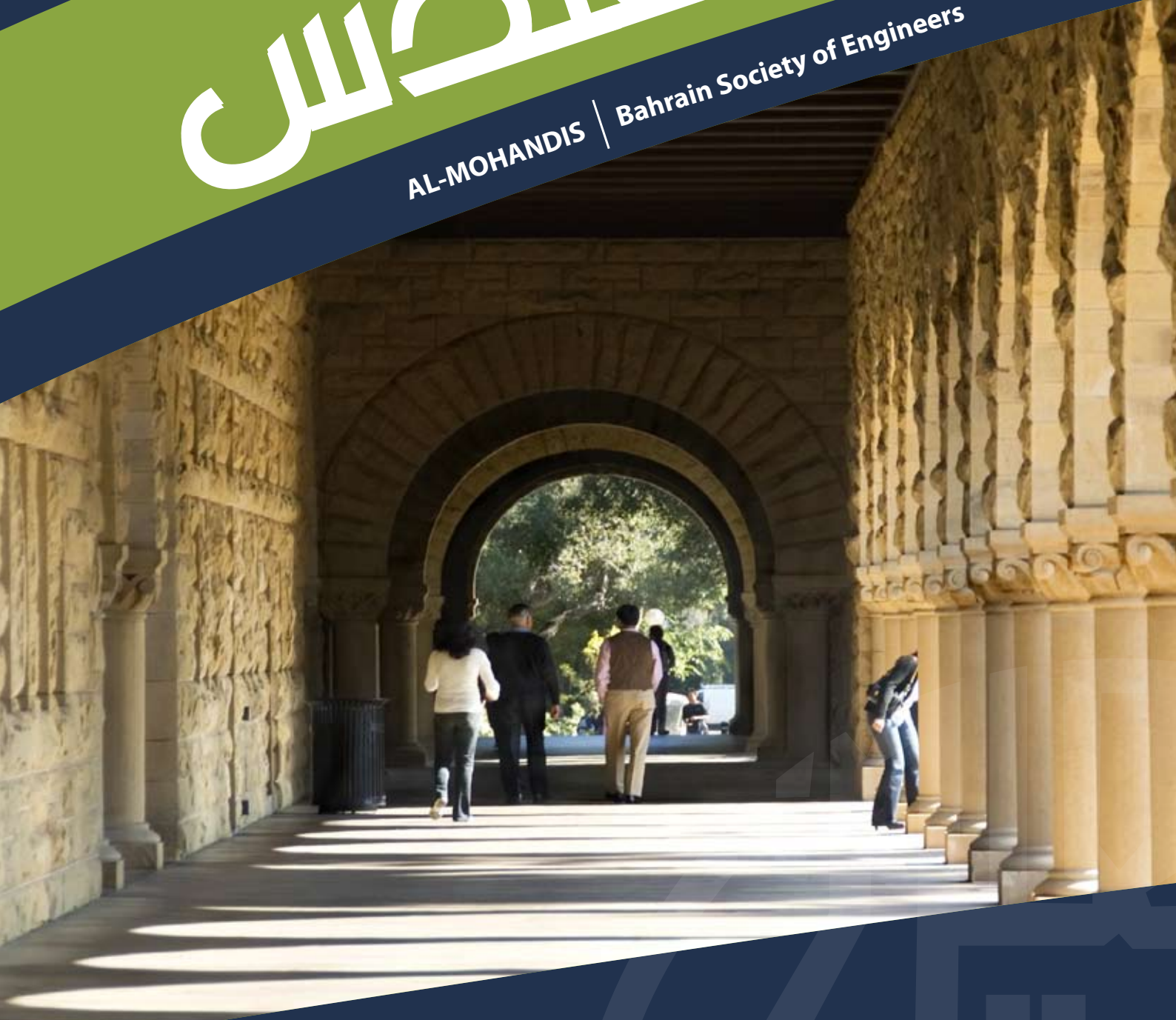


48 issue

December 2008

المهنديس

AL-MOHANDIS | Bahrain Society of Engineers



Profile: Engineer Salim S. Al-Aydh

Book Review

BSE Activities

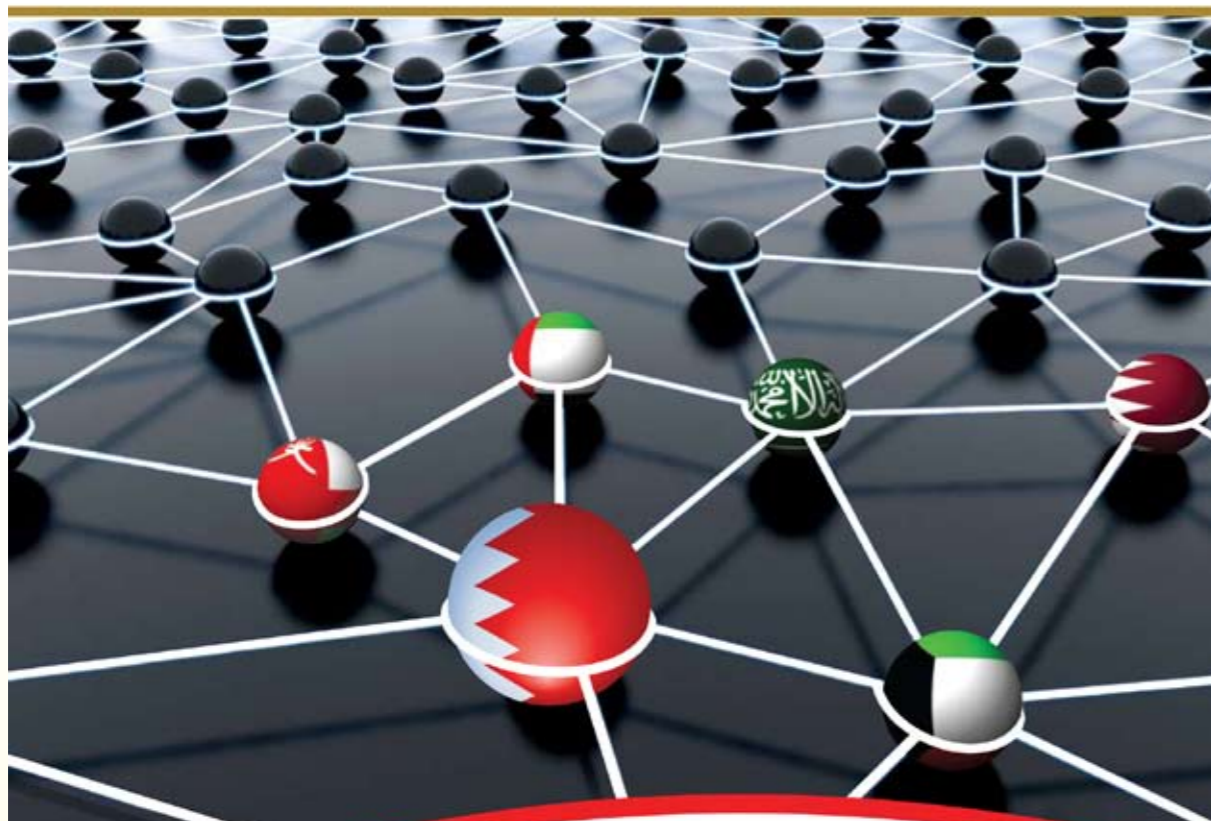


Under the Patronage of
H.E. Shaikh Mohamed bin Mubarak Al Khalifa
Deputy Prime Minister
Kingdom of Bahrain



ملتقى البحرين الدولي للحكومة الإلكترونية ٢٠٠٩
Bahrain International eGovernment Forum 2009

"eServices towards a better life"



25-27 May 2009
Bahrain International
Exhibition & Convention Centre

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EDITORIAL

Dear Colleagues,

Issue no. 48 of *Almohandis* will continue its strive to provide our readers with state-of-the-art knowledge and information. In doing so, we rely first and foremost on your valued contributions. Inside this issue, you will find the follow up piece of our coverage of Higher Education Investment entitled "Architecture Higher Education Quality Standards". "Book Review" and "Architectural Brainteaser" are our new additions in our pursuit of unremitting makeover.

We are in the midst of a global recession caused by financial crisis. (people in this region are yet to feel the crunch). We do recognize the need and the value of bringing you up-to-date with the issue and its implications on the real estate and construction market/industry. Aspirations would not be fulfilled without your ardent involvement and support.

I wish you all a happy new year and may all your wishes come true.

Effat Redha

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Designed & Printed by:

digiparts w.l.l

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Claims and Counterclaims

Five (5) Days Training Workshop

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FROM THE DESK OF THE PRESIDENT



Mr. A. Majeed Al-Gassab
President

As you read this, you will see the 2008 has been a year of great accomplishment for the Society. We achieved all targets set in regard to Key Performance indicators set by the Society's Strategic Committee, one of the highest of all BSE achievements in all times. As a result, in 2009 we intend to raise our performance targets to increase membership value which is at present considered below expectations.

It has been an exciting year as we celebrated by hosting our first ever Eight (8) parallel session AMPT (Advance Material Processing Technology) Conference with 315 selected papers and keynote speakers from all over the world along with 7 other international conferences, seminars, exhibitions and 18 workshops. We also had several celebrations with our volunteers, members and sponsors throughout the year. These have been both fun and meaningful as we achieved both our mission and vision to advance our engineering profession.

During the year we also had a sad occasion on the demise of one of our most loyal volunteer engineer BSE ever had, the late Mr. Hisham Al Shihabi. In his memorial gathering which the Society held, we made some commitments in his honor including renaming the auditorium to his name, scholarship for engineering students to be named after him and a proposal made to the government to name the adjacent road to the Society after Hisham.

I'm confident that you all enjoyed reading the previous issue of the BSE magazine... one of our best ones over the years. It featured interesting articles that covered BSE activities, news and articles contributed by our members, as well as commendable write-ups on every conference and workshop that took place at the Society. I wish to take this opportunity to congratulate Ms Shahraban Sharif, Director of information and her energetic team, who orchestrated the masterpiece with their efforts and hard work.

Planning continues for the Society, the Board of Directors is committed to providing the guidance and support to bring BSE to the forefront providing members value and advancing the engineering profession.

We look forward to your contribution in the Society's activities for another productive year.

Happy New Year

PROFILE

SAUDI ARAMCO'S SALIM AL-AYDH: ENGINEERING A BETTER, BRIGHTER FUTURE



"As engineers, we have a responsibility to design, build, operate and maintain world-class industrial facilities and a robust energy infrastructure. But we also have a responsibility to develop world-class people, to create the basic conditions necessary for the future success of our organizations, and to construct a better and brighter future for our country and its people."

Salim S. Al-Aydh

Saudi Aramco Senior Vice President for Engineering & Project Management

As the head of Saudi Aramco's Engineering & Project Management business line and a member of the company's Board of Directors, Salim Al-Aydh is engaged in some of the petroleum industry's biggest projects and most demanding operations. Saudi Aramco is the world's largest producer and exporter of crude oil, a major producer of natural gas, and maintains a nationwide network of refining and petroleum product distribution facilities. It is also pursuing the development of world-scale integrated refining and petrochemical facilities—a new area of endeavor for the company. And without a doubt, all of those operations require top-notch engineering talent and project managers capable of taking on some of the biggest and most complex industrial initiatives anywhere in the world.

Within Saudi Aramco, Al-Aydh is responsible not only for Engineering Services (including environmental engineering) and Project Management, but also the company's New Business Development function, and has also been tasked with project management duties related to the development of the King Abdullah University of Science & Technology, which will open its doors in the fall. "It's a full slate of activities," Al-Aydh smiles, "but that's the Saudi Aramco way of doing business. We are pushing forward at every stage of the petroleum value chain, while at the same time investing heavily in the development of new technologies and particularly in our people."

But his influence in the realms of engineering and industry goes well beyond the company for which he works. That's because Al-Aydh has made the development of people and the cultivation of their skills and talents his mission as an executive, as an industry leader, and as an engineer.

Perhaps Al-Aydh's focus on talent development and lifelong learning is the result of his own professional path. Aside from a degree in mechanical engineering from the University of Tulsa and management development studies at Harvard University, Salim Al-Aydh also brings nearly four decades of Saudi Aramco experience to the table. During his career he has worked in areas as diverse as marine terminals, pipelines, gas operations, downstream joint ventures, and government and public affairs—and thus has a broad perspective on the company, its role in the Kingdom, and its position in the global petroleum industry.

His commitment to developing people and honing their capabilities is evident in the establishment during his tenure as senior vice president of an internationally accredited engineering training center to develop between four and five thousand engineers in some 13 disciplines, and the launch of a Specialist Development Program to develop technical experts in 129 critical engineering areas. Over 100 experts have graduated from the program to date, and nearly 300 more have begun their own SDP journeys toward excellence. The company's Research & Development Center, which also falls within Al-Aydh's area of responsibility, is a world-renowned center of scientific and technological excellence, and is engaged in groundbreaking research related to whole crude desulfurization, new fuel formulations and carbon management, among other areas of endeavor.

Al-Aydh's organization is also responsible for maintaining Saudi Aramco's Engineering Standards: a compendium of 75 years of engineering know-how and experience, and the basis for the company's standards, specifications, procedures and best practices. To develop and maintain that repository of information, more than 500 specialists, consultants and subject matter experts participate in 38 engineering standards committees, with many also engaged in the development of international standards through their work in global organizations



Despite his many responsibilities within Saudi Aramco, Al-Aydh has taken the wider view when it comes to the development of engineers and engineering disciplines, and the impact of his efforts can be seen throughout the Gulf region. A strong believer in the importance of professional and technical societies, Al-Aydh has supported a wide range of technical conferences and has encouraged engineers of all disciplines to join international professional societies—and then to take an active role in their events, symposia and research and development activities.

PROFILE (Contd.)



Such support extends to the Bahrain Society of Engineers, as well as other regional groupings. "Saudi Aramco is eager to cooperate with such societies in a range of areas, including conferences and symposia, exhibitions, technical exchange meetings and other events designed to enhance the development of engineering as a profession and individual engineers in the Gulf," Al-Aydh states.

"Our region is blessed not only with enormous hydrocarbon resources," he adds, "but also talented individuals working in many different technical fields and engineering disciplines. We have a great deal to offer the rest of the world in terms of experience and expertise, and I would like to see our engineers—and especially our young professionals—take on a more active role when it comes to knowledge sharing."

Perhaps Al-Aydh's best-known initiative outside of Saudi Aramco is the establishment of the Society for Organizational Learning in the Gulf Region. Gulf SoL, as it is known, is part of the international Society for Organizational Learning, which is committed to fundamental innovation and change in organizations and forms a global collaborative learning community. Since its establishment, Gulf SoL has held events such as the Shaybah Café and the Jiddah Dialogue in Saudi Arabia and the Hawar Dialogue in Bahrain. All of these events employ the world café process, which is a method for fostering collaborative dialogue among large groups.

"These meetings are based on the belief that the exchange of different ideas and perspectives in a cooperative environment can create enormous value," Al-Aydh states. "It is an incredible process to witness and a rewarding experience to engage in these discussions, and I know that the participants leave not only with innovative ideas, but a new approach to their work."

"But if you think about it," Al-Aydh continues, "exchanging knowledge and new ideas is something that every good engineer does every day. In my view, building upon that realization is essential not just in meeting our responsibilities, but in realizing our true potential as professionals."

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(Module 1)

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PUBLIC SAFETY MUST BE HELD PARAMOUNT BY ENGINEERS

By: **Dr. Alee A. Sleymann, Ph.D., P.E.**
Quantum Engineering Services

In the midst of the rush to get a design job done on time and under the pressure of economic boom when time is a rare commodity, one element that could easily be given the opportunity to lower our guards on is the safety level of our designs and practices.

Public safety for us, Engineers, is a responsibility that is inherent in our profession and must be taken very seriously due to its devastating effects should it be ignored or overlooked. Examples of structural failures are not in the long ago past, but in fact in the very recent past. We all vividly remember the I-35W Mississippi River bridge catastrophic failure during the evening rush hour on August 1, 2007, where thirteen people were killed and 145 were injured, not to mention the economic loss and the travel disruption to about 140,000 vehicles using it daily.



To emphasize the importance of public safety, engineering societies have recognized it in the first fundamental canons and principles in their code of ethics. It states "Engineers shall hold paramount the safety, health and welfare of the public and shall strive to comply with the principles of sustainable development in the performance of their professional duties."

As a reminder, the following were downloaded from the society of Civil Engineers website:

Fundamental Principles

Engineers uphold and advance the integrity, honor and dignity of the engineering profession by:

1. Using their knowledge and skill for the enhancement of human welfare and the environment;
2. Being honest and impartial and serving with fidelity the public, their employers and clients;
3. Striving to increase the competence and prestige of the engineering profession; and
4. Supporting the professional and technical societies of their disciplines.

Fundamental Canons

1. Engineers shall hold paramount the safety, health and welfare of the public and shall strive to comply with the principles of sustainable developments in the performance of their professional duties.
2. Engineers shall perform services only in areas of their competence.
3. Engineers shall issue public statements only in an objective and truthful manner.
4. Engineers shall act in professional matters for each employer or client as faithful agents or trustees, and shall avoid conflicts of interest.
5. Engineers shall build their professional reputation on the merit of their services and shall not compete unfairly with others.
6. Engineers shall act in such a manner as to uphold and enhance the honor, integrity, and dignity of the engineering profession and shall act with zero-tolerance for bribery, fraud, and corruption.
7. Engineers shall continue their professional development throughout their careers, and shall provide opportunities for the professional development of those engineers under their supervision.

Therefore, we engineers must always remind ourselves that it is our ethical and professional responsibilities to practice in safe manner keeping in mind the economic welfare of our clients and society at large. Safe design encompasses not only the structural aspects of the project but also the functional one as well. How people use and move within the structures is as important as how well designed and built they are.

Professionalism on the one hand, requires that we provide our client with the state-of-the-art engineering service, using the latest technologies from design methods to construction materials, all within the allocated budget.

Ethics on the other hand, stipulate that we treat our client with honesty and convey to them the best advice in order to protect their interest and investment.

Professional and ethical practice dictates that we act in a serious and responsible way not to jeopardize our profession's standing within our society as well as our licensing privileges with practices that put people's safety at risk for the sake of earning a small amount of money. Otherwise, we will soon find ourselves not worthy of such respect; the integrity and reputation of our profession would deteriorate and public trust would vanish. We owe it to ourselves, our profession and our clients to keep public safety as a top priority in all our practices by adhering to the civil engineering fundamental principles and Canons.

SCIENCE AND DAILY LIFE

By: Dr. Shaker Haji

I often hear university students referring to "aluminum foil" –that is used for food packing– as "tin foil" or reasoning why a person floats easier in the sea compared to swimming pools by describing sea water as "lighter" instead of "denser" than fresh water. Shouldn't university students be more knowledgeable and scientifically correct than common people? Certainly there is a disconnection between the life lived outside the classroom and the knowledge learned/taught inside the classroom.

I don't think that disconnection between science and daily life is merely due to the students' lack of interest in a certain subject. For instance, there are many university students who are stunned by the power boost achieved by "turbocharged" car engines and find this subject a very interesting one yet only few know the science behind it. What prevents those students from exploring the science behind what interests them? Or is it the instructor's shortcoming as he/she does not relate the science he/she teaches to daily life examples especially those which students might be interested in? For example, the subject of "turbochargers" can be brought up in ideal gas law, density, turbines, and/or combustion lessons.

I believe if science and daily life are always related to each other, then the quality of education and learning would be higher. Students continuously need to be reminded that science laws and formulas are no more than expressions of what happens in nature; expressions that mankind then used to design devices to be used in our daily life. Moreover, it needs to be known that science helps to better understand daily life issues, despite the fact that it is taught in university to enable us to design and operate processes that we don't often see daily.



We, as instructors, should look for ways to cultivate in students' minds the attitude of wanting to know the science behind what they like or what they frequently encounter in their life. One of the ways to do so is to bring up examples from daily life when teaching new scientific concepts.

On the other hand, I encourage the students to always find out the science behind the phenomena they frequently encounter and devices they regularly use in their daily life,

especially those which they find interesting. There are a lot of resources that one can refer to for such purposes. I mention here, as an example only, an easily accessed resource: www.howstuffworks.com, which is a website that explains daily life subjects using very clear language and illustrative figures and animations.

JOKE



A Quality Engineer married an average girl.

After 2 years of tough life with her, finally Engineer got angry and sent a note to father-in-law stating that

"YOUR PRODUCT NOT MEETING MY REQUIREMENT".

The smart father-in-law replies,

"WARRANTY EXPIRED, MANNUFACTURER NOT RESPONSIBLE".

BOOK REVIEW

STRAIGHT FROM THE GUT BY JACK WELCH

Reviewed by: **Ali Hashem**



When you finish the last page in this book, you will still sense a gushing source of excitement, knowledge and inspiration.. The book which has been classified in Business and Biography sections, simply teaches and preaches from a guru who is no one other than Dr. Jack Welch, the Ex-CEO of GE's empire.

Welch starts his book with an apology for using the pronoun "I" frequently, because he believes that all accomplishments are a result of "We". The note is followed by a prologue, where he describes his last day at work before retirement, when he meets his successor, and leads him to the new office. Like a flash back it suddenly jumps to the very beginnings of his life and continues in a sequence of events throughout 600 pages of endless excitement.

It all starts with his family, that was simple and ordinary by all aspects, but the passion within his mother to raise a strong outstanding personality in him, stimulated Jack to polish out all potentials and talents, that eventually built a confident and competent leader. This was supported by a distinguished academic accomplishment, throne with PhD in a specialized field of Chemical Engineering from Illinois university. The Dr, soon realized that he was not born to be a scientist and started to pursue new horizons that eventually lead him to GE plastic, a new division at that time at the most diversified company ever.

The following chapters explains his strive with R&D to achieve in plastic world which was in a boom at that time, the necessity to meet specifications from one side and to beat the competitors from other side was his first challenge, the way was paved with major pain, with hundreds of experiments failing and less progress, nevertheless, it has never stopped Jack's team from trying again and again. Ultimately Jack succeeds to make a break through and moves up in the hierarchy in a fast track of time to be a whole international division manager for GE plastics, while he was still in his early thirties.

With new responsibilities, came new challenges and there was Jack with his innovative ideas, persistence and diligence. Soon he was recognized as a special human capital that might be short listed as the future CEO. The road towards being a CEO was again tougher. A journey filled up with all politics and bureaucratic issues, that might spread easily in a company with 300 000 employees. Jack explains explicitly with minute details how hard work, integrity, golf and luck stood besides him on his way to the CEO's chair.

The story reaches the peak point of excitement when Jack narrates his struggle to clean his company from bureaucracy and to establish a new GE, "large company with a soul of a small one, that was active and fast". He gets his new name, "Neutron Jack the world's toughest boss", who smacked and smashed any obstacle towards the new phase of his company.

Major critical ideas popped while sketching on rough papers, that would be molded with his trusted group during heavy and long hours of discussion and communication, and later implemented with a pounding hand. He decides to keep business lines that are only of first or second rank globally, other wise he would sell the retarded division and look for new competitive acquisitions. He emphasized on paying more for training centers and invest heavily on human development. People were promoted or kicked out according to their financial records and performance scheme that was set by subjective criteria.

Chapters go ahead with the same pace and different topics. The man who narrates the story, ensures we get all the good and bad, correct and wrong that he went through. It's a complete variety of topics, that illustrates his role in his company with quality, people, machines, acquisitions, golf, stock market, parties, policies, E-business etc.

The simple language of the book made it easy to understand the intrinsic complicated problems one can face, and how to fight back. It gives the real meaning of being persistence, ambitious & initiative. It is a story of a man who changed his company's nation into a better mode, that lead to sustainability and continuous development on the long run.

Finally, it is important to mention that Jack Welch has got his own site, in which he still preaches with the ideas and knowledge of his long experience¹. The book which has its own site too², is a written work that would be a differentiator for it's readers.

1. <http://www.welchway.com>
2. <http://www.straightfromthegut.com>

