**

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Ferrous Metallurgical Department

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### Personal

Born 5th of July, 1980, Egypt. Nationality: Egyptian

Address: Al-Nada district, Hadayek October, Giza, Egypt Postal code: 12578

### Education

| I 2012                    | D 4 CDU 1 . M4 H . LE NA LTI   |
|---------------------------|--|
| January2012 -             | Doctor of Philosophy in Metallurgical Engineering, National University of                    |
| May 2016                  | Science and Technology, Moscow Institute for Steel & Alloys «NUST MISiS»                     |
|                           | Department: Steel Metallurgy, New Production Technologies and Protection of                  |
|                           | Metals, Moscow, Russia, May 2016.  |
|                           | Address: Leninsky Prospekt, 2, Moscow, 119049, Russian Federation                            |
|                           | http://misis.ru/Portals/0/Avtoreferat/2016/Hassan-Abdel'rhman-disser.pdf                     |
| September 2004 - May      | Master's Degree in Metallurgical Engineering   |
| 2008                      |  |
| 2000                      | Department, Cairo, Egypt, 2008   |
|                           |  |
| C . 1 1000 M              | Address: El-Nasr Rd, Nasr City, Cairo Governorate, 11651                                     |
| September 1998 - May      |  |
| 2003                      | Faculty of Engineering, Al-Azhar University, Metallurgical Engineering                       |
|                           | Department, Cairo, Egypt, 2003   |
|                           | Address: El-Nasr Rd, Nasr City, Cairo Governorate, 11651                                     |
| Work Experience           |  |
| 2016 to present           | Assistant Prof., Tabbin Institute for Metallurgical Studies (TIMS), Cairo, Egypt,            |
|                           | Metallurgy department  |
|                           | www.tims.gov.eg E-mail: info@tims.gov.eg Tel.: +20227155170                                  |
|                           |  |
| 2016 to present           | Head of Grants and International Collaboration Office (GICO), Technology                     |
|                           | Innovation and Commercialization Office (TICO), Academy of Scientific                        |
|                           | research and Technology, Cairo, Egypt.   |
|                           | E-mail: tims_tico@tims.gov.eg Tel.: +20225010175   |
|                           | Z main time_tree c timesge (reg  |
| 2009 -2016                | <b>Assistant lecturer</b> , Tabbin Institute for Metallurgical Studies (TIMS), Cairo, Egypt, |
|                           | Metallurgy department  |
|                           | Wetanungy department   |
| 2004 -2009                | Research engineer, Tabbin Institute for Metallurgical Studies (TIMS), Cairo,                 |
|                           |  |
|                           | Egypt, Metallurgy department   |
| The state of the state of | CUTEZ CALL CLASSIC FOR A   |
| Trainer/Instructor        | 1 0 001  |
|                           | Course title: Steelmaking Production from Electric Arc Furnace                               |
|                           | Date: From 19 to 24 December 2018  |

**SULB Steel Company, Kingdom of Bahrain** 

Date: From 10 to 14 February 2019

Course title: Secondary steelmaking-ladle treatment and its quality control

| Administrative Duties |  |
|-----------------------|--|
| 2016 to present       | Member of the Negotiation and International Relations Committee, Tabbin Institute    |
|                       | for Metallurgical Studies (TIMS), Cairo, Egypt.                                      |
| 2016 to present       | Member of the Scientific Council, Tabbin Institute for Metallurgical Studies         |
|                       | (TIMS), Cairo, Egypt.  |
| 2016 to present       |  |
|                       | Institute for Metallurgical Studies (TIMS), Cairo, Egypt.                            |
| 2016 to present       | Member of the administrative Board of the Manufacturing Studies Center, Tabbin       |
|                       | Institute for Metallurgical Studies (TIMS), Cairo, Egypt.                            |
| 2019 to present       | Member of the administrative Board of the Belarusian Egyptian Center for             |
|                       | Consulting and technical support, Tabbin Institute for Metallurgical Studies (TIMS), |
|                       | Cairo, Egypt.  |

Research Interests

Extractive Pyrometallurgy
Ironmaking and Steelmaking
Primary & Secondary Steelmaking
Ferroalloys Production
Ore preparation and concentration

| Ore preparation and con     | centration  |
|-----------------------------|---|
| Researches and Publications |   |
| November 2010               | "Effects of Basicity and Temperature on Phosphorus Distribution between Slag and Metal in Basic Oxygen Converter" <i>International Arab Conference for Metal Casting</i> , "Arab Cast" 13 – 16 November 2010, Sharm El- Sheikh, Egypt   |
| October 2012                | "Dust generation and treatment for recycling in electric arc furnace"  International Arab Conference for Metal Casting, "Arab Cast", 22 – 25 November 2011, Sharm El- Sheikh, Egypt   |
| January 2015                | "Analysis of dephosphorization process in steelmaking from metallized raw materials with high phosphorus content", A. I. Hassan, G. I. Kotelnikov, A. E. Semin, G. M. Megahed), "Chernye metally" Ferrous metals journal, No:1, 2015  http://www.rudmet.ru/journal/1387/article/23832/  |
| April 2015                  | "Melting technology analysis of steelmaking with using high phosphorous content of DRI in EAF", A. I Hassan, G. I. Kotelnikov, A. E. Semin, G. M. Megahed), "Chernye metally" Ferrous metals journal, No:5, 2015  http://www.rudmet.ru/journal/1426/article/24499/  |
| June 2015                   | "Phosphorous behavior in electric arc furnace steelmaking with the melting of high phosphorous content direct reduced iron", A. I. Hassan, G. I. Kotelnikov, A. E. Semin, G. M. Megahed) 24th International Conference on Metallurgy and Materials, June 3rd - 5th 2015 / Hotel Voronez I, Brno, Czech Republic, EU (Published in Thomson Reuters database - Web of Science, Web of Knowledge incl. CPCI and (Elsevier) |
| June 2015                   | "Technology of metallized raw materials melting process in EAF steelmaking", A. I. Hassan, G. I. Kotelnikov, A. E. Semin, G. M. Megahed), Proceedings of international scientific-practical conference, school for young scientists, Yekaterinburg, 2015  |
| November 2016               | "Estimation of environmental impact of steel production processes for Misr Steel Company in Egypt", Egyptian Environmental Affairs Agency, Cairo Egypt, 2016.   |
| August 2018                 | Study of management and saving of energy consumption in the Egyptian industries Academy of Scientific Research & Technology, Cairo, Egypt, 2018.  |
| March 2019                  | Manganese partitioning between slag and liquid metal in LD converter", Meeting: 2019 TMS Annual Meeting& Exhibition Symposium, 10th International Symposium on High Temperature Metallurgical Processing, Session: Extraction and Recovery of Metals.http://www.programmaster.org/PM/PM.nsf/ApprovedAbstracts/525FB506D28 D782852582CE0065D667OpenDocument  |

| February 2020 | Liquid Metal in BOF, TMS 2020 Annual Meeting & Exhibition Symposium: 11th International Symposium on High Temperature Metallurgical  |
|---------------|--|
| February 2021 | Processing, Session, San Diego, California, USA  Abdelrhman Ibrahim Hassan, Mohamed Gamal Khalifa, Mohamed Aziz Meraikib and Belal Saleh Ahmed, "Sintering of Bahariya iron ore using anthracite at the Egyptian iron and steel company", Metallurgist, Vol. 65, Nos. 1-2, May, 2021, pp.3-12, Springer, Web of Science, Scopus, Scimago(Q2)   |
| April 2021    |  |
| July 2021     | <b>Abdelrhman Hassan</b> , Georgy Kotelnikov & Hany Abdelwahed "Melting characteristics of alternative charging materials in an electric arc furnace steelmaking" Ironmaking & Steelmaking Processes, Products and Applications, Volume 48, 2021 - Issue 10, Pages 1136-1141.  |
| October 2021  | <b>A. I. Hassan</b> , M. G. Khalifa, M. A. Meraikib and B. A. Saleh "Effect of MgO content on properties of Bahariya iron ore sinter under the conditions of Egyptian iron and steel company (EISCO), Metallurgist, Vol. 65, Nos. 9-10, January, 2022 pages1077–1084.  |
| April 2022    | <b>Abdelrhman Hassan</b> , Mohammed Meraikib & Taha Mattar "Thermodynamic Modelling of Manganese Behavior in Oxygen Steelmaking", Global Journal of Researches in Engineering Volume 22, Issue 1, Version 1, 2022.   |
| October 2022  | <b>Abdelrhman Hassan</b> , Mohamed Kamal El-Fawakhry, Ahmed Hamed & Taha Mattar "Monitoring the effect of alloying elements segregation in Fe Mn Ni Al high Entropy Alloy", The 11th Global Conference on Materials Science and Engineering (CMSE 2022), September 8-11, 2022 Shenzhen, China, Journal of Physics: Conference Series <b>2368</b> (2022) 012010, IOP Publishing doi:10.1088/1742-6596/2368/1/012010 |
| October 2022  | Abdelrhman Ibrahim Hassan, Ateya Saad Eldin, Mohammed Meraikib, Hany Abdelwahed, Towards clean technology by improving energy efficiency in the Egyptian steel industry, the 6 <sup>th</sup> conference of clean technologies in the steel industry, Aachen, Germany.  |

## Theses Supervised

- MSc Thesis, Belel Saleh, entitled "Improvement of Sinter Properties by Using Mill Scale, Alternatives of Coke and Fluxes", Tabbin Institute for Metallurgical Studies (TIMS), Cairo, Egypt, 2020
- MSc Thesis, Ashraf Shaaban, entitled "The role of OHS in improving the employee performance and its impact on productivity in INCO Steel", Tabbin Institute for Metallurgical Studies (TIMS), Cairo, Egypt, 2022.
- Ph.D. Thesis, Shaimaa Hussien, entitled "**Treatment of electric arc furnace steelmaking** dusts in **Egypt**", Faculty of science, Ain Shams University, Cairo, Egypt, 2022

| Training Courses |   |
|------------------|---|
| 1/7/2001 to      | Alexandria National Iron & Steel Company (DEKHELA)                            |
| 1/9/2001         | Training course: Direct reduced iron technology (Midrex technology) and steel |
|                  | making processes in electric arc furnace (EAF).                               |
| 7/ 2002 to       | Iron mining survey project at Al-Wahat Al-Baharia iron mines, Giza, Egypt.    |
| 8/ 2002          | Determinations and calculations of geodesic and topographic survey working,   |
|                  | finding the topographic maps for Al-Gededa iron mining progression.           |

| 11/1/2005 to          | Egyptian Iron & Steel Company (EISCO)   |
|-----------------------|---|
| 9/3/2005              |   |
|                       | processes at mixer and basic oxygen converters (BOF).                           |
| June, 2009            | Institute of national planning, Cairo Egypt                                     |
|                       | Training program: Feasibility study and industrial projects evaluation          |
| 1/10/2010 to          | EZZ Flat Steel Company (EFS), Ain Sokhna, Suez, Egypt.                          |
| 30/12/2010            | Melt shop, Electric arc furnace steelmaking.                                    |
| January 2017          | National Greenhouse Gas Inventory: Industry Sector GHG emissions, Climate MRV   |
|                       | for Africa, Project of the European Commission.                                 |
|                       |   |
| April- June 2020      | 1   |
| Academy of Scientific | - Future foresight of emerging technologies                                     |
| Research and          | - Strategy formulation and planning   |
| Technology, Egypt     | - Management of technology projects   |
|                       | - Measuring and classifying research, development and innovation activities and |
|                       | evaluating performance  |
| 22/10/2021            | WAITRO: Capacity Development Workshop "How to sell ideas: Pitch training for    |
|                       | researchers, World Association of Industrial and Technological Research         |
|                       | Organizations   |
| February 10th, 2022   | Workshop 'Intellectual Property for the 'Research Commercialization &           |
| -                     | Innovation', Knowledge Egyptian bank.   |
| 1                     | 1   |

## Projects & Scientific Programs

- Study of the phenomenon of alkalis sediments in blast furnace in the Egyptian Iron and Steel Company.
- Participating with the ROMELT Center, Moscow Institute for steel and Ferro alloys, Russian Federation, for using the Romelt technology to producing pig iron from poor Egyptian Iron ores at Egyptian Iron and Steel Company.
- Head Coordinator for the memorandum of understanding which has been signed between Delta Steel Company, Egypt and our institute to develop and increase the efficiency of electric arc furnaces in order to reduce materials and energy consumptions and increase the quality of the produced steel.
- Rapporteur of the first session of the Fourth Forum "Environmental Studies and their Roles in Securing the Working Environment - Occupational Safety and Health", 25 May 2017, Tabbin Institute for Metallurgical Studies, Cairo, Egypt.

## International Agreements

- General coordinator of the protocol signed between the Egyptian Iron and Steel Company (Egypt), the ROMELT Center "MISIS" Moscow Russia, and the Tabbin Institute for Metallurgical Studies for establish the Romelt unit at the Egyptian Iron and Steel Company, 2017
- International Cooperation Agreement between Egypt and Belarus to establish the Belarusian Technological University at the Tabbin Institute for Metallurgical Studies, 2018
- Agreement on scientific & Technological cooperation between Egypt and Russian Federation for training, technology transfer, scientific dispatch and holding conferences between the Tabbin Institute for Metallurgical Studies and the National University of Science and Technology, Moscow Institute for Steel & Alloys "NUST MISIS", 2020
- MEMORANDUM OF UNDERSTANDING, Baltic State Technical University, Saint Petersburg, Russia, development and implementation of joint educational programs, including double Master degree programs
- Cooperation protocol with St. Petersburg Polytechnic University. Double degrees of specific programs taught in English. Joint research cooperation. Visiting Professors and student exchange program

| Membership of Professional Societies |   |
|--------------------------------------|---|
| October/2003                         | Egyptian Engineers Syndicate  |
|                                      | Tel: +2022574779- 25747480- 25747481  |
| July/2015                            |   |
|                                      | Tel. +39.02.76021132 -76397770 - 76397763 Fax. +39.02.76020551              |
|                                      | E-Mail: aim@aimnet.it   |
| January/2016                         | Association for Iron & Steel Technology (AIST)                              |
|                                      | 186 Thorn Hill Road. Warrendale, PA 15086 USA Phone: +1.724.814.3000 Fax:   |
|                                      | +1.724.814.3001 - E-Mail: memberservices@aist.org                           |
| February/2020                        | The Minerals, Metals & Materials Society (TMS)                              |
|                                      | 5700 Corporate Drive Suite 750, Pittsburgh, PA 15237                        |
|                                      | 1-800-759-4867 (U.S. and Canada only), 1-724-776-9000 (all other countries) |
|                                      | Fax: 1-724-776-3770 tmsgeneral@tms.org                                      |
| July/2020                            | Member of World Association of Industrial and Technological Research        |
|                                      | Organizations, WAITRO   |
| Languages                            |   |
| Arabic                               | Native language   |
| English                              | Fluent  |
| Russian                              | Fluent  |