

HISHAM SAYED ABDEL HALIM SALEM

Present Employer: Cairo University, Faculty of Engineering.
Professor of Sanitary and Environmental Engineering

Nationality: Egyptian
Date of Birth: 13 November 1960



Key Qualifications

- More than Thirty years of experience in Research, Management and Administration of water, domestic and industrial waste treatment projects.
- Great Experience with rural sanitation including low cost sanitation and Ecological sanitation.
- Involved in the design, preparation of tender documents and execution of large number of wastewater (domestic and industrial) and water treatment plants; including, but not limited to, development of basic designs/PID's/PFD's, MTO's, equipment data sheets and bid pricing. Extensive experience in project management, construction supervision, commissioning and start-up of treatment plants.
- Delivered training courses to engineers and technicians related to design, construction supervision and operation of water, domestic and industrial wastewater systems. All training courses were sponsored by financing agencies (USAID, DANIDA, FINIDA, CARE Projects).
- Eight years' experience in Industrial Wastewater management and treatment comprising cleaner production, in plant/in process measures, and end of pipe treatment.
- Consultant to the General Organization for Physical Planning and the General Organization for New Communities, Ministry of Housing, in the fields of water, wastewater and solid waste management.
- Consultant of Environmental facility for industry pollution abatement plans and measures including Environmental Impact assessment of different projects.
- Has knowledge of computer applications for system design and cost analysis.
- Formulated construction, installation and operation and maintenance budgets including capital replacement accountants for water and wastewater projects.
- Member of several professional societies, including the Engineers Syndicate, Sanitary Engineering Society and the Japan Economic Review.
- Author of several publications on water and wastewater treatment.

Education

Ph.D.	Civil / Environmental Engineering, 1994
M.Sc.	Civil / Sanitary Engineering, 1988
B.Sc.	Civil Engineering. Cairo University, 1983

Experience Record

1983 - Present: Demonstrator, Teaching Assistant, Associate Professor, and Professor, Faculty of Engineering, Sanitary and Environmental Eng., Div. Faculty of Eng., Cairo University.

Professor of Sanitary (water and wastewater engineering) and Environmental Engineering Division, Civil Engineering Dept.

1994-present Water and Sanitation Consultant – Enviroconsult MD

- Infrastructure Consultant for Participatory Development Programme in urban Areas (PDP) In association with Dorsch International- Funded by GIZ.
- Main Consultant of The Integrated Sanitation Service Project ISSIP funded by World Bank. **ISSIP-1** for three Governorates in Delta (Beheira, Gharbeya, and K Al-Sheikh). Projects value, USD 180 Million.
- Main Consultant of The Integrated Sanitation Service Project ISSIP funded by World Bank. **ISSIP-2** for Sohag Governorate in Upper Egypt.
- Main Consultant of more than 40 water and wastewater projects belonging to NOPWASD, Capow, HCWW. Many of those projects financed by local as well as USAID, German, and WB funds.
- Rural Sanitation Consultant for Sohag rural Sanitation Project, ISSIP-2 World Bank Project. A smart wastewater system selection tool using computer soft wares was developed as a step ahead to the preparation of complete rural sanitation master plan. Moreover, prioritization criteria have been developed to set implementation priorities for different rural sanitation projects.
- Training Provider in the fields of water, wastewater, environment, and management for Sohag Project for Rural Development, World Bank funded project.
- Rural Sanitation Consultant for CARE covering many rural areas for cost effective cost wastewater systems in different villages.

- Water and Sanitation Consultant of Strategic Urban Planning for Small Cities Project in Egypt, GOPP, UN-HAPITAT.
- Consultant for ACC for 240 villages water supply projects, Contract B, ground water Plants, Iron and Manganese removal units.
- Consultant of ACC for Marg WTP, 600000 m³/day.
- Consultant of CAPOW for many water and wastewater projects with contracts amounting at LE 4 Mio.
- Water Supply and Sanitation Consultant for East Delta Agricultural Program Services EDASP, Funded by IFA, WB.
- Water and Wastewater Consultant for Sohag Project for Rural Development, World Bank funded project.
- Consultant of Azhary wastewater project in Beni Suif Governorate, USAID funded.
- Consultant of water line 800 mm in Beni Suif Governorate, UsAID funded.
- A Team Member (Infrastructure and Environmental Consultant) of International Multi-Donors Review Mission for Social Fund Programs performed in Cairo from Jan. 23 to Feb. 11, 2000, representing EU as a donor.
- Detailed Engineering for Suez Gulf Wastewater (Domestic & Industrial) Treatment Plant, 55,000 m³/day.
- Consultant of Beni Suif Governorate for Wastewater projects at El Kom El Ahmar, Beni Haroon, El Maymoon, El Reyad, Biad El Arab, and El Ezab.
- Senior consultant at Hattab consulting Office, Design and review many of more than 30 water and wastewater projects.
- Up-grading of Abu-Simbel water system (Intake, Treatment Plant, and Distribution System).
- Consultant, **DANIDA**. Preparation of tender documents (Detailed engineering, general/technical specification, O&M instructions and cost estimates for Aswan City Slaughter House, Aswan, ARE (April 1997)
- Consultant, **Chemonics Egypt**. Pre-screening / Project Identification for the Facility for Financing Environmental Protection in the Public Sector Industry financed by KfW. (1996)
- Design of lead smelter air pollution mitigation systems (1994)
- Consultant of **General Organisation for Physical Planning** in the field of Water, Wastewater, and solid waste. In the following:
New Aswan city, Menoufeya Gov., El Edwa, Maghaagha, Dir Mowas, Marakez in Menya Gov. Ahnasya Markaz, Beni Sueif Gov. El Farafra city, New Valley Gov. Sherbeen City, Daqahleya Gov. Old Fayoum city,

Fayoum Gov. New Community north Wadi El Natroon City, Hehya City, and Sharqeya Governorate

- Consultant of **General Organisation for Tourist Development** planning in the field of Water, Wastewater, and solid waste.
- Consultant of water and wastewater projects *for New Fayoum City, Ministry of Housing.*
- Consultant in water and wastewater projects *at Center of Civil Engineering Research and Studies, Faculty of Engineering, Cairo University.*

1997-2005 Technical Manager-Part Time- Coordinating Consultant, Dorsch Consult

Responsible for the review and approval of the Technical Feasibility Studies / Bidding Documents for the Industrial Pollution Abatement Facilities for projects under the Environmental Facility/Public Sector Industry Program (EEAA, KfW). Industrial Sectors included in that program are: Food, Chemical, Pharmaceutical, Engineering, Textile, Petroleum, and Mining. The scope includes preparation Pre and feasibility studies for Pollution abatement plans as well as preparation of EIA studies for different facilities and construction monitoring.

1993-1997 Design and Proposals Expert- Part Time- , The Arab Company for Engineering Works

Responsibilities include:

- Preparation of bid documents/offers for turn-key, supply/erection and construction projects for liquid treatment (industrial and domestic water/wastewater treatment)
- Preparation of EIA studies for Wastewater treatment plants
- Development of preliminary P&I diagrams, equipment data sheets and specifications for special equipment
- Performing preliminary designs and detailed designs, to be used for pricing, for various types of treatment plants including the preparation of technical specifications and detailed engineering documents
- Development of project work plans (schedules) for the follow-up, monitoring and implementation of activities
- Establishing man-power, material and equipment requirements
- Preparation of project budgets and cash-flow for projects

- Follow-up on local/foreign procurement activities
- Review of and approving equipment and materials
- Co-ordination of electrical and instrumentation work in accordance with process design and operation procedures
- Co-ordination of construction supervision, pre-commissioning, commissioning and start-up phases
- Development of O&M manuals.

Following is a list of selected industrial waste treatment projects. Primary responsibilities included, but not limited to, developing the basic design, selection of equipment, completing bid document requirements and bid pricing for:

- El-Ain Animal Stockyard and Milk Processing Wastewater Treatment Plant (350 m³/day), UAE, July 1997
- SIMO Paper Company IWWTP and Effluent Recovery (10,000 m³/day), Alexandria, ARE (Awarded to others). May 1997
- Helwan Cement Company (260 m³/hr), Helwan, May 1997
- Moharam Bek Press Company IWWTP (400 m³/day), Alexandria, March 1997
- Private Dyeing Plant IWWTP (50 m³/day), February 1997
- Shams Company for Textile Products IWWTP, November 1996
- Geisum Oil Company, IWWTP (50 m³/day, September 1996
- Assyout Industrial Zone Wastewater Treatment Plant (1,400 m³/day), Assyout, July 1996
- Assyout Cement Company IWWTP (150 m³/hr), Assyout, April 1995

1987-1993 Engineering Advisor-Part Time. Basic Village Services Project/Local Development II Provincial Project, Chemonics International /Wilber Smith (USAID-funded project).

Participated in the following activities covering 22 rural governorates:

- * Technical and financial review and approval of tender documents
- * Developing model tender documents and design standards
- * Developing training manuals and providing training courses for governorate engineers and technicians on the use of these manuals
- * Monitoring construction and providing technical assistance for bid review/award, inspection, progress monitoring and dispute resolution for projects
- * Preparing monthly progress reports submitted to USAID
- * Developing databases and computer applications

1986-1987 Part Time Water/Wastewater Engineer. Regional Centre for Planning and Development-Region III Governorates, Ministry of Housing and Reconstruction.

As a team member typical assignments covered planning of water and wastewater schemes including evaluations of the existing situation and alternatives for future extensions in Ismailia, Port Said, Suez and North Sinai.

1985-1986 Part Time Water/Wastewater Engineer. Development Research and Technical Planning Centre (DRTPC), Cairo University.

Participated in the following activities:

- Design of the Al-Arish potable water distribution system rehabilitation
- Computer hydraulic analysis and design of the proposed and existing systems
- Preparation of MTO's and cost estimates for different materials and equipment
- Preparation of complete tender documents
- Monitoring and preparation of progress reports for construction

Languages

Arabic: Native language

English: Fluent

SOCIETIES AFFILIATION

- ◆ Member of engineering syndicate since 1983. Registered as a ***Consultant Engineer No. 4586/1 in Hydraulic Design of Potable Water & Sewerage Networks and Plants***
- ◆ Member of Sanitary Engineering Society since 1989.
- ◆ Member of Japan Economic Review since March 1995.
- ◆ Member of Egyptian Environmental Engineering Society since Dec. 1998.
- ◆ Member of Filtration Separation Magazine since 1999
- ◆ Member of International Water Association IWA since Jan 2002.

Participation in Conferences / Seminars

1. “National Seminar on Appropriate Technologies for Groundwater Treatment and Conservation” organized by The National Organisation for Potable Water and Sanitary Drainage (NOPWASD) and WHO, Oct. 24, 25 1994, Cairo, Egypt.
2. “The Second International Conference on Potable water Management and Water Treatment Technologies, Aqua-Tec 96, Cairo Dec. 19th – 21st 1996.
3. First International Conference & Trade Fair on Environmental Management & Technologies Environment 97”, February 16-18, 1997, Cairo – Egypt.
4. “The Second International Conference & Trade Fair for Environmental Management and Technologies Environment 99”, November 24 – 26, 1999, Cairo, Egypt.
5. “The Third International Conference & Trade Fair for Environmental Management and Technologies Environment 2001”, October 29 – 31, 2001, Cairo, Egypt.
6. “The 12th International Trade Fair and conference on Wastewater and waste Disposal IFAT 99”, May 1999, Munich, Germany.
7. “Focus on Integrated Water Management Aqua-Tec 2000”, Sept-Oct 2000 Amsterdam, Netherlands.
8. “The International Trade Fair and conference on Wastewater and waste Disposal” IFAT 2002, May 2002, Munich, Germany.
9. “The Euro Arab Environmental Conference 2002” Sept 2002, Rostock, Germany.
10. “9th Large Wastewater Treatment Plants Conference” organized by International Water Association IWA, September 1-4, 2003, Prague, Czech Republic.
11. “IWA Conference, Ecohazard 2003 – 4th IWA Specialized Conference on Assessment and Control of Hazardous Substances in Water”, 14-17 September 2003 in Aachen, Germany.
12. “30th International Symposium and W062 Forthcoming Meeting” September 16-17, 2004. Paris, France.
13. 7th International Conference of Chemical Engineering. Conrad Hotel – Cairo Egypt, December 27-29, 2004.
14. “The 10th International Conference on Water Technology and Researches AQUA-TECH 2005”, 8-9 February 2005, Cairo, Egypt.
15. Cairo 9th International Conference On Energy & Environment, March 13-17, 2005, Sharm El-Sheikh.
16. The Seventh International Symposium on Waste Management Problems in Agro-industries, Amsterdam RAI, The Netherlands 27-29 September, 2006.
17. “The International Trade Fair and conference on Wastewater and waste Disposal” IFAT 2008, May 2008, Munich, Germany.
18. The International Trade Fair and Conference on Water and wastewater “Water Berlin”, Berlin, 2010.

Awards-Training / Research Visits

- 1- Post Doctoral Training in Industrial Wastewater Management, Nagoia, Japan, 1994. JICA grant.
- 2- PI of US-Egypt joint Science and Technology Board of a grant for joint research project incorporation with NJIT entitled “A Pilot Plant Study for Low Cost Treatment of Domestic Wastewater Using Biological Anaerobic Reactors.” Award No. ENV5-002-003.
- 3- Co. PI, in association with Menoufya University, of US-Egypt joint Science and Technology Board of a grant for a joint research project incorporation with Auburn University entitled “A Pilot Plant Study for Treatment of Domestic Wastewater Using Hybrid Growth System.” Award No. ENV7-002-001.
- 4- PI of US-Egypt joint Science and Technology Board of a grant for joint research project incorporation with University of Arizona, USA, Award No. ENV9-002-008.
- 5- Research Visit at NJIT, New Jersey, USA May / June 2002.
- 6- Research Visit at TUHH, Hamburg, Germany, Sept/October 2002.
- 7- Research Visit at Auburn University, Alabama, USA, October 2004.
- 8- Tempus Project Preparatory Visit, Lattinga Associates, Netherlands and Institute of water Quality, Hanover University, Germany. Nov-Dec, 2004.
- 9- Research Visit at University of Arizona, Tucson, Arizona, USA, Nov. 2008.
- 10- Research visit at University Magdeburg, MLU Halle-Wittenberg, UST, Halle/Saale, Germany. Supervising a Ph.D. Student in cooperation with Prof. Dr. Heinz Koeser, May 2010.

List of Publications

1. Hisham A. Halim “Treatment Technologies for Groundwater in Egypt” National Seminar on Appropriate Technologies for Groundwater Treatment and Conservation organized by The National Organisation for Potable Water and Sanitary Drainage (NOPWASD) and WHO, Oct. 24, 25 1994, Cairo, Egypt.
2. Keith R Brooke and Hisham Abdel Halim “Industrial Wastewater Pollution Abatement in the Egyptian Public Industries (I)”, The Second International Conference & Trade Fair for Environmental Management and Technologies, Environment 99, 24-26 Nov 99, Cairo, Egypt, pp 239-251.
3. Keith R Brooke and Hisham Abdel Halim “Industrial Wastewater Pollution Abatement in the Egyptian Public Industries (II)”, The Third International Conference & Trade Fair for Environmental Management and Technologies, Environment 2001, 29-31 October, 2001, Cairo, Egypt, pp 957-987.

4. Sadawi Mohamed, Abdel-Halim Hisham S, and Abo-Elhassan Eman Ezz “Assessment of Industrial Oil and Soap Wastewater Treatment Systems, (Case Study), Options for Reuse and Recovery”, Engineering Research Journal, Helwan University, Faculty of Engineering and Tech. Vol. 86, pp 78-92, April 2003.
5. Hisham S. Abdel-Halim, Khaled Zaher Abdalla, Usama Zaher, and Peter A. Vanrolleghem “Dynamic Modeling of The Return Activated Sludge Process for Real Time Monitoring and Control”, 9th Large Wastewater Treatment Plants Conference organized by International Water Association IWA, September 1-4, 2003, Prague, Czech Republic, pp 87-90.
6. Hisham S. Abdel-Halim, Zaher Abdallah, and Omar El-Hattab “Evaluation of Soil Aquifer Treatment Potential of Mixed Domestic / Industrial Wastewater”, IWA Conference, Ecohazard 2003 – 4th IWA Specialized Conference on Assessment and Control of Hazardous Substances in Water, 14-17 September 2003 in Aachen, Germany, pp 55/1-55/9.
7. Hisham S. A. Halim, Walid Abdel-Halim, and M. Nazih “Selection and Evaluation of Appropriate Sanitation Systems in Rural Egypt. Case Study in Sohag Governorate, Upper Egypt”. The 30th International Symposium in Water Supply and Drainage for Buildings (CIB W062 2004), September 16-17, 2004, Paris, France, Second Session p. no. 5.
8. Said El Nashaei, Parag Garhyan, Pradeep Prasad, Hisham S. Abdel Halim, and Ibrahim G. “Modeling of Hybrid Growth Wastewater Bio-Reactors” 7th International Conference of Chemical Engineering. Conrad Hotel – Cairo Egypt, December 27-29, 2004, pp 1343-1368.
9. Fayza A. Nasr, Hala S. Doma, Hisham S. Abdel-Halim, and Saber A. El-Shafai “Chemical Industry Wastewater Treatment” 7th International Conference of Chemical Engineering. Conrad Hotel – Cairo Egypt, December 27-29, 2004, pp 1183-1206.
10. H. S. Abd El Haleem, El-Ahwany A. H., Ibrahim, H. I., and Ibrahim G. “Modeling Aspects of Activated Sludge Process, Part II: Mathematical Process Modeling and Bio-kinetics of Activated Sludge Process” 7th International Conference of Chemical Engineering. Conrad Hotel – Cairo Egypt, December 27-29, 2004, pp 1073-1108.
11. Hisham S. Abdel Halim, and F. El Gohary “Wastewater Treatment for Dairy Processing Plants, Case Study “Aqua-Tec 2005, The 10th International Conference on Water

Technology and Researches, Cairo International Conference Centre, Cairo, Egypt, February 8-9, 2005, pp 226-238.

12. Ezzat A. Shafei, Hisham S. Abdel Halim, and Ahmad Abou El-Magd "Upgrading of Activated Sludge Process for Better Organic Removal and Nitrification Using Hybrid System" Aqua-Tec 2005, The 10th International Conference on Water Technology and Researches, Cairo International Conference Centre, Cairo, Egypt, February 8-9, 2005, pp 207-217.
13. Ezzat A. Shafei, Hisham S. Abdel Halim, and Hazem Abdel Aziz Selmy "Options for Greywater Treatment and Reuse in Egyptian Schools" Aqua-Tec 2006, The 11th International Conference on Water Technology and Researches, Cairo International Conference Centre, Cairo, Egypt, February 15-16, 2006, pp 82-94.
14. Waseem El Sayed, Hisham S. Abdel Halim, M. Saadawy "Performance of Fixed-Bed Anaerobic Reactors Treating Domestic Wastewater" Workshop On Implementation of Anaerobic Sewage Treatment in the Middle East with a Focus on Jordan and Egypt: A Low-Cost, Low-Energy Alternative Workshop, Nile Hilton, Cairo, Egypt, March 13-15, 2006.
15. M.E.Matta, E.A. Hasanein, H.S.A. Halim, and G.H. Ali "Wastewater Treatment Using Algal-Bacterial Reactor" Journal of Engineering and Applied Science, Vol.53, Apr 2006, PP 215-233 Faculty of Eng., Cairo University.
16. Abou-Elela Sohair I, H. Abdel Halim, Enas Abou-Taleb, and Hanan S. Ibrahim "Pollution Prevention and Waste Minimisation in Poly Sulfonated Naphthalene Fomaldhyde Plant as A Typical of Chemical Industry" Egyptian Journal of Applied Sciences, Vol.21, No.8B, August 2006, PP 723-736.
17. W.Abdel-Halim, D..Weichgrebe, *Hisham S.A.Halim*, K.H.Rosenwinkel "Development of Operation and Performance Monitoring Guidelines for Anaerobic Industrial WWTP, Case Study for Agro-Based Industries in Germany and Egypt". The Seventh International Symposium on Waste Management Problems in Agro-industries, Amsterdam RAI, The Netherlands 27-29 September, 2006.
18. Sohair I. Abou-Elela, *Hisham Abdel Haleem*, Enas Abou-Taleb, Hanan S. Ibrahim "Application of Cleaner Production in Chemical Idustry: a near zero emission", International Journal of Cleaner Production (ELSEVIER), Accepted 27 October 2006, Vol.15, Issue 18, Pages 1852-1858. *ISSN 0959-6526, IF 1.34.*

19. Sohair I. Abou-Elela, Hisham S. Abdel Halim, Hanan S. Ibrahim “Application of Alternated Anaerobic Fixed Bed Reactor AAFBR for Treatment of Saline Wastewater”, An International Journal- Management of Environmental Quality, Vol.18, No.1, 2007, PP 13-21, By Emerald, ISSN1477-7835, Previously Environmental Management & Health, ISSN. 0956-6163.
20. Fayza A. Nasr, Hala S. Doma, Hisham S. Abdel Halim, Saber A. El.Shafai “Chemical Industry Treatment” The International Journal of Environmentalist, Published by Springer Netherland, Vol.27, No.2, June 2007, PP 275-286. ISSN. 0251-1088.
21. Ezzat Abdel Shafi, Hisham S. Abdel Halim, Mohamed H. Mostafa, Mohamed Nazeih “Anaerobic Low Strength Wastewater Treatment Using Dual Stage Fixed Film Reactor, Effect of Organic Loading Rate” Journal of Al-Azhar University, Engineering Sector, Vol.3, No.8, July 2008, PP 701-714.
22. Hisham Abdel Halim, Ragaei H. Ismail “Recovery of Water and Alum from Surface Water Treatment Sludge” Journal of Al-Azhar University, Engineering Sector, Vol.5, No.16, April 2010, Accepted for Publication in January 2010.
23. S. Al-Dosary, M. Galal, and H. Abdel-Halim “LCA of Zenien and 6th of October Wastewater Treatment Plants” 7th International Engineering Conference, Mansoura University, Faculty of Eng. 23-28 March 2010.
24. N.A. Al-Hattab, H.A. Halim, and M.E. Matta “Performance of IFAS Using Dispersed Media in Organic Matter Removal and Nitrification of Wastewater”. Journal of Engineering and Applied Science- Faculty of Engineering- Cairo University- 58/6 Dec-2011.
25. Abdel Salam El-Awwad, Hisham Abdel-Halim, Heinz Koeser “The Start-up of Aerated Submerged Fixed-Bed Biofilm Reactor for Steady State Nitrification”, International Journal of Environmental Pollution and Remediation, Volume 1, Issue 1, Year 2012, ISSN: 1929-2732.. Article ID: 004, DOI: 10.11159/ijep.2012.004.
26. Abdelsalam Elawwad, Ahmad Naguib, Hisham Abdel-Halim “Modeling of Phenol and Cyanide in a Full scale coke-oven wastewater treatment Plant”, Journal of Desalination and water treatment – Taylor & Francis Group, Accepted on 25 Jan-2016.

27. Mostafa M. El-Seddik, Mona M. Galal, A.G. Radwan, and Hisham S. Abdel Halim “Modified Kinetic-hydraulic UASB reactor model for treatment of wastewater containing biodegradable organic substrates”, IWA publishing, Journal of water science and technology.

More Publications are available upon request.