

Name: Ahmed Mohamed Hamed

Current Title: Professor

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FIELDS OF SPECIALIZATION

- Solar Energy Applications
- Absorption Cooling
- Extraction of water from air using solar energy.
- Desiccant dehumidification systems
- Water Desalination

DEGREES

- **Ph.D.** in “Renewable Energy”, The major field of thesis was “Non-Conventional method for Extraction of Water from Atmospheric Air”, **Russian Academy of Science, Institute of High Temperature, 1993**
- **M. Sc. in Mechanical Power Engineering**, The major field of thesis was "Continuous Operation of the Intermittent Absorption Solar cooling System", Mansoura University, Egypt, 1988.
- **B. Sc. in Mechanical Power Engineering**, Mansoura University, Egypt, 1984

Academic and Industrial Positions

Academic:

- Jul.2022- Emeritus Professor, Mechanical power Engg. Dept., Mansoura Univ., Egypt
- November 2017-Jul.2022 Head, Mechanical power Engg. Dept., Mansoura Univ., Egypt
- May 2014-2017 **Professor**, Mechanical power Engg. Dept., Mansoura Univ., Egypt.
- **June. 2011** – May 2014, **Head**, Mechanical Eng. Dept., Taif Univ., KSA
- **Feb. 2009, Professor**, Mechanical Eng. Dept., Taif Univ., KSA
- November 2005-Feb.2009 . **Professor**, Mechanical power Engg. Dept., Mansoura Univ., Egypt.
- November 2000- November 2005, **Associate Professor**, Mechanical Power Eng. Dept., Mansoura Univ., Egypt.
- January 1994- Nov. 2000, Assistance Professor, Mechanical Power Eng. Dept. Mansoura University, Egypt.
- September, 1989-January, 1994, Study of Ph.D. in Russia
- March 1986- September 1989, Lecturer, Mechanical Power Eng. Dept., Mansoura University, Egypt.
- March 1986- September 1989, Assistant Lecturer, Mechanical Power Engineering Department, Mansoura University, Egypt.

Industrial, consulting:

2000-2003 – Consultant Rice Marketing Company

2002-2002 Supervising Maintenance of HVAC testing unit in (New and Renewable Energy Authority) NREA, Egypt

Previous Research Projects:

- Application of Solar Energy for Air Conditioning In Humid Zones, Taif University, KSA 2010, 100k,SR
- Development of Solar System for Saline Water Desalination In KSA, Taif University, KSA 2012, 90k,SR
- Intelligent Antilock Brake System Design for Road-Surfaces of Saudi Arabia, Taif University, KSA 2010, 100k,SR
- Study of Solar Hydrogen Production using Water Electrolysis, Taif University, KSA 2012, 80k,SR
- Solar Powered Dehumidification System using Desert Evaporative Coolers, Taif University, KSA 2011, 100k,SR
- Development of Using the Solar Kilns In Drying The Wastes Of Palm Trees In Saudi Arabia, Taif University, KSA 2013, 80k,SR
- Application of Solar Energy for Regeneration of liquid desiccant using rotating wick in the climatic conditions of Taif City, KSA, Taif University, KSA 2013, 100k,SR
- Application of Solar Energy for Recovery of Water From Atmospheric Air IN KSA, Taif University, KSA 2010, 100k,SR

SCIENTIFIC AND PROFESSIONAL SOCIETIES:

- Egyptian Engineers Syndicate
- Committee of electricity and energy, Academy of Scientific Research, Egypt, 2018-2021
- Technical working group in nuclear desalination (TWG-ND), IAEA, 2021-2024

HONORS AND AWARDS:

- Marquis Who's Who in Science and Engineering 7 th Edition 2003-2004
- International Biographical Center IBC, 2000 Outstanding Scientists of the 21 st Century
- International Biographical Center IBC, International Educator of the year for 2004
- Mansoura university award for scientific creativity in 2020
- Silver medal, salon International des inventions Geneva, Mars. 2017
- Mansoura University prize for scientific excellence, 2015
- Mansoura University incentive prize, 2000
- Taif University Publication Prize, 2012
- Taif University Publication Prize, 2013
- Taif University Citation Prize, 2013
- Taif University Publication Prize, 2014

Patents & Publications

Patents

- Установка для получения пресной воды из атмосферного воздуха · патент 20047
(Installation for fresh water from atmospheric air), Russia, 1992

- устройства для получения воды из Атмосферного воздуха, (Device for obtaining water from atmospheric air), Russia, 1995
- способ преобразования энергии гравитационных сил в работу и устройство для его осуществления, (method for converting the energy of gravitational forces into work and a device for its implementation), Russia, 1997

Publications:

Journal Papers (2019-2023)

- [1] W.M. Alaian, E.A. Elnegiry, **Ahmed M. Hamed**, Experimental investigation on the performance of solar still augmented with pin-finned wick, **Desalination** 379 (2016) 10–15.
- [2] S, Barakat, Ahmed Ramzy, A. M. Hamed, S. H. El Emam, Enhancement of gas turbine power output using earth to air heat exchanger (EAHE) cooling system, **Energy conversion and management** 111 (2016)137-146.
- [3] K. H. Awad, M. M. Awad, A. M. Hamed, Extraction of water from air using double slope condensation surface, *MEJ*, 2017
- [4] MA Talaat, MM Awad, EB Zeidan, **AM Hamed**, [Solar-powered portable apparatus for extracting water from air using desiccant solution](#), **Renewable energy** 119(2018), 662-674
- [5] AA ElBahloul, ESB Zeidan, II El-Sharkawy, **AM Hamed**, A Radwan, Experimental and numerical investigation of multistage sorption energy storage system., *Applied Thermal Engineering*, Volume 218, 5 January 2023, 119313
- [6] MM Abd-Elhady, II El-Sharkawy, **AM Hamed**, MS Salem, Performance evaluation of a novel multi-tray packed bed solid desiccant dehumidification system. *International Journal of Refrigeration*, In Press, 2023.
- [7] AO Ali, **AM Hamed**, MM Abdelsalam, MN Sabry, MR Elmarghany, Energy management of photovoltaic-battery system connected with the grid, Volume 55, Part D, 30 November 2022, 10586
- [8] Abdelrahman O Ali, Mohamed R Elmarghany, Mohamed M Abdelsalam, Mohamed Nabil Sabry, **Ahmed M Hamed**, Closed-loop home energy management system with renewable energy sources in a smart grid: A comprehensive review *Journal of Energy Storage*, Volume 50, June 2022, 104609
- [9] Farouk Badr, Ali Radwan, Mahmoud Ahmed, **Ahmed M Hamed**, Performance assessment of a dual-axis solar tracker for concentrator photovoltaic systems, *International Journal of Energy Research*, Volume46, Issue10, August 2022, Pages 13424-13440
- [10] Farouk Badr, Ali Radwan, Mahmoud Ahmed, **Ahmed M Hamed**, An experimental study of the concentrator photovoltaic/thermoelectric generator performance using different passive cooling methods, **Renewable energy** [Volume 185](#), February 2022, Pages 1078-1094
- [11] AA ElBahloul, ESB Zeidan, II El-Sharkawy, AM Hamed, A Radwan, Recent advances in multistage sorption thermal energy storage systems, *Journal of Energy Storage* [Volume 45](#), January 2022, 103683
- [12] MM Abd-Elhady, MS Salem, AM Hamed, II El-Sharkawy, Solid desiccant-based dehumidification systems: A critical review on configurations, techniques, and current trends, *International Journal of Refrigeration* 133, 337-352, Volume 133, January 2022, Pages 337-352
- [13] AEA El-Maaty, MM Awad, GI Sultan, AM Hamed, Performance study of fog desalination system coupled with evacuated tube solar collector, Volume 504, 15 May 2021, 114960

- [14] MH Fathy, MM Awad, ESB Zeidan, AM Hamed, Solar powered foldable apparatus for extracting water from atmospheric air , Renewable energy , Volume 162, December 2020, Pages 1462-1489
- [15] MM Abd-Elhady, AM Hamed, Effect of fin design parameters on the performance of a two-bed adsorption chiller, International Journal of Refrigeration [Volume 113](#), May 2020, Pages 164-173
- [16] MA Talaat, MM Awad, EB Zeidan, **AM Hamed**, [Solar-powered portable apparatus for extracting water from air using desiccant solution](#), **Renewable energy** 119(2018), 662-674
- [17] EA El-Maaty, MM Awad, GI Sultan, **AM Hamed**, Solar powered fog desalination system, **Desalination** (2019)472, 114-130
- [18] HO Helaly, MM Awad, II El-Sharkawy, **AM Hamed**, Theoretical and experimental investigation of the performance of adsorption heat storage system, **Applied Thermal Engineering** (2019) 147, 10-28
- [19] S Barakat, A Ramzy, **AM Hamed**, SH El-Emam, [Augmentation of gas turbine performance using integrated EAHE and Fogging Inlet Air Cooling System](#), **Energy** (2019) 189, 116133
- [20] MM Abd-Elhady, **AM Hamed**, Effect of fin design parameters on the performance of a two-bed adsorption chiller - **International Journal of Refrigeration**,(2020) 113, 163-173
- [21] MH Fathy, MM Awad, ESB Zeidan, **AM Hamed**, Solar powered foldable apparatus for extracting water from atmospheric air, **Renewable Energy**(2020) 162, 1462-1489
- [22] ME Ismail, MM Awad, **AM Hamed**, MY Abdelaal, EB Zeidan, [Experimental and numerical investigations on a high-density polyethylene \(HDPE\) blown film](#), Journal of Plastic Film & Sheeting,(2021) 87560879211026010
- [23] AEA El-Maaty, MM Awad, GI Sultan, **AM Hamed**, [Performance study of fog desalination system coupled with evacuated tube solar collector](#), (2021), Desalination 504, 114960
- [24] F Badr, A Radwan, M Ahmed, **AM Hamed**, [An experimental study of the concentrator photovoltaic/thermoelectric generator performance using different passive cooling methods](#), Renewable Energy (2022) 185, 1078-1094
- [25] AA ElBahloul, ESB Zeidan, II El-Sharkawy, **AM Hamed**, Recent advances in multistage sorption thermal energy storage systems, Journal of Energy Storage, (2022),45, 103683
- [26] MM Abd-Elhady, MS Salem, **AM Hamed**, II El-Sharkawy, [Solid desiccant-based dehumidification systems: A critical review on configurations](#), techniques, and current trends, International Journal of Refrigeration (2022) 133, 337-352