

Third Laureate Applied Research

26th Khwarizmi International Award (KIA)



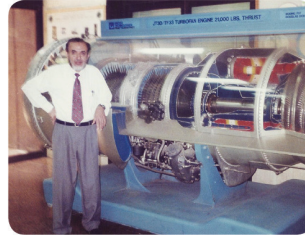
- **Research Work Title:** Some Novel Cycles of Gas Turbine Cogeneration Systems
- **Researcher:** Professor Yousef Salameh Hussein Najjar
- **Nationality:** Jordanian
- **Date of Birth:** 1946
- **Field:** Mechanics
- **Position:** Professor
- **Scientific Affiliation:** ordan University of Science and Technology Irbid -Jordan

● **Abstract:**

The gas turbine engine has some attractive features, principally: low capital cost, compact size, short delivery, high flexibility and reliability, fast starting and loading, lower manpower, and better environmental performance, compared with other prime movers especially the steam turbine plant. However, it suffers from limited efficiency, especially at part load.

Cogeneration, on the other hand, is a simultaneous production of power and thermal energy when the otherwise wasted energy in the exhaust gases are utilised. Hence, cogeneration with gas turbines utilises the engine's relative merits and boosts its thermal efficiency. Thereby, the worldwide concern about the cost and efficient use of energy is going to provide continuing opportunities, for gas turbine cogeneration systems in power and industry.

In this work, ten novel research investigations carried out by the author and associates during the last ten years in the field of gas turbine cogeneration in power and industry are discussed briefly.



● **Biography:**

Najjar, Yousef S.H., Founding Director of the Energy Center, Fellow ASME (USA), Fellow the Institute of Energy (UK), Professional Engineer P.E., Chartered Engineer C.Eng., Professor of Mechanical Engineering. B.Sc., Mech. Eng. (Power) Cairo University (1969); M.Sc. & Ph.D. Mech. Eng. (Thermal Power), Cranfield Institute of Technology (U.K) 1976 1979 & respectively. Chief Power Engineer (75-1969); Training with General Electric (GEC) (U.K) (74-1973). Yarmouk University (86-1980); King Abdulaziz University-Jeddah (-1986 2001), Published 143 international journal papers, granted a patent by British Patent Office (1988); Two Patent Publications; Lectured in 33 international conferences; Member of the «Editorial Advisory Board» for some International Journals.

Awards: Won the International Arab Creativity Award- 2011 in Sciences; KIA International Award-Scientific Research in 2012; The 1995 and 2007 Awards for excellence for outstanding papers.

Research: Energy-Thermal Power including Gas Turbines: Fuels, Combustion, Turbomachines & Renewable and Alternative Energy Systems; ICE; Hydrogen and Fuel Cells; Authored three books & manuals.

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