

National Grand Lodge of Romania & Romanian Academy 2016 “Henri Coandă” Award for Applied Sciences Prof. Ion Gheorghe BOLDEA, PhD, New Member of the Romanian Academy

Acad. Ion Boldea, IEEE Life Fellow, University Politehnica Timisoara, Romania

Subject: 2016 “Henry Coanda Award” for applied sciences /by Romanian Academy and the Great National Masonic Loje
For the book : Ion Boldea : “Electric Generators handbook” vol. 1 + 2, 1000 pages, CRC Press Florida, Taylor and Francis Group, New York, second edition, 2016

The uni-author is still the single Monograph in English, in two volumes and 1000 pages on all electric modern electric generators, from topologies to modeling, performance transients to power electronics digital control, optimal design and testing. Electric generators convert mechanical energy in prime movers (turbines) into electric energy via a storage medium, magnetic energy.

Energy as the capacity of a system to produce mechanical useful work is together with Knowledge, the main two concepts that may describe all we humans do.

Electric energy by its flexibility in conversion, transport and utilization for motion and temperature control is the workhorse of all industries. Electric generators are used to “produce” all electric energy today with the exemption of Photovoltaic method (less than 0.5 %, still, but increasing); Electric generators are run by turbines whose mechanical energy is provided by fossil fuels or by river or wave water or wind energy; the latter is call “Renewable Energy” because it makes use of solar power beamed now on Earth at 1KW/m².

The Handbook treats all generators from those in wireless hotel door opener and cellular phone microphones to autonomous generators on vehicles and as auxiliary power sources for Telecom, hospitals, banks Data Centers and thermal or hydro or wind power plants (or parks), at powers from less than 1 W to 1800 MVA per unit

The Handbook presents a unitary view of electric generators with numerous results from literature and of the author’s over decades of experience in the field, with many numerical examples mainly for the young reader/researcher/inventor/designer in industry.



Thanks I am due with humility for this prestigious Award (Henry Coanda is a legendary Romanian creator in science). I am also conscious of the generous degree of luck and circumstance involved in such a process, and only hope that, by continuing the work humbly, with internationally visible results, in full honesty, compassion and joy, I may come closer to deserve it fully.

Sincerely, Ion Boldea
January, 2017.