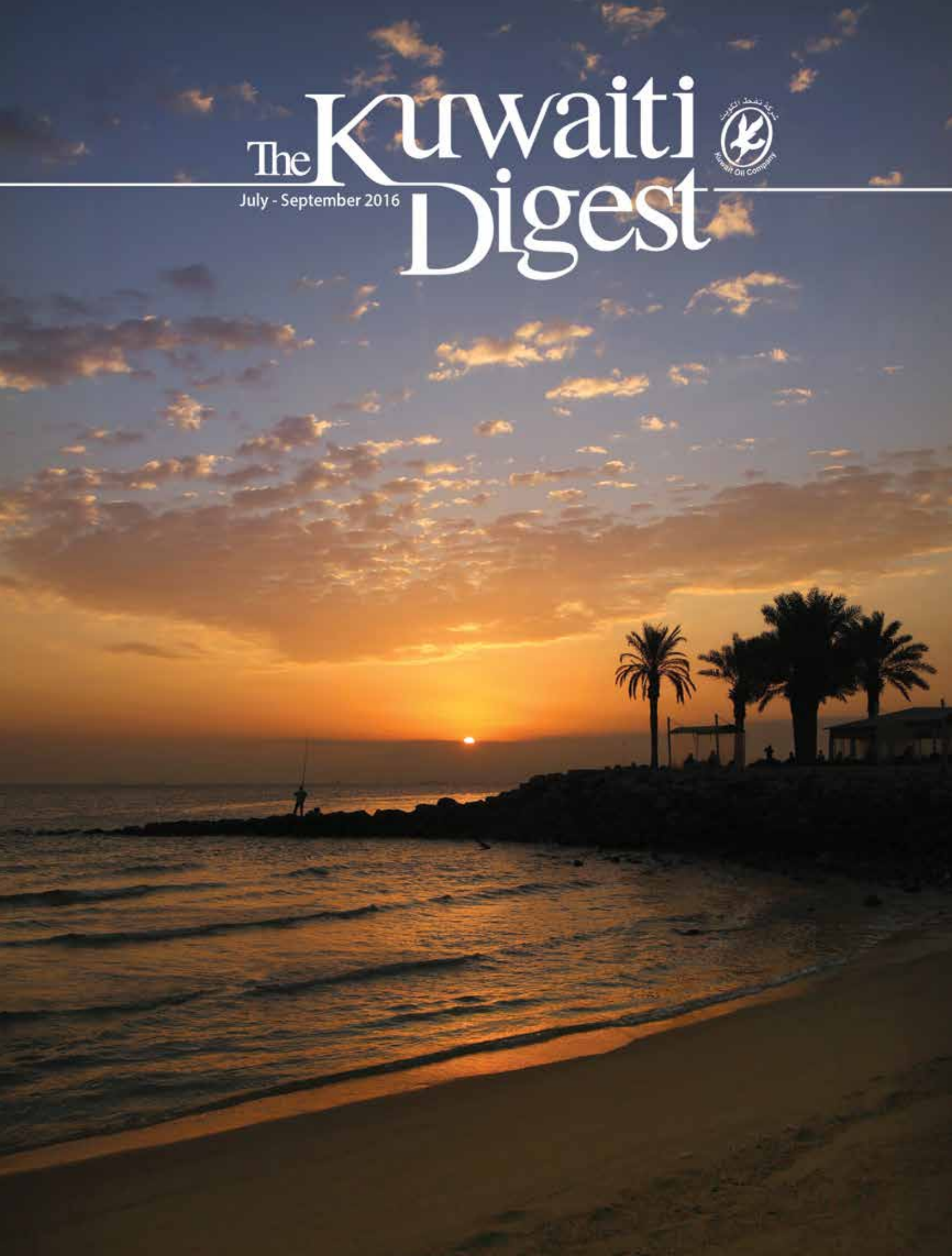


The Kuwaiti Digest

July - September 2016



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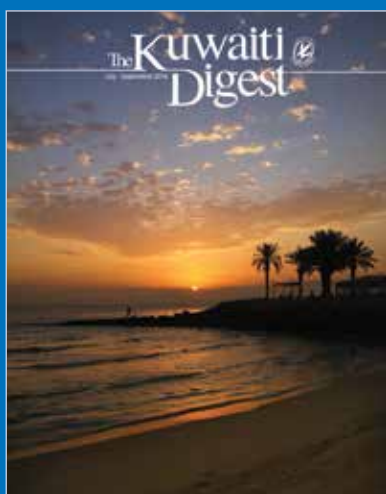
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The 4th Kuwait Oil & Gas Summit

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Letter from the Editor



Saad Rashed Al-Azmi
Deputy CEO
(Administration & Finance)

By the time this issue of *The Kuwaiti Digest* reaches your desk, everyone here at KOC will be looking back on the successful completion of the Holy Month of Ramadan. I would therefore like to take this opportunity to wish all KOC employees a very happy Eid Mubarak. It is my sincere hope that this past month was one filled with goodwill and self-reflection for you and your families, and on behalf of the Company's senior leadership, please allow me to extend my best wishes to you all.

The months of July and August tend to be Kuwait's hottest. As temperatures soar, there is no doubt that the usual hustle and bustle of our lives slows down a bit. As always, however, the same cannot be said of the pace of work at KOC, which must carry on as usual. It is true that in order to remain a reliable supplier of energy to the world, our Company must redouble its efforts over the summer months to ensure we remain a global leader in the oil and gas industry. This is a difficult task when the weather is fair and our employees are eating regularly – it is an even more difficult task when the weather approaches 50°C and the majority of our employees are fasting. With this in mind, I would like to commend all KOC employees and contractors for their efforts over the summer months.

Regular readers of *The Kuwaiti Digest* may notice a few changes that have been made to this issue of the magazine. For one, we have included a significantly larger percentage of general interest stories for our readers. For example, in the pages that follow, you will find stories that touch on topics such as art, culture, history, health, architecture and more. As always, however, particular attention has been paid to ensure these stories relate in some way to Kuwait or our region.

While this issue may contain a number of stories that focus on topics that do not directly correspond with the oil industry, I am happy

to say that there are quite a few that do. For example, some readers may be particularly interested in the work KOC employees are conducting in their free time. In the pages that follow, readers will be exposed to personal profiles on employees who are engaged in exciting initiatives that range from volunteer medical work in Africa to creating art out of recycled materials.

Our lead story for this issue covers Kuwait's recent 4th Oil & Gas Summit. I encourage those interested in learning more about Kuwait's future plans for the oil industry to spend some time with this story. In terms of KOC-related news, we have a feature story on the recently completed Ahmadi Oasis. This project, I am proud to say, was made possible through the work of volunteers, and the successful completion of this initiative should serve as inspiration to us all about the power we can wield when we decide to work together for a common goal.

Another story in this issue that I am particularly excited to announce is an exclusive interview that was conducted with Lulu Al-Qatami, the first Kuwaiti woman to receive her higher education overseas. Lulu Al-Qatami is a pioneer in the field of Kuwaiti education, and her long and illustrious career has done much in the way of opening doors for Kuwaiti women from all walks of life. I encourage everyone to read Lulu Al-Qatami's story, which is truly an inspiring one that we can all learn from.

In closing, I would like to once again thank all KOC employees for their hard work and dedication to the Company. Without your efforts, we could not be the leading oil and gas company that we are today.



THE 4TH KUWAIT OIL & GAS SUMMIT

The 4th Kuwait Oil & Gas Summit was held recently at the Jumeirah Messilah Beach Hotel. The event, which was hosted by Kuwait Petroleum Corporation (KPC), Shell and Equate, served as a forum where oil and gas officials from Kuwait and abroad could discuss the strategic future of Kuwait's oil and gas industry. The event was officially held under the auspices of H.E. Anas Al-Saleh, Deputy Prime Minister, Minister of Finance and Minister of Oil of the State of Kuwait.

Dr. Alirio Parra, former Venezuelan Minister of Energy & Mines, patronized the summit and delivered the event's opening remarks. In his address, Dr. Parra provided an overview of the summit's purpose and touched on a number of issues affecting the international oil and gas industry. He also highlighted the progress and challenges associated with Kuwait's oil and gas industry.

"Among a range of other topics, the 4th Kuwait Oil & Gas Summit will focus on how KPC is adapting to the low price environment and how it proposes to deal with cost reductions," Dr. Parra said, adding, "Additionally, the conference will highlight the extraordinary strength of the oil industry as a subject to be improved. Looking beyond Kuwait, the global growth outlook is not encouraging. The IMF categorizes the situation as 'subdued development, diminished prospects.' The good news, however, is that we are still growing. The bad news is that it is slow."



KPC CEO Nizar Al-Adsani delivers opening remarks.

Dr. Parra went on to say that downside risks do have the potential to negatively impact global energy plans. "One thing, however, is apparent: Markets are self-correcting, and it is simply a matter of time that will determine when the market will work itself out of this present situation," the former Minister of Energy & Mines from Venezuela said. He then reminded the audience that in 2015, there was approximately 2 million barrels of surplus oil in the market per day. In 2016, that amount is projected to be less than 1 million, and the possibility remains for 2017 to have a much smaller surplus.

Dr. Parra then shifted his attention back to Kuwait and told the audience that there has been progress on all fronts of Kuwait's oil industry. The work on various major projects throughout all levels



Dr. Alirio Parra, former Venezuelan Minister of Energy & Mines, addressing the audience.

of activity was occurring at rates not seen in decades, he maintained. According to Dr. Parra, this thrust forward is categorized by a number of factors. These factors included increases in upstream production and investment in Kuwait, including the signing of new contracts and consultancy agreements and integrating refineries outside Kuwait, which provides long-term stability for Kuwait's production. In addition, the manufacture of clean oil products through Kuwait's Clean Fuels Project will see Kuwait transformed into the Gulf's clean fuels hub. Moreover, the Zour Refinery and other major projects have been major indicators of progress and success for the oil and gas industry in Kuwait.

Dr. Parra then closed out his speech by leaving the audience with a number of "questions for the future." These questions included the challenge of increasing domestic supplies of fuel, developing technology for

the oil industry, the role private industry can play for the national oil industry, investing in the next generation of oil and gas workers, and what extent renewable energy can be adopted to help Kuwait meet its energy and environmental requirements.

Following Dr. Parra's opening remarks, KPC CEO Nizar Al-Adsani took the stage and welcomed those in attendance. In his address to the audience, Al-Adsani confirmed that weak oil prices have been a feature of the market since June of 2014 and that the lower price of oil will continue to pose a great challenge to the industry.

"The industry has experienced the worst declines since similar commodity declines occurred in the 1980s and 1990s," he said. The KPC CEO went on to say that a feature of the low price of oil included a significant decline in associated activity as it relates to the oil and gas industry. Throughout the industry, this includes

various types of budget cuts, a decrease in drilling rates and new wells, and a negative impact on the exploration production business, among others.

The KPC CEO then discussed Kuwait's oil industry and the strategies that are being planned and implemented that will allow Kuwait to remain competitive and flexible in the current uncertain environment.

"The challenges ahead are complex. We are at a time of dramatic and perhaps unprecedented change and challenge in the global oil and gas business," Al-Adsani said. "Technology has been the driving force for the safe, efficient and environmentally sound development of oil and gas. The key to moving forward and achieving our strategic targets will require the full commitment of our resources. The petroleum industry plays a vital role in supporting Kuwait's economy, and with this in mind, we have developed more than 100 initiatives that focus on how the K-Companies can achieve sustainability. These initiatives, in part, improve and ensure better performance in our industry while supporting those that are profitable and exiting those that are not," he said.

In his address, KPC CEO Nizar Al-Adsani also told the conference that Kuwait's future focus will be on the development of Jurassic gas and the petrochemical industry. "We plan to dedicate more time to it for the benefit of Kuwait," he said. In order to achieve the gains that are part of Kuwait's energy strategy, the country's oil sector will require assistance from a variety of international

oil companies. In this regard, Al-Adsani maintained that the necessary contracts that will enable Kuwait to achieve its ambitions are being finalized or have already been signed.

“All major upstream projects to boost production and achieve targets are already signed and are in the process of implementation,” the KPC CEO said, referring to contracts for three gathering centers, two booster stations, the development of heavy oil and four early production facilities – two of which are in the execution phase and two that will be awarded soon. Al-Adsani added that a fourth gathering center, GC-32, was in the contractual tendering process and that it will have a 120,000 b/d capacity.

Adapting to Change & Optimizing Kuwait's Role in World Energy

The 4th Kuwait Oil and Gas Summit featured a number of discussions where a diverse selection of panelists from the global oil and gas sector weighed in on topics that currently affect the industry. The first panel discussion featured participation from KOC CEO Jamal Jaafar, Shell's Upstream Director, Andrew Brown, and Professor of Professional Practice in International & Public Affairs from Columbia University, Jason Bordoff.

In an opening statement, KOC CEO Jamal Jaafar maintained that the only way to survive and thrive in an ever-changing world is to adapt to change. The KOC CEO said that all projections point to energy demands increasing in the coming years, and as such, Kuwait will continue to work



KOC CEO Jamal Jaafar during the panel discussion.

toward maintaining its position as a reliable supplier of energy to the world.

In order to maintain this position, Kuwait must adapt to change, Jaafar said. To do this, Kuwait's oil sector must adapt to global changes, make decisions in a timely fashion, engage its workforce, and apply new technologies throughout the industry. In addition, Kuwait must focus on preparing its young population through proper education and training in order to equip them with the means necessary to carry Kuwait's oil industry into the future.

The KOC CEO said that the country would continue to weather the storm of the current market, and that while the low price of oil was a major challenge for the industry, it also represented an opportunity to optimize costs for existing projects, in addition to being an opportunity to cautiously invest in a variety of projects.

Jaafar also maintained that KOC was currently conducting

the largest seismic survey project in the world and that the 2030 Strategy contained a clear plan to overcome the current challenges. To conclude, the KOC CEO said that the Company was committed to growing its oil and gas capabilities and that Kuwait would continue to remain a key player in the oil and gas industry for years to come.

The Role of Gas

With the Middle East having a 40% share of global gas reserves, more networking connectivity is needed to maximize the utilization value of such gas resources. “Developing the gas sector requires thorough collaboration between national oil companies and their international counterparts as partners for overall sustainability,” said Mohammad Husain, CEO of Equate Petrochemical Company.

“Such development entails overall adaptation, preparing for the new era, resilience, understanding the future



Equate CEO Mohammed Husain, Shell's Upstream Director Andrew Brown, Columbia University Professor Jason Bordoff, and KOC CEO Jamal Jaafar.

energy mix, high reliability, ensuring environmental excellence, pricing structure, innovative solutions, cost effective technology, suitable regulations, as well as having the qualified human capital," Husain explained in a statement he made at the Kuwait Oil & Gas Summit.

"Currently, the oil market is facing price fluctuations due to increased supplies. Although the market is currently progressing, we are still dealing with changes. Naturally, as a major market, China is critical to maintain stability."

Husain added, "In terms of Equate's upcoming projects, we are continuing the execution of our 2020 Strategy and are currently looking as far as 2025. At the same time, to optimize the added-value, Equate is continuing the integration of

its new subsidiary, MEGlobal, which we acquired at the end of 2015."

In Summary

The 4th Kuwait Oil & Gas Summit & Exhibition, officially hosted by the Kuwait Petroleum Corporation, is the strategic meeting place for Kuwait's oil and gas industry. The summit has a reputation for delivering quality and excellence while playing a critical role in helping to set the agenda for sustainable growth. The program for 2016 included forward-thinking debates on adapting to changes, capacity building, efficiency and cooperation, investing in the next generation, and a focus on the policies, investment and skills needed to realize Kuwait's strategic oil and gas objectives.

Key topics that were addressed at the summit included:

- The ability to adapt to the low price of oil.
- Optimizing Kuwait's role in world energy.
- Strategies for a sustainable energy future.
- Investing in the next generation of oil workers.
- Priorities for realizing potential and maintaining a competitive advantage.
- Driving energy efficiency.
- Delivering excellence and best practice.
- Partnership and investment opportunities.
- Achieving Kuwait's international strategic objectives.



KOC HOLDS 19TH HSSE AWARD CEREMONY

The 19th KOC CEO Award for Health, Safety, Security and the Environment (HSSE) was held recently at the Hilton Resort and Hotel in Mangaf. The event, which is hosted by the Company on an annual basis, plays an important role for KOC by recognizing some of the most outstanding initiatives made by Company employees in the field of HSSE. This year's event was held under the theme of "We Care. Drive Safe."

During a speech he delivered at the event, KOC CEO Jamal Jaafar told the audience that good HSSE practice was at the heart of the Company's values and that the award ceremony marked KOC's continuous effort to improve and enhance HSSE standards in order to protect the lives of employees, contractors, and surrounding communities.

"It's vital that we think of HSSE not only as a set of industry requirements that

we must meet, but as a challenge to be innovative with initiatives that will better serve our community and the environment.

At KOC, our top priority is maintaining a culture that continuously reminds employees to take care of their personal safety, as well as the safety of those around them," the CEO said.

The CEO went on to say that in order to motivate contractors to work in alignment with these principles, KOC began including HSSE regulations and conditions within Company contracts. As a result, KOC has managed to reduce the rate of lost time due to injuries.

"We have also embarked on a new project that seeks to reinforce occupational health, thinking beyond the longstanding services and medical care KOC offers to employees and their family



KOC CEO Jamal Jaafar delivered the event's opening remarks.

members through Ahmadi Hospital and private insurance schemes," he said. He added that the Company has also implemented a security project for KOC facilities that utilizes the latest technology and equipment in this field.

The KOC CEO then thanked all members of the HSSE Award Committee for their efforts in organizing the event. He also thanked all employees who continue to work toward helping KOC maintain its



A group photo of the 2016 CEO HSSE Supreme Award Winners.

commitment to matters related to HSSE.

Following the CEO's speech, Nouri Al-Khatrash, Manager Ahmadi Services Group, took the stage and discussed the theme of the event, which he said clearly reflected the importance KOC attaches to matters related to health, safety and the environment.

"KOC believes that caring about the safety and health of its employees, contractors and partners falls within its core responsibilities, which is why KOC implements the HSE Management Systems. These include Risk Management, Integrity Management and Identification of Hazards. In this context, the Company has implemented a set of measures that fall in line with our strategic objectives concerning the protection of the community and environment.

Road safety, which is the theme of this event, plays a part in this effort," Al-Khatrash said.

In this context, the Ahmadi Services Group Manager said that that point-to-point cameras and fixed speed cameras were provided to all assets throughout KOC's areas of operation. He also upheld his belief that awareness campaigns and programs related to HSSE were of the utmost importance and encouraged positive behavior from employees and contractors.

In terms of this year's HSSE Award, Al-Khatrash said the organizing committee received 206 applications that covered five categories: Health, Safety, Security, Environment and HSSE Awareness. The total number of winning applications was 11. Additionally, 52 employees

from all KOC directorates participated in the winning applications.

2016 CEO HSSE Supreme Award Winner:

Project title: *Stop Texting... Just Drive.*

Members: Anwar Sami Al-Wehaib, Hasan Yousef Abdal, Esraa Adnan Al-Kheraibit, Ali Abdullah Al-Basri, Alaa Eldin Mohammed Aly.

Abstract:

In April of 2015, KOC launched a public awareness campaign titled: "Stop Texting... Just Drive." It was implemented throughout KOC's areas of operation, in addition to areas throughout Kuwait. The campaign interacted with the public through informative and very effective video clips that were aired on various TV channels and cinemas. In

addition, billboards and petrol station panels ran messages from the campaign throughout Kuwait. A booth at the Avenues Mall was also set up to interact with the public and share information about the dangers associated with texting while driving. A driving simulator was also set up at the booth to show firsthand how dangerous it can be to text while driving.

About the KOC CEO HSSE Award

The KOC CEO HSSE Award was created in order to recognize outstanding achievements at KOC in the fields of Health, Safety, Security and the Environment. The awards are open to employees and teams of up to five key members, and applications are invited to be submitted on an annual basis. Applications from cross departmental teams is highly encouraged.

Applications from the following fields of work are encouraged:

Health: Initiatives or programs that promote and enhance health. Applications should

be submitted under one of the following sub-categories:

- **Occupational Health:** Improvements in the work place, home or community environment of KOC that enhance health, fitness and hygiene.
- **Medical Health:** Improvements by medical policy & personnel that improves the health, fitness and hygiene.

Safety: Changes to behavior, procedures, design or operations that raises safety standards. Applications should be submitted under one of the following categories:

- General Safety
- Process Safety

Security: Changes to behavior, procedures, design or operations which raise security standards.

Environment: Activities which help protect and conserve the environment and minimize the impact of KOC's activities, including activities to reduce waste, emissions and

environmental improvement schemes in the community.

HSSE Awareness: Programs designed to educate and motivate employees, contractors, students and the public.

Applications are judged on the following guidelines:

- **Performance:** Has the activity contributed to the improvement of HSSE performance at KOC?
- **Reputation:** Has it enhanced KOC's reputation/image?
- **Outreach:** Has the activity contributed to awareness or improvement of HSSE issues among employees, contractors, students or the public?
- **Transferability:** Can the activity be applied to other KOC activities?
- **Cost Efficiency:** Has HSSE improvement been implemented in the most cost efficient manner?



A Kuwaiti Pioneer: An Interview with Lulwa Al-Qatami

“All of my dreams came true.”



For many in Kuwait, Lulwa Al-Qatami needs no introduction. For the younger generation, and for those unfamiliar, Ms. Al-Qatami has, for decades, served as President of the Kuwait Women's Cultural and Social Society, which she helped found in 1963. Among a long list of other accomplishments, Lulwa Al-Qatami was the first Kuwaiti woman to study abroad, shattering the restrictive barriers of her time to pave the way for generations of young

Kuwaiti women in their pursuit of higher education and social equality. The text that follows is her story.

We met Lulwa Al-Qatami, now in her 80s, at the visitor's room of the Kuwait Women's Cultural and Social Society, where framed photos of past and current members adorned the white walls. It was a hot day, the beginning of another long Kuwaiti summer, but inside the cultural center, the quiet hum of the air

conditioning created a cool environment that stood in stark contrast to the blistering heat outside. We had arrived early, which is why we were surprised to see Ms. Al-Qatami emerge, alone, from a back room. Our expectations for the meeting were mixed, as anyone who has spent any amount of time with someone past the age of 80 might understand. Would Ms. Al-Qatami be interested, or for that matter – able – to recollect and share

her life story? Would she grow tired, forcing us to shorten the interview? Fortunately, as it turned out, we soon came to discover that none of those concerns were necessary, as the woman before us, a true living legend who championed such causes as rights for all Kuwaiti women, showed no signs of being a day over 50. She greeted us warmly, and the spark in her eyes reminded us that this pioneering woman, this testament to Kuwait's progress in the 20th century, still embodied the razor sharp focus, wit and intelligence that she is widely known and respected for.

As we sat down, Ms. Al-Qatami began to empty the contents of a small package she had brought with her. In it were photographs, some in color, most in black and white, that were important memories from her life. Many of her photos, we learned, had been destroyed during the 1990/91 invasion, a story that is all too common for many Kuwaitis. Naturally, the few photographs she was able to recover were cherished greatly by her, and she showed us some of them, which did not seem to be arranged in any particular order. There was a photo of her as a teacher at the Mirqab School in Kuwait which, she regretted, had since been demolished. Another showed her and her sisters in London feeding pigeons, and without hesitation, she confidently recalled the year – 1958. There was another photo of a student and friend of hers, Latifa Al-Houti, who studied physics in the United States. She then spread out more photographs on the table. In one, she was pictured leading a group of female Kuwaiti students on an international trip to Jerusalem



Lulwa Al-Qatami led a delegation of female Kuwaiti students on a tour to Jerusalem in the early 1960s.

in the early 1960s, Al-Aqsa Mosque in the background. In another, she is meeting with King Hussein of Jordan. There are photos of her father visiting her in England. There is a photo of her and Um Kalthoum at a gathering in Kuwait. Still more of her and her students in Cairo in the 1960s. In another, she is pictured in Sudan, where she helped build a camp for refugees of the Ethiopian Eritrean war. Together, these photos help us to slowly piece together just a small picture of the life Ms. Al-Qatami has led.

When we asked Lulwa Al-Qatami to start at the beginning, it became apparent that her early education had played a pivotal role in shaping the rest of her life. That education, however, did not come easy. Kuwait in the 1950s, she reminded us, was a much different place than it is today. Whereas the State of Kuwait today sends thousands of young Kuwaitis to study overseas, the Kuwait of the 1950s was still adjusting to the concept of sending its young students away for education, let alone sending young women

abroad to pursue university degrees.

"In 1952, I was the first Kuwaiti woman to leave the Gulf region to study in Great Britain. It was a scandal at the time – almost all of my relatives and most of Kuwaiti society was against it," Ms. Al-Qatami told us. "My father, however, was very much for it. He was the driving force behind this undertaking, and he would not let anyone discourage him from ensuring his children received the education he believed they needed. My father understood travel and education were a very important aspect of any individual's life, which is why I was able to study subjects such as music and ballet. This, of course, was in addition to my main areas of study, which were English and French."

In England, Lulwa Al-Qatami first studied at a French convent school. It was there, she told us, that she studied English, French and the piano. For many of her peers, she was the first Arab and Muslim woman they had ever met. While Ms. Al-Qatami managed to adapt well to her



Lulwa Al-Qatami (right) was a major pioneer in terms of rights and education for Kuwaiti women.

surroundings and succeed in her studies, she never lost track of her heritage or purpose. She fasted and prayed during Ramadan and served as an ambassador of her faith and country to her fellow students. One day, her father sent a letter encouraging her to change her field of study. He wanted her to begin studies under a British system as opposed to a French one, and he wanted her to become a teacher. His reasoning was that an English teaching degree would better facilitate her ability to have a larger impact on Kuwaiti society when she returned – and he was right.

“My primary interest at the time was French language studies,” Ms. Al-Qatami said. “I was surprised, then, when I received the letter from my father asking me to change schools. However, I trusted his judgment. I knew that if he believed a teaching degree from an English school would be of better use to me and my country, then I should do it. I then went to a school in Edinburgh for four years where I graduated with degrees in English and French.”

The influence Ms. Al-Qatami’s father had on her life is profound. When we asked her

who had the greatest impact on her growing up, she does not hesitate to answer: Her father. A courageous man who stood steadfastly by his ideals and beliefs, Lulwa Al-Qatami’s father was the driving force behind his children’s pursuit of higher education. When his own family, and the majority of Kuwaiti society, turned against him and criticized his decision to allow his daughters to study abroad, he stood his ground. He knew education was necessary for a modern and vibrant society, and he was willing to sacrifice a great deal in order to make sure his son and daughters received the proper training that was necessary to carry Kuwait into the future. This decision, however, led to what Ms. Al-Qatami described as a “war.”

“When my family found out that my father was allowing me to study in Great Britain, a war broke out between them,” she said. “Our relatives asked, ‘How can you allow your girls to study alone in a foreign country?’ Our neighbors and friends asked the same questions, and many people were very much against allowing young Kuwaiti women to study abroad. For

some people, this might have been discouraging, but I used it as something positive. I admired my father and trusted his judgment, and because of this, I wanted to succeed in my studies and prove to everyone that my father was right and that young Kuwaiti women could accomplish great things. More importantly, I knew that my education would allow me to return to Kuwait and share my knowledge with new generations of young Kuwaiti women. Education was, and still is, very important for any society. My father realized that, and while many attacked him for his beliefs, he was simply ahead of his time. In the end, however, I knew we had won when one of my family members who was against me studying abroad wrote to me one day and asked if I could help find a school to enlist his daughter in. After reading the message, I quickly sent a letter to my father and said, ‘You won!’”

It seemed that Ms. Al-Qatami had won this battle in the face of adversity. But she would soon learn that there would be many more fights on the path to victory. For example, ask any Kuwaiti who was around to remember the 1960s, and they will tell you about Lulwa Al-Qatami’s fight to allow female Kuwaiti teachers to instruct classes without wearing the abaya, the black cloak worn by some Muslim women that was mandatory for teachers at the time.

“When I first returned to Kuwait and began my career as a teacher at the Mirqab School for Girls, I was the first woman to not wear the abaya when teaching my classes,” she said. “In fact, many of my

students didn't even know I was Kuwaiti! I taught my classes in English and French only, which I believe helped my students learn better and faster. I drove my own car to and from school, so I was not the typical type of teacher that existed at the time. I noticed that all the female teachers, including the expatriates, had to abide by the abaya rule. When I became head of the school, I decided to include my students and some of the other teachers in a civic demonstration to eliminate the rule that forced us to wear the abaya. Naturally, this created quite a large scandal, as we were very vocal about this cause. We even burned abayas in protest, so our message was clear. In the end, we overturned this rule and female teachers in Kuwait are now free to teach their classes without the restrictions of the abaya."

It was around this turning point in Lulwa Al-Qatami's career that she, along with a group of other Kuwaiti women, started to discuss the possibility of opening a facility for the benefit of women in the country. "At the time, a group of us women began to discuss the possibility of opening a club or organization that would serve the needs of Kuwaiti women. For example, illiteracy was high at that time in Kuwait, especially among women, particularly older women. Why couldn't we do something about that? We decided that we had to, and this paved the way for the creation of the Kuwait Women's Cultural and Social Society. Of course, the society was not simply limited to eradicating illiteracy, though that is something that we helped accomplish. The society was a place for women to come together and address the issue



In Sudan, Lulwa Al-Qatami helped organize the provision of services for war refugees.

affecting us at the time, and it was a way to show solidarity and support for our fellow women. We also were very much involved in charitable efforts throughout the world."

As the President of the Women's Cultural and Social Society for many years, Ms. Al-Qatami has overseen a body of work that has made innumerable contributions that affected the lives of many thousands of people. In Kuwait alone, the society created classrooms for girls and women where they could study a range of subjects, from learning how to read to learning about civic duties. Some of these classes helped prepare young women for their college careers. The society also opened a nursery for children that women could utilize while they attended classes themselves. In addition, charities for children suffering from cancer were also founded, in addition to a great amount of other work for various social causes that affected Kuwaiti women at the time.

Fundraisers for every issue imaginable were held, and

the society and its supporters donated generously. Assistance was rendered to Palestinian refugees in Lebanon, and educational missions were sent regularly to Palestine, Jordan, Egypt and other countries as well. When the aftermath of the Eritrean Ethiopian war resulted in an influx of refugees into Sudan, the society raised funds for an initiative to help support those affected.

"When I was in Khartoum, I noticed refugees from the war in the streets who were in a very bad state. Many of the women and children had walked great distances to flee the fighting, only to find safety on the streets, where they foraged for food in the trash. We discussed the issue with the relevant authorities in Kuwait and Sudan, and we managed to raise funds to build a camp on land we had acquired for the refugees. A lot of effort went into creating the proper facilities for them, which included a school for more than 1,000 children, living facilities, medical facilities, and a bakery that produced 50,000 baguettes a day. We even



Young Kuwaiti women are pictured here learning to type. Educational programs like this were provided by the Kuwait Women's Cultural and Social Society, which Al-Qatami helped found.

shipped a car from Kuwait that was used to deliver the bread. We also helped them grow crops and raise livestock. Our way of thinking was to help them become self-sufficient by providing them with the knowledge and tools to do so. After all, the saying goes: *If you give a man a fish, you feed him for a day. But if you teach a man to fish, you feed him for a lifetime.* That was our philosophy."

Over the years, Ms. Al-Qatami went on to support a wide range of issues concerning women, education, and more, both in Kuwait and internationally. When visiting delegations came to Kuwait, one of the first places they went was the Women's Cultural and Social Society, where they were briefed about the progress and efforts that Kuwaiti women were so hard at work at. In her time, Ms. Al-Qatami rubbed shoulders with some of the most influential leaders of the Arab world. She has met and worked with Presidents, Kings, Prime Ministers and cultural icons over the years. A brief scan of her past shows an individual who is just as much at home talking about art and culture with Um Kalthoum or discussing education with the King of Jordan as she is with helping refugees in Sudan. By all accounts, she is Kuwait's

premier renaissance woman, and she is peerless in terms of the amount of work she has pioneered throughout her life. As one of Kuwait's most influential women of the 20th century, Ms. Al-Qatami has made a priceless contribution toward the furtherance of women's advancement in Kuwait, a badge of honor that she carries with great humility and grace.

As our conversation with Ms. Al-Qatami drew to a close, we made sure to include two very important parting questions. The first, we wanted to know, was how she felt about the current state of education in Kuwait. In this regard, Ms. Al-Qatami lamented the loss of something that existed in the 1960s and '70s that appears to have faded away today. In particular, the quality of education seems to have been diminished. Respect for teachers and interest in the quality of education has taken a turn for the worse, and Ms. Al-Qatami also believes the positive relationship that can exist between student and teacher is not held in high regard anymore. Students, she said, used to learn about civics, about their history, about their duty to their country, and they had pride in their culture and language. Today, parents and

schools are not instilling these values into young people very effectively, and she believes this is one of the primary causes for some of the social issues, such as crime, that are affecting Kuwaiti society today.

In our last question to Ms. Al-Qatami, we wanted to know what it felt like, from her perspective, when looking back on her long and illustrious career. To answer this question, Ms. Al-Qatami responded simply: "I'm happy. I'm proud. All of my dreams came true. Everything I wanted for Kuwait that I thought was impossible became possible. When I was young, I imagined myself one day becoming head of the Kuwait Municipality or Kuwait Oil Company, where I could help transform the country. As a young person, Kuwait had very few roads. I dreamed that one day we would have a modern road system, and it came true. I dreamed every neighborhood would have a school, a co-op and a bank, and it came true. I dreamed about equality for women in education and the workplace, and it came true. I dreamed that I would be able to do something for my country, and I truly hope that came true as well. All of my dreams for Kuwait came true."

KOC and KU Celebrate 25 Years of Partnership

Under the patronage of the Minister of Education, Minister of Higher Education and Kuwait University President Dr. Badir Al-Essa, KOC and the Engineering & Petroleum Faculty recently celebrated 25 years of strategic partnership between the Company and the university's Petroleum Engineering section.

During the celebration, KOC CEO Jamal Jaafar delivered a speech in which he underlined the importance of the partnership, indicating that through its strategic partnership with different establishments – with Kuwait University at the forefront – KOC was able to make great strides in regard to obtaining the production targets of its 2030 Strategy. He also noted that the celebration of a quarter century of partnership between the Company and Kuwait University is a source of great pride for both parties.

Meanwhile, Dr. Salah Al-Mudhi, Petroleum Engineering Professor, delivered the celebration's opening remarks in which he expressed his gratitude to everyone who contributed to this partnership. He added that most Petroleum Engineering graduates currently working at KOC received field training at the Company prior to their graduation.

The celebration honored KOC trainers who contributed to the success of the field training initiative through their efforts to prepare suitable training programs for Petroleum Engineering Faculty students. The event was then concluded after the Organizing Committee and KOC Training Supervisors were thanked.

About Kuwait University

Kuwait University was established in October of 1966 and officially inaugurated on November 27, 1966 to include the College of Science, the College of Arts, the College of Education and the College for Women. The university is the state's first public institution of higher education and research.

The university aims to preserve and transmit knowledge through scholarship, encourage innovation and development in the arts and sciences



Officials from KOC and KU celebrate 25 years of strategic partnership.

by addressing issues of national, regional and global significance. It has made significant advances since its establishment nearly 50 years ago and has evolved into a multi-faculty institution of higher learning comprised of 17 colleges offering 76 undergraduate and 71 graduate programs.

Kuwait University's facilities are geographically spread over six campuses, providing sites for intellectual exchanges across disciplines and faculties offering programs in the sciences, engineering, humanities, medical and social sciences. In keeping with its dynamic plans for development, the university continues to add new programs, facilities and faculties, ensuring that students are at the cutting-edge of scientific advances and global initiatives.

Facilitating students' entry into mainstream programs is a wide range of options in undergraduate and graduate studies. The university seeks to promote faculty-student discussions, peer-bonding, and stimulate a culture of humility, respect, and camaraderie. Within the university's environment, vast opportunities are available for students to develop analytical and scientific skills through practical exposure, scientific experimentation, research and presentations, to learn, improve and excel. The entire learning process ultimately finds expression in the students' overall performance and academic excellence, leading to the awarding of the Bachelor, Master and Doctoral degrees.

The institution's scientific culture strives to further postgraduate studies, develop new programs, and enhance collaborations with world-renowned universities and research centers to attain global recognition and visibility. This purpose dynamically involves faculties in exploring new dimensions in academic exchanges and research, in bolstering their institutions' external profiles and international standing.



KOC Inaugurates Ahmadi Oasis

KOC has distinguished itself once again as a pioneer in the field of environmental projects, as CEO Jamal Jaafar, along with a number of his deputies, recently inaugurated the Ahmadi Oasis. The recently completed project is the Company's latest addition to its list of environmental achievements.

In order to learn more about the project, *The Kuwaiti Digest* attended the inauguration of the Ahmadi Oasis, where we learned about its important features, how it was constructed, and how it contributes to the achievement of a number of the Company's strategic goals.

In an opening speech that was delivered at the event, DCEO West Kuwait Hasan Bunain affirmed KOC's commitment to environmental and HSE

matters. He also upheld the Company's commitment to the wellbeing of Kuwait's community. In this regard, Bunain indicated that KOC's responsibilities extended beyond oil and gas production to include issues such as social harmony and cooperation. These aspects, he maintained, have been reflected in the design of the Ahmadi Oasis.

Bunain then expressed his admiration for the effort that went into the construction of the Ahmadi Oasis. He also commended the role it will play in benefitting and supporting the environment and Kuwaiti society. He praised those in charge of the project's execution and said that the Ahmadi Oasis was an environmental masterpiece that will be enjoyed today and by future generations. On behalf

of KOC's senior leadership, Bunain then commended the efforts of the officials who oversaw the project's construction and said that the Ahmadi Oasis will serve as a model for future environmental projects.

The DCEO then thanked the Export Operations Group and the Export Maintenance Team, in addition to other Groups and Teams involved with the construction of the Ahmadi Oasis, for their contributions. He also said that KOC's senior leadership will continue to support future work at the Ahmadi Oasis as new phases of the development come online. Finally, Bunain concluded his speech by reminding everyone in attendance that KOC will continue to work in the fields of environmental protection and community outreach.

About Ahmadi Oasis

The location of the Ahmadi Oasis was partly chosen so that it could appear to air travelers on their approach to Kuwait. In coordination with Kuwait's Directorate of Civil Aviation, KOC ensured that the enormous KOC logo, a primary feature of the Ahmadi Oasis, could be seen by approaching aircraft.

The Export Maintenance Team of the Export Operations Group (WK), in cooperation with a number of KOC Groups, supervised and managed the project under the leadership of Team Leader Export Maintenance Osama Al-Dabbous. It should be noted that the construction of the Ahmadi Oasis was a voluntary effort that was accomplished with available and recycled resources and volunteers.

Originally, the project area was rough terrain with a natural topography that reached up to 12 meters in height in some areas. In addition, a large amount of trash had accumulated throughout the area over the years. The location was cleaned up and the logo was drawn on an area of 120,000 square meters through the use of modern scanners and drones, which photographed the area from above for optimal accuracy. The plan for the Ahmadi Oasis was drawn internally without the help of any engineering firm, and external resources used to complete the project did not exceed 15%.

Construction Work

Construction of the Ahmadi Oasis began after plans were finalized. The first phase of the project took four years to



A view of the lake and waterfall at the Ahmadi Oasis.

complete as the project did not fall under a fixed plan. Several teams were formed and spread out through the desert to gather scrap (pipes, metal, wood, etc.) to use and recycle for the project. The best example of this recycled material at the Ahmadi Oasis is the main gate, which was engineered by forging and welding the recycled material before being painted. Moreover, at the main entrance, there is a burned bus that has been repurposed to serve as a rest area on the top deck. An artificial waterfall at the Ahmadi Oasis was also constructed with scrap material.

Facilities

The Ahmadi Oasis features facilities for a number of sports, including football fields, basketball courts and tennis courts. Furthermore, there are 36 rooms with small gardens attached that families can make use of. Playgrounds for children are also present. The rooms can also be used for fair pavilions to display products, which is very suitable for the Company's spring season activities. A walking track also encircles the location.

Cars are not permitted into the Ahmadi Oasis. This was decided so that visitors could be protected from emissions.

Instead, electric golf carts are used as an alternative.

Because an oasis could not exist without greenery and water, two lakes were constructed. The first artificial lake is fed by a waterfall that was made of scrap material. In the second stage of construction, a musical fountain will be added. The second lake is home to ducks, with a small seating area beside the lake. The oasis also has a tent that can be used for meetings facing the lake.

Boom Vessel & Al-Fireej

The Ahmadi Oasis also celebrates Kuwaiti culture. The Cultural Village from the the Mishref Fair Ground gifted a traditional boom vessel, which KOC will maintain. The vessel will be a monument that will allow visitors to learn more about Kuwait's seafaring history, as it features old diving tools such as nets, shellfish holders and other equipment. The Company established a passage to the vessel that has a resting area onboard and can hold a group of seven people.

The Group also established an old Kuwaiti *Fireej*, which is an old neighborhood with an antiquated Kuwaiti house that has three rooms: a kitchen, a diwaniya and a bedroom,



The Ahmadi Oasis features a greenhouse where a variety of fruits and vegetables are grown.

which were furnished with old cultural furniture obtained from local markets.

Green House

The Ahmadi Oasis also features an agricultural green house that extends over an area of 3,000 square meters. It features a great number of trees, such as banana, mango, figs and apple trees. It also has a small museum for school students that explains the various aspects of agricultural activity. It also has a rest area and a small waterfall. Part of the Ahmadi Oasis was constructed as an agricultural area so that various Company teams can take part in annual competitions where different crops and plants are grown on dedicated plots of land.

Central Hall

The Ahmadi Oasis has a central hall for events. This hall was formerly a workshop at Ahmadi Port where forging, maintenance and welding work took place. It has been repurposed to its current oval

shape with glass windows so visitors can enjoy the oasis. In addition, approximately 3,000 empty soda cans were recycled to form an artwork that shows the Kuwaiti flag and Kuwait's Amir with its martyrs at night.

Solar Power

In order to minimize electricity consumption, power at the Ahmadi Oasis is generated through solar energy. Solar panels at the oasis illuminate all of the facility's walkways, in addition to operating the irrigation system. A future plan has been made to generate all of the Ahmadi Oasis power needs through solar power by installing panels over the car parking lot, which has accommodation for 150 cars.

The oasis also features an "Environment Map" which is a map of Kuwait that features plants that used to be widespread in Kuwait 40 years ago. The plants have been replanted on this map, and information about each plant is available through the push of a button.

In a statement he made at the opening of the Ahmadi Oasis, Team Leader (Export Technical Services) Ali Sayed Ahmad Hashem affirmed that the oasis comes within the context of KOC's effort and commitment to support the environment. He also commended the CEO and the Company's senior leaders for supporting the project.

One Team Spirit

On the sidelines of the inauguration ceremony, Team Leader (Export Maintenance) Osamah Al-Dabbous indicated the project had left a great impression on the team of workers involved with its construction as they gained leadership and creative skills, which were added to its pool of expertise and technical skills. He also maintained that a "one team spirit" prevailed throughout the process of turning the dream of the Ahmadi Oasis into reality. He then thanked the KOC CEO and everyone involved with the project for their support and efforts.

Turning Waste Paper into Beautiful Crafts through Origami

SUBMITTED BY GLICERIA MANDANAS,
SECRETARY I, SAFETY TEAM (HSE GROUP)

Origami is the art of paper folding, which is often associated with Japanese culture. In Origami, the papers are used for creating decorative items through the artistic folding of paper. It is really an art to transform a flat sheet of square-shaped paper into a finished sculpture through folding and sculpting techniques. At its heart, Origami is a philosophy of design that crafts square or rectangular shaped paper into works of art.

It was in the office where I saw plenty of scrap paper from printers, copy machines and magazines being thrown as waste in the bin. That is when I began to think about utilizing that paper in a purposeful, decorative way. I then came to know about Origami and I decided to try it. Initially it was difficult to try and give the paper a decorative shape. In December of 2014, I started trying to create Origami from waste paper in my office. My first step was a trial and error experiment, until I made a flower basket. With great hesitation, I showed it to my Team Leader, Fahad Al-Qattan, who immediately praised my effort and skill in Origami with waste paper.

On his encouragement, I started making a swan, which took time to fold small pieces of rectangular paper into triangular shapes. Since then, I enjoyed doing Origami during my free time. Assembling is the most interesting part of Origami, especially once the base is formed. Then starts the next stage of work - connecting small triangular pieces to form a desired shape like a swan, basket, vase, etc., until it forms a completed work. My attempt at creating Origami also received appreciation from colleagues, friends and peers who saw it as a positive step towards recycling waste paper through an environmentally friendly approach.

I am sincerely thankful to my Team Leader, Fahad Al-Qattan, for encouragement and support in doing Origami, which has also helped me enhance my bonds with friends, colleagues and family members whom I gifted my Origami products.



Changing Lives One Surgery at a Time

AN INTERVIEW WITH DR. WASMY AL-FADHLI, PEDIATRIC SURGEON, AHMADI HOSPITAL



The story behind the Kuwait Hope Surgical Camp is truly an inspiring one. For the past eight years, the team behind the initiative – a group of Kuwaiti surgeons and doctors – has worked tirelessly throughout Africa to bring hope to less fortunate individuals suffering from a broad range of medical issues. In their last trip alone, the team was able to conduct 434 operations over the course of a single week. To learn more about the Kuwait Hope Surgical Camp, *The Kuwaiti Digest* spoke to Dr. Wasmy Al-Fadhli, Pediatric Surgeon at Ahmadi Hospital.

The Kuwait Hope Surgical Camp is unique in the sense that it leads missions where many surgical procedures are conducted, as opposed to simply providing medical care. Before we

discuss the important work that has been accomplished, can you please provide a brief background summary of how the initiative began?

The whole story began when a group of Kuwaiti medical students, myself included, were doing our postgraduate work in Canada. At the time, we gave a lot of thought to how we could best help the needy and the poor, but at the time, we were very overwhelmed with our studies as medical students. We decided that we would all work together to do something when we returned to Kuwait.

When I returned to Kuwait in 2007, my colleague and friend, Dr. Hisham, was the driving force who moved the project we had talked about

as students along. One day he called me and told me that he was developing plans to conduct a humanitarian mission in Africa. One thing led to another and we were soon working in collaboration with Direct Aid, who supported us with instruments, money and logistics. Our first mission was to Kenya in 2009. In the years that followed, we conducted surgical camps in Somaliland, Tanzania, Djibouti and Sudan. Each new trip featured a larger group, with more surgeons, physicians, nurses and anesthetists than the trip before it. As we continued, the trips became better organized, which is a necessity given the amount of coordination that must be conducted, to say nothing of the large amount of equipment that must be taken with us. This idea for a surgical camp,

which is very different from a medical camp because of the number of actual surgeries we perform, is the result of friends and colleagues with different specialties in the medical field coming together to help people.

What made you want to go into medicine?

Medicine was actually not my first choice, as I was planning to study computer engineering. However, when I enrolled at Kuwait University, I decided that I wanted to attend the best school at the university, which was the faculty of medicine. It took me a long time to really like medicine, because as a young man, I thought the whole process would take too long. In fact, there were times when I thought about going back to study engineering. However, by the fourth year we started seeing patients, and this is where my feelings changed. When I started my internship, I knew that I had made the right choice because I really loved the work. I then decided to continue on with my education and work, where I studied pediatrics and surgery. All in all, I spent three years studying in Kuwait, four

years abroad in Bahrain, and five years in Canada before becoming a pediatric surgeon.

I began work at Ibn Sina Hospital when I returned to Kuwait, where I became head of the department after some time. I was then a consultant before becoming head of the pediatric department. I then decided I wanted to work part time at KOC, where there was no pediatric surgeon. Ahmadi Hospital made an offer to me where I could start pediatric services at the hospital, where I am currently the only pediatric surgeon. We also have plans to prepare these services to ensure they are ready when the New Ahmadi Hospital is completed so that we can transfer them over there.

When did you begin your humanitarian and charity work?

The first humanitarian and charity work I was involved in occurred when I was a medical student. In 1989, I went to Sudan with the International Federation of Medical Students' Associations, where I helped them by assisting at a refugee camp set up during the war between Ethiopia and Eritrea. I was head of the refugee

committee during that trip, and we also received assistance from Direct Aid. I went again in 1990, just one week before the invasion, and then after I returned from Canada, I helped deliver ICUs and incubators to Sudan. We also brought a lot of medicine, food and clothes from Kuwait to the refugees. At that time, however, my work was mainly limited to the pharmacy.

What kind of logistics are involved with setting up a surgical camp in Africa?

It is very difficult to arrange a trip to Africa, which is why we only go once a year. It takes almost a year to simply arrange for the medical certificates for the doctors and surgeons, because you can't operate in a country without the certificates. We arrange things in such a way where two members of the group go to the country beforehand in order to ensure there are enough operating rooms, the machines are working, and that the anesthetic drugs are available. While we can bring most of our medical equipment, the anesthetic drugs are highly regulated, and we generally cannot travel with those drugs.



Our surgical camps in Africa are very unique in the sense that we bring just about everything with us. We take our IV drips, instruments, monitors, sutures – all of our medical equipment. We are basically self-sufficient when we arrive. Of course, getting everything there can be a challenge. For example, I think on our last trip to Sudan we hauled 1,800 kg of equipment with us.

What kind of support does your team receive?

We receive most of our support from Direct Aid, who help us with acquiring our tickets and mapping out the logistics of the trip. They have offices in Africa, so their people there help us greatly to get everything done, especially in terms of arranging the certificates, which is the most difficult aspect of the trip. They also provide us with one coordinator and one photographer. We also receive support from the Ministry of Health, and of course, KOC has been very supportive, from the CEO of the Company down to the Managers. The Ministry of Health, Ministry of Defense and a number of private hospitals have also provided us with doctors and nurses, which means at the end of the day, our team generally consists of about 30 individuals, with the majority of those individuals being surgeons.

When in Africa, is the scope of your work limited to surgeries? Or do you offer other services, such as training programs?

We would like to give lectures, but there is no time. Instead, we provide direction to the host country's trainees and students. We are in the country for one week, so we sometimes

ask doctors in training to scrub with us so that we can lead by example.

Sometimes the work that we do is groundbreaking for the host country. For example, when we were in Tanzania, we conducted the country's first splenectomy. We had to bring special equipment from Kuwait to conduct the operation, and when we completed it, news of the procedure was in the newspapers and national TV.

When we visit these countries, our aim is to do surgery, and in order to do this effectively,



Dr. Wasmy Al-Fadhli

we need someone there to tell us what they need and what we can do. Naturally, this requires close coordination and understanding. It is also very important to be sure there is someone in the country who is able to follow up on the patients after we leave, because we cannot conduct a surgery if there is no proper follow-up.

What stories from your trips to Africa stand out?

On the last day of our first trip to Djibouti, they brought me a 2-year-old kid named Ayana who was born without an anus. What they did was create an

opening in his abdominal wall to get the stool out, and at that time he came from a tribe in the desert, so they did not have the proper medical bags to collect the stool. The best they could do was use a diaper in that area, so the whole process was naturally messy and very miserable for the child. They asked me if there was anything I could do for the child, but as I was leaving the next day, I said I was not able to. We did not have the time or the proper planning or facilities to conduct such an operation, which actually would require two procedures. In a case like Ayana's, his control of his bowel movements was the main issue. We could simply create an opening for him, but it would be of little use if he could not control his bodily functions. To enable control, we would have to bring the colon into the sphincter, which is a very meticulous job and requires a lot of work. It just couldn't be done with one day left.

Before we left, I wrote Ayana's information down and spoke to the Minister of Health in Djibouti, asking him if it was possible to bring Ayana to Kuwait. He was positive about the prospect, so I spoke to the Kuwaiti ambassador in Djibouti, and he was very helpful as well. When I returned to Kuwait, I began making phone calls. I spoke to someone from the ministry who called someone from the Diwan of His Highness the Amir who then spoke to H.H. Sheikh Sabah himself. I soon learned that H.H. the Amir responded affirmatively and said, "Yes, bring this child to Kuwait and we will take care of his medical needs."

We then managed to get Ayana and his mother a visa to Kuwait. I remember that they arrived in the middle of the night. We had arranged for an ambulance to pick Ayana and his mother up directly from the plane and take them to Ibn Sina Hospital. After he settled in, we managed to successfully perform the first operation, but he needed time to recover before I conducted the second procedure. However, his visa was going to expire. The Amiri Diwan helped us again by renewing the visa promptly, and we were very grateful to them for that. We then were able to perform the second operation, which I am very happy to say was a success.

Today, Ayana has total control of his bowel movements. If you see him, you would think he is just like any other child, you would never know he had such a major medical problem not too long ago. Later on, I spoke to the Ambassador of Djibouti here in Kuwait, and he asked me if I knew the meaning of the name "Ayana." He told me it means "The Lucky Guy," and I'd have to say I agree with that. It really is incredible to be able to conduct a procedure like that where you know you are changing someone's life for the better.

When I was a medical student, enduring 15 years of training, everyone said that the whole process took too long, that the misery I suffered through wasn't worth it. It was hard to sit alone in the library every night reading until midnight while the rest of your peers are out enjoying their lives. Today, however, I realize the true importance of the work surgeons can do and how we can make a positive impact on the lives of those who are



Dr. Al-Fadhli is pictured here with one of his young patients.

suffering. When I look back on all the time it took to get me here, I don't feel like it was wasted at all. It was all very much worth it.

What are your plans for the future?

Our plans for the future include growing our team and hopefully making progress in our plan to arrange surgical camps twice a year instead of just annually. Our other plan, which is a dream of ours, is to acquire a ship or plane that can serve as a surgical theater. This would eliminate much of the difficulty associated with logistics and certificates that we currently face. If we manage to secure the support and funding required for such an undertaking to become a reality, we could help a great number of people around the world.

I would like to also add that the work the Kuwait Hope Surgical Camp conducts could not be done by one individual alone. This is a collaborative

effort that is based on close cooperation and teamwork from everyone involved. The work we do would not be possible without the support of Direct Aid, The Ministry of Health, the Diwan of H.H. the Amir, KOC, and everyone who has donated and helped support us in this undertaking.

Lastly, and of course not least, I would just like to acknowledge my role model and mentor, Dr. Abdul Rahman Al-Sumait, the founder of Direct Aid, may God rest his soul. He supported me on the first humanitarian trip I went on in 1989, and he came to Canada while I was a student there. He is the one who inspired me and the group of Kuwaiti students studying there at the time. Dr. Al-Sumait is our role model, and this whole undertaking started because of him. We are very thankful that we are able to keep his spirit of humanitarian work alive, and we all look forward to continuing our work, not only in Africa but around the world.



AT THE HELM

AN INTERVIEW WITH CAPTAIN ALHARITH AL-ATEEQI

In terms of the type of work that KOC requires, one thing is certain: The Company is constantly on the lookout for a wide variety of specialized skills. And, because KOC continuously seeks development throughout all of its sectors, it should come as no surprise that the human element is by far the most important component of this formula for success. In its pursuit of this development, the Company provides the best and most technologically advanced means available that allow employees to work more effectively, succeed in their tasks and accomplish more whenever possible.

The pursuit of excellence is embedded in the work ethic of every team at the Company, and this is especially true for teams from the Marine Operations Group. Recently, the Group has completed a number of significant accomplishments on the collective and personal levels. To learn more about one of these personal accomplishments, we sat down with Captain

Alharith Al-Ateeqi, who is the first Kuwaiti to command one of the industry's most advanced tugboats.

The Beginning

Captain Alharith Al-Ateeqi began his career at KOC as a Tug Master in the Fleet Management Team of the Marine Operations Group. Recently, however, he became an integral part of the newly established Marine Oil Spill Management Team as an Oil Spill Officer, while at FMT he took pride in being the first Kuwaiti at the helm of KOC's new tugboats. These new tugboats, which utilize "ASD" technology, are some of the most advanced in the world.

Propulsion Power

When we asked Captain Al-Ateeqi about "ASD" technology, he informed us that it was an acronym for "Azimuth Stern Drive," which is a form

of marine propulsion that combines inward forces with the boat's external engine.

The First Kuwaiti

In our interview with Captain Al-Ateeqi, he indicated that as part of infrastructure upgrades to various oil facilities, KOC had shouldered the responsibility of managing the infrastructure of harbors. As such, it decided to switch from conventional tugboats to a new fleet of technologically advanced vessels. Captain Al-Ateeqi was one of the people who were trained to use these new boats. Later, he became the first Kuwaiti at the helm of these new vessels.

Over the course of our interview, Captain Al-Ateeqi explained some of the features of these new tugboats, and what has changed since they have gone into service with the Company. He answered by first explaining what the role of a tugboat is, and how it is important for Company operations. Tugboats help steer oil tankers and maneuver them to their assigned loading terminal and hold them in place until the ship is completely fast along the pier or SBM. They also take tankers from the harbor out to the sea again. Tugboats are helmed by a specialist, a Tug Master, who is qualified to coordinate with the vessel's captain and the port management.

Flexibility & Maneuvering

In terms of features, Captain Al-Ateeqi said the new tugboats have more flexibility and better maneuverability as they can rotate 360 degrees on the same axis and move sideways in a maneuver called "side step." Once the captain becomes



Captain Alharith Al-Ateeqi.

proficient in piloting them, they can steer them as if they were toys, whereas conventional tugboats have less flexibility and are not able to maneuver in the same way.

He clarified that the new tugboats have non-fixed engines, which means they can rotate in all directions very easily, and they can be moved in any direction without the need to stop like conventional tugboats, which have slower and limited movements.

A New Fleet

Captain Al-Ateeqi added that there are 14 tugboats in active operation, each with an individual name. Although they are characterized by their great maneuverability, piloting them is not an easy task. They

are especially hard to control at the beginning and require a considerable degree of skill, but when a person gets used to them, they become second nature.

In regard to the locations where these boats operate, Captain Al-Ateeqi said that they are currently active throughout all ports, including Ahmadi Port (North and South), Abdullah Port and Shuaiba Port. He also added that this isn't the first time these vessels have been operated in Kuwait, as they have served for quite some time at Al-Shuaiba Commercial Port. However, it is the first time they have served in Kuwait's oil sector, which has qualified Captain Al-Ateeqi to become the first Kuwaiti at the helm of these vessels.



HSE TEAM PROMOTES HEART HEALTH FOR KOC DRILLING CREWS

SUBMITTED BY THE HSE (D&T) TEAM

For the first time at KOC, and under the theme of “Healthy Heart – Healthy Crew (3HC)”, the HSE (D&T) Team, headed by Team Leader Fahad Al-Dhamen, recently implemented a health stewardship program that was aimed at enhancing the wellbeing of drilling crews throughout the Company. In part, the program was intended to educate drilling crews about the benefits associated with maintaining a healthy heart. Drilling crews were provided with information that discussed how a strong heart can help individuals prolong their lives by reducing many complications associated with their health.

The nature of work involved in drilling operations is a 24 hour, round the clock operation. Therefore, it is no surprise that the work can contribute to stressful and unhealthy situations for crewmembers. The Healthy Heart - Healthy

Crew program was specially designed for drilling crews. The program was conducted in coordination with a voluntary organization called “Heartfulness,” Development Drilling Group I, Development Drilling Group II, Deep Drilling Group, the Medical Group and Community Services Team with professional support throughout all three phases. The work for this project was made possible through the close coordination of Basheer Malik, HSE Drilling Hygienist.

Healthy Heart - Healthy Crew

Based on data analysis from the last 10 years of heart-related illness in the D&T Directorate, the HSE (D&T) Team proactively implemented the Healthy Heart - Healthy Crew program for drilling crews. About 600 rig crewmembers benefitted from the program. As part of this voluntary measure, the following

activities were conducted:

- A comprehensive D&T Health Management & Illness Prevention (HMIP) workshop was conducted that included all D&T business partners, Drilling Operation Groups and other stakeholders to analyze past medical incidents (i.e. heart attack incidents). This was followed by a brainstorming session on the root causes of medical illnesses. Those were then identified and additional proactive measures for health management and illness prevention of drilling crews were discussed. The workshop included the participation of 84 attendees.
- As a proactive measure, the HSE (D&T) Team, in consultation with Ahmadi Hospital and a third party organization



KOC employees and contractors were provided with information that aimed to enhance their wellbeing while in the field.

named "Heartfulness," developed a customized healthy heart program for drilling crews with the participation of a sports center representative. All crews were also educated individually on preventive medicines and their importance for healthy lives. This program focused on synchronizing body, mind and heart through customized yoga sessions and medical advice and "Heartfulness," which is a simple and practical way to experience the heart's unlimited resources.

- Health educational materials such as posters, banners, leaflets, fliers, the D&T monthly theme related to health and hygiene, SMS alerts, etc., were

developed and distributed to drilling crews.

- This program was much appreciated by all drilling crews, operations groups, other stakeholders and employees who attended the programs.

Summary

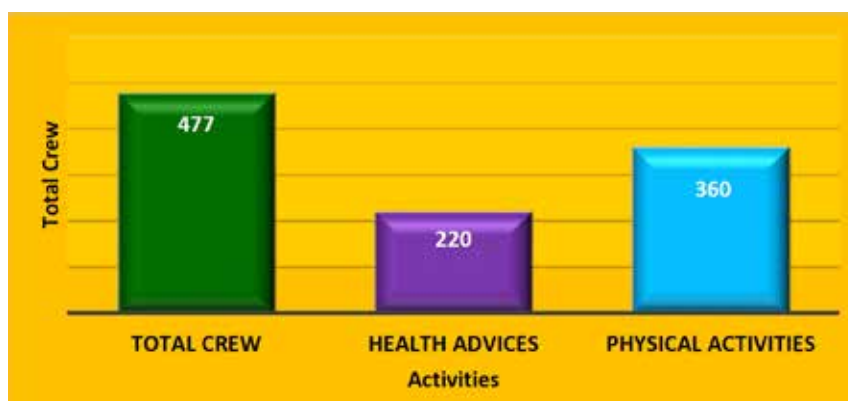
The HSE (D&T) Team analyzed the health check-up results of three phases and summarized the

D&T management to take further necessary actions. The summary details are given below:

- 60% of the rig crews received individual health advice and tips from medical doctors.

- 35% of rig crews learned specially designed fitness programs from fitness experts that they can conduct regularly at their camps without any further requirements.
- All camp catering crews have been provided with customized healthy and balanced nutrition diet programs that can be adopted by the camps for healthier lifestyles.

The HSE (D&T) Team is continuously monitoring this 3HC program by conducting scheduled rig health and hygiene inspections. During 2014/15 and 2016, the HSE (D&T) Team has carried out 54 and 69 rig health and hygiene inspections respectively.



Total number of crew that participated in all three phases along with the number of crew who received health advice.



INTERNATIONAL NURSES DAY & FLORENCE NIGHTINGALE

KOC, represented by Ahmadi Hospital and the Nursing Services Team, recently organized a celebration on International Nurses Day under the slogan: "Nursing: Determination for Change."

Medical Group Manager Dr. Emad Al-Awadh, Team Leader Nursing Services Halima Al-Kandari, Senior Nursing Officer Essam Taleb and a number of Ahmadi Hospital nurses attended the celebration.

On the sidelines of the celebration, Ahmadi Hospital Manager Dr. Emad Al-Awadh addressed the nursing body at the hospital and expressed his appreciation and gratitude to all the nurses. He then said that International Nurses Days is a valuable opportunity to express thanks to the nursing staff for the health care and services they provide to patients at the hospital.

Meanwhile, Team Leader Nursing Services Halima Al-Kandari upheld the importance of the nursing staff and the expertise and efficiency they bring to the health system. She also pointed out that the nursing staff is the focal point in health care and the first point of contact for social welfare services.

During the celebration, a number of distinguished nurses were honored for their continuous efforts in this humanitarian service. All nursing staff were honored as well, as they spare no effort to provide all forms of care for patients.

International Nurses Day is celebrated around the world every May 12, the anniversary of Florence Nightingale's birth. The International Council of Nurses (ICN) has celebrated this event since 1965. Florence Nightingale is widely regarded as the founder of modern nursing. Each year, ICN prepares and distributes the International Nurses Day Kit. The kit contains educational and public information materials, for use by nurses everywhere.

About Florence Nightingale

Florence Nightingale was born in 1820 to wealthy English parents traveling in Florence, Italy. Both Florence and her sister were named after the Italian cities in which they were born. At home in England, the Nightingales divided their time between two houses, Lea Hurst in Derbyshire for the summer and Embley in Hampshire for the winter. The two girls were educated by their father, and Florence, in particular, excelled academically. With regard to the marriage and social life of their daughters, the Nightingales held high expectations. However, Florence had other ideas, because as a teenager in 1837 she received a "divine calling" to do God's work, which sparked her advocacy of social and health care causes and eventually led her to establish nursing as a distinct profession.

The period between the later half of the 17th century and the middle of the 19th has been described by medical historian Fielding Garrison as the "dark

age" of nursing. Nurses in those days were typically poor and unskilled. The hospitals they served held equally low reputations as unclean, disorderly, and infection breeding. They were often regarded merely as places to die. It is not difficult to see why Florence Nightingale's family, wealthy and respectable as they were, discouraged her from selecting this "unsuitable" profession. However, Florence went against her parent's wishes, refused a prospective marriage and in 1851 trained as a nurse in Kaiserswerth, Germany at Pastor Theodore Fliedner's hospital and school. Fliedner's school was one of the earliest institutions for the proper training of nurses outside of the Catholic religious orders. In 1853, Nightingale went for additional training in Paris with the Sisters of Mercy. After her return to England, Florence took a position as superintendent for London's Establishment of Gentlewomen During Illness in 1853.

Florence Nightingale is probably most famous for her work during the Crimean War (1854-1856). Responding to unpopular newspaper reports of the horrendous situation in the English war camp hospitals, Secretary of War Sidney Herbert, a personal friend of Nightingale, consented to let her organize and manage a group of female nurses to go to Turkey. On November 4, 1854, Nightingale and 38 nurses arrived in Scutari, the location of the British camp outside Istanbul. The doctors originally did not welcome the incoming female nurses, but as the number of patients escalated, their help was needed in the overcrowded, undersupplied, and unsanitary hospital. Under Florence's leadership, the nurses brought cleanliness, sanitation, nutritious food and comfort to the patients. Nightingale was known for providing the kind of personal care, like writing letters home for soldiers, that comforted them and improved their psychological health. Her group of nurses transformed the hospital into a healthy environment within six months, and as a result, the death rate of patients fell from 40 to 2 percent. In 1857, Florence returned home a heroine. It was the soldiers in Crimea that initially named her the "Lady with the Lamp" because of the reassuring sight of her carrying around a lamp to check on the sick and wounded during the night, and the title remained with her for the rest of her life.

Upon her return from the Crimean War, she devoted the next few years to the Royal Commission investigating health in the British Army. It was her discussions with Queen Victoria on the conditions of the camp hospitals that sparked the commission's formation. Also, Nightingale's statistical data and analysis strongly influenced the commission's



A photograph of Florence Nightingale.

findings, which resulted in great public health advances in the British army.

In 1859, Florence Nightingale's book, *Notes on Nursing: What it is, and What it is Not* was published. Based on knowledge acquired at school in Kaiserswerth and while nursing the sick during the Crimean War, *Notes on Nursing* provides a simple but practical discussion of good patient care, along with helpful hints. According to Florence Nightingale, hygiene, sanitation, fresh air, proper lighting, a good diet, warmth, quietness and attentiveness were necessary conditions for hospitals and were to be ensured by trained nurses. Taken for granted today, her commonsense advice helped transform hospitals from death houses to sanctuaries of care. This work quickly became a classic introduction to nursing, and has remained in publication to the present day.

During the war a public subscription fund was set up for Florence Nightingale to continue her education of nurses in England, and the Nightingale Training School at St. Thomas' Hospital opened in 1860. The education of recruits involved a year of practical instruction in the wards, supplemented with courses of lecturing, and followed by two years of work experience in the hospital. After graduation, many of the students staffed British hospitals, and others spread the Nightingale education system to other countries.

Through her work and her school, Florence Nightingale is responsible for elevating the profession of nursing to an honorable status. She also wrote about 200 books, pamphlets and reports on hospital, sanitation, and other health-related issues, as well as contributing to the field of statistics. Throughout her life she provided advice on a variety of health care issues to associates all over the globe. Though ill and bedridden for much of her later life, Nightingale managed to continue her great work through correspondence.



Simplicity & Peace

SUBMITTED BY ASHOK SINGH,
CONSTRUCTION ENGINEER, AHMADI
PROJECTS GROUP

Life is simple. This existence should be simple. True love is simple. All the things that are good — in you, about you, and around you — are simple.

Peace is also simple, but if I ask, “What is peace to you?” everyone will give a different answer. If I ask, “What is God?” the answer will be based on your religion, your upbringing, what your parents told you, what your friends and other people told you.

You have always wanted to feel good. Your desire to feel good goes back a long way. In fact, it goes back to when you were an infant. You wanted to feel good — that was it. You didn’t have big agendas. When you didn’t feel good, you cried.

Who taught you to cry? This started from day one. When most people are born, the first thing they do is cry. If you didn’t, a doctor held you by the legs and gave you a little slap until you did. And most importantly, who taught you to be quiet when all was well? When you are satisfied, nothing needs to be done or said or expressed. All is well. This is you.

This is essentially the way you still behave. When all is well — great. When all is not well, it’s, “Why did you leave that door open? What’s wrong with you? Why are you looking at me? Why are you talking to me?” The very existence of another human being whom you actually may love can

irritate you, just because all is *not* well. When all is well, everything is very simple, because life is simple. Some people say, “You cannot say my life is simple. I have all these problems. My cat has left me, my wife is threatening to leave me, my kids keep sending me their bills...”

The complications that we bring into our lives — the good and the bad, right and the wrong, love and hate, doubt — are what make our lives so complicated. We all want simplicity. We have a relationship with joy, and simplicity has a unique way of bringing joy. The question is, how do we get it?

There is a joy that comes from the outside, and there is another joy that comes from inside. I’m not ignoring the joy that comes from outside. But there is a joy that comes from the inside, and it only comes when there is simplicity in your life. It’s simple because since the day we took our first breath, this energy resides in us. All this time, even if we don’t know about it, it continues to reside in us. How utterly simple is that?

Life wants to be content. Life wants to be happy. You want to be happy. Something is going on here, isn’t it? You can move, you can talk, you can think, you can smile, you can cry. Something is going on here, and one day it won’t be. What is this thing that is going on? Is it your appointments? Is it your job? Is it all the things you do? Is it all your likes and dislikes?

There is something that keeps happening in my good days and in my bad days. All the things that I call *good* or *bad* are irrelevant to the fact that something else is going on. The coming and going of this breath is automatic, and due to this magnificent thing, I am alive. All the complicated will one day go away. So will you. The challenge seems to be to find the simple and hang onto it for dear life while you are alive.

Does this sound like a challenge — to find it and hang onto it for the rest of your life? It is possible. The joy that you have in you needs to be honored. The love needs to be honored. The greatest of all gifts, this most subtle and most beautiful breath, needs to be honored. Recognize it for what it is worth. Acknowledge this most magnificent but simplest of things in your life.

What happens when you honor this life within you? The energy within returns those honors, and the homage that is paid to you is called *peace*. Peace is your reward. It’s also called *joy*, *understanding*, *clarity*. This is how simple it is.



The Lanterns of Ramadan and Eid Al-Fitr

Ramadan, the ninth month of the Muslim lunar year, is a time of fasting, blessings and prayers. It also commemorates the revelation of the first verses of the Holy Qur'an to the Prophet Muhammad (PBUH). As a way of giving thanks to God during this holy month, and as a way of unifying the worldwide community of believers, Muslims - with special exceptions for the sick, nursing mothers, pregnant women and travelers - spend the daylight hours fasting. The hours of the night, until dawn, are marked by prayers, ceremonial meals and celebration of the day's spiritual victory over human desires. After sunset, streets and squares all over the Muslim world are thronged with people out buying food after the long day's fast, or visiting friends, or preparing for *sahur*, the last meal of the night, which takes place before dawn.

No one knows for certain when the use of children's Ramadan lanterns began, but it is a very old tradition that began in Egypt and has since become widespread throughout the Arab world. Lanterns and lamps of various kinds, of many hues and degrees of brightness, and even both real and imaginary, have always been special to Egypt. For centuries before the coming of electricity, Cairo itself was noted for its spectacular use of lanterns to illuminate the city, especially during the holy month of Ramadan.

Most lantern frames today are made from thin strips of metal usually cut from old tin cans. Pieces of hand-colored glass are then inserted into the frame and finally, when a lighted candle is placed inside, the lantern glows with translucent beauty - at least for the few weeks of Ramadan, for they

are not meant to last longer. Most lanterns are no more than 25 centimeters high, but others can be enormous constructions as much as 150 centimeters tall. Only the lantern-makers know all the designs, manufacturing secrets and, above all, the names of their magical lanterns. New designs are sometimes created to commemorate special events.

Eid Al-Fitr

Eid Al-Fitr, translated into English as the Festival of Fast-Breaking, falls on the first day of Shawwal, the month which follows Ramadan in the Islamic calendar. It is a time to give charity to those in need and celebrate the completion of a month of blessings and joy with family and friends.

Before the day of Eid, during the last few days of Ramadan, each Muslim family gives a determined amount as a donation to the poor. This donation is of actual food such as rice, barley, dates, rice, etc., to ensure that the needy can have a holiday meal and participate in the celebration. This donation is known as *sadaqah al-fitr* (charity of fast-breaking).

On the day of Eid, Muslims gather early in the morning in outdoor locations or mosques to perform the Eid prayer. This consists of a sermon followed by a short congregational prayer. After the Eid prayer, Muslims usually visit various family and friends, give gifts (especially to children), and make phone calls to relatives to give well-wishes for the holiday. These activities traditionally continue for three days. In most Muslim countries, the entire three-day period is an official government/school holiday.



Flavors from Arabia

The Arabian Peninsula has been closely linked with spices throughout its history. Spices were appreciated everywhere in the Middle East for their fragrances and their medicinal properties, as well as for their enhancement of flavor in food. Herodotus, "the father of history," wrote in the fifth century BC of the spices of Arabia that "the whole country is scented with them, and exhales an odor marvelously sweet." For centuries the Roman Empire, with its insatiable demand for Eastern spices, kept caravans crisscrossing the peninsula, bringing such important spices as pepper, cardamom, cinnamon, ginger, spikenard, nutmeg and cloves to the West. The Prophet Muhammad (PBUH) himself, as a young man before the Holy Qur'an was revealed to him, accompanied caravans across the peninsula to Syria, carrying

goods which very likely included spices. After Islam was established, believers came to Makkah from all over the world to make the Hajj, or pilgrimage, and enriched the peninsula with an enormously varied culinary acquaintance. Arabian cooks developed a mastery of flavoring, using a multitude of spices in each dish to create a taste which is rich and subtle, never overpowering but magnificently enhancing the food.

In many other regions of the world where the climate is hot, the food is, too. In southern India, Mexico, and parts of Africa, for example, many dishes are served that will literally scorch your tongue if you're not used to them, and make beads of perspiration stand out on your forehead. Perspiration has a cooling effect on the body, of course, and it is generally accepted that this

is the purpose of such spicing. In contrast, spicing in Arabian cuisine is not extremely pungent. Although there are, as everywhere, individuals who enjoy a good hot red pepper, or a large dose of ginger, mustard or onion, the flavoring in Arabia is tasty enough to awaken an appetite in the heat, but not so hot as to induce a loss of the moisture so essential to life in an arid or desert land.

Certainly, in most cities of the Arabian Peninsula there are sophisticated supermarkets where you can find spices sold in rows of uniform bottles containing colored powders. But it is more common - and more fun - to buy the spices whole in some tiny, fragrant shop or stall in a *souq*. These whole spices are interesting in that they reveal, to a certain extent, which part of the plant has yielded the spice, whether bark or berry, seed or sap. More

importantly for flavor, they will be stronger and more aromatic since the volatile essential oils are lost much more rapidly after the spices have been ground. The spice seller will often grind your spices for you on the spot, if you prefer, or he may offer to sell you a pre-ground mixture which he will assure you is excellent for specific dishes, such as a rice pilaf or a vegetable stew, but whose ingredients remain his secret.

Dates have always been an important food in the Peninsula, where several varieties are cultivated in ancient groves in the large oases; dates are a common condiment at any meal and with coffee. Various nuts - almonds, walnuts, pistachios, hazelnuts and pine nuts - all of which grow in regions of the Middle East, lend texture as well as flavor to Arabian foods. Familiar spices and herbs like cinnamon, cloves, black pepper, hot red and green peppers and allspice, ginger, mint, parsley, bay leaves, basil, dill, rosemary, garlic and onions all are used frequently. A few others which are becoming more commonly known in the West are popular as well, such as cumin, caraway and coriander - both the tan, spherical seeds of the coriander plant and its parsley-like fringed green leaves, known in the West as cilantro. But beyond those there are still other spices and condiments important to the flavor of Arabia that are relatively unknown in the West today.

Sesame seeds, the pale, small seeds of a tall herb grown in many parts of the Middle East, are extremely important to the cuisine of the region. The seeds are pressed to extract a



high-quality oil; lightly toasted, they add their nutty flavor to a large number of breads and pastries, or provide a tasty coating for sweet Medina dates stuffed with almonds. *Tahinah*, a paste made from sesame, is mixed with mashed chickpeas, garlic and lemon juice to make the beloved dip *hummus*. Sesame seeds mixed with honey are a nutritious, sweet snack. Perhaps Ali Baba commanded the cave to "Open, sesame!" because the seed pods of this plant (except for modern commercial varieties) burst open suddenly and forcefully when the seeds are ripe, scattering them widely.

Cardamom is an essential ingredient in that ubiquitous symbol of Arab hospitality, coffee. In the Arabian Peninsula, coffee is usually a straw-colored brew, made from lightly roasted beans, lavishly perfumed and flavored with crushed, large green cardamom pods, and served unsweetened

in miniature handleless cups in a stream of generosity that ends only when the guest's thirst is unquestionably satisfied. As it is one of the world's most expensive spices, cardamom's generous use is intended as an honor. In addition, coffee brewed from dark-roasted beans, and usually prepared with sugar, is drunk occasionally. That brew is sometimes spiced with a little ground cardamom seed as well.

Cardamom is by no means limited to coffee; its pleasant, camphor-like flavor combines well with any food or beverage, hot or cold. The seed pods, slightly crushed, are a standard spice in the traditional Arabian dish *kabsah*, a lamb-and-rice stew, and it is a common ingredient in fruit desserts.

As a native of southern India, the spice has traveled the short distance to the Arabian Peninsula since antiquity. The plant is a member of the ginger



family, grows to a height of two meters or more (six or eight feet) and produces its aromatic seedpods on curly panicles at its base.

Dried limes lend a bright tang to stews, some varieties of kabsah, and fish dishes. The limes may be used whole and fished out of the dish before serving, or pounded to a fine powder. To make your own dried limes, boil the small round variety of lime vigorously for a few minutes, then dry them in a sunny or otherwise dry and warm place for several weeks until they turn brown and feel hollow.

It is *mahlab*, the aromatic kernel of a kind of cherry with a black fruit, that gives that distinctive flavor and scent to the sweet braided yeast bread popular all over the Middle East. The droplet-shaped kernels are ground into a powder and used in this and other breads and pastries. In addition to providing "the bread spice," this versatile

tree has several other uses: Its fragrant oil is used in making perfumes, its hard, heavy wood is valued in turnery, and the tree itself provides grafting stock for cherry growers in southern Europe and western Asia.

Mastic, the resin exuded from the bark of a small evergreen shrub closely related to the pistachio tree, is best known in the West today for its use in such products as varnish and paint, but cooks in Arabia continue their centuries-old custom of enjoying its unique fresh, resinous aroma and flavor in meat soups and stews and in puddings. Mastic melts into the food rather than dissolving, so it is best to pulverize the translucent light-yellow lumps before adding them. Mastic is one of the many ingredients used in the popular *shawurma*, that elaborate construction of marinated meat, fat and flavors which rotates on a vertical spit placed close to a fire.

Nutmeg is the seed of a large evergreen; tree native to the Spice Islands (the Moluccas) of what is now Indonesia. The fleshy yellow, peach-like fruit of this tree splits open when ripe, revealing the nutmeg encased in a dark-brown shell, which is in turn wrapped in a bright red net, or aril; this aril is the spice mace. Nutmeg has long been in popular use in the Middle East, as in the rest of the world, both as a flavoring and a medicine; however, its medicinal properties have caused it to be classified officially as a drug and it is therefore banned in Saudi Arabia today. Very large quantities of nutmeg can produce hallucinations followed by ferocious headaches, and an overdose can be lethal.

Rosewater & orange-blossom water lend their sweet perfumes to a wide variety of foods, notably puddings and pastries but also to some fruit drinks and salads. They

may be used separately or together, depending on the dish and the taste of the cook. The essences are distilled from the petals of the flowers with water, a process developed by the Arabs; the flower waters on sale today are usually a dilution of this product. Rosewater is one of the earliest distilled products ever made, and its manufacture has been an important industry in the Middle East for about 1,200 years. Rosewater and orange-blossom water are added to food simply for the pleasure their fragrance gives, rather than for flavor.

Shaybah, also known as "old man's beard," is a tree lichen found in the Arabian Peninsula whose complex bitter, metallic flavor is popular in meat and vegetable stews. A small piece of curly black-and-silver lichen will flavor a large potful.

Saffron is commonly used in the more elegant rice dishes, both savory and sweet, as much for its beautiful yellow color as for its unmistakable earthy taste. Chicken and fish are also often flavored with saffron. This spice, the world's most expensive, is made up of the stigmas of an autumn-flowering crocus native to the Middle East. The stigmas and parts of their styles are dried to brittle red threads which, when ground, yield a yellow powder. Each flower has only three tiny stigmas, and something like 80,000 flowers are needed to produce a pound of spice. Most of the saffron in trade today comes from Spain, where it was introduced by the Arabs in the eighth or ninth century.

Powdered dark-red *sumac* berries provide a pleasant lemony spice which tastes especially good on meats such



as shish kebabs. Although it is produced by a small Mediterranean/Persian tree related to the poisonous sumac of North America, and it is sometimes used in tanning leather, the agreeable acid of these berries is in no way harmful. Sumac was mentioned nearly 2,000 years ago in the writing of Dioscorides, a Greek physician serving in the Roman army, as having healthful properties; Dioscorides says it was "sprinkled among sauces" and mixed with meat. Modern-day eaters find it excellent on pizza. Sumac is also generally considered an essential ingredient in the spice mixture *za'tar*.

The *tamarind* is a small tropical tree similar in appearance to an acacia. Its name is derived from the Arabic for "Indian date." The pulp of its long brown

seed pods yields an extremely viscous syrup with a distinctive sour flavor that is excellent in vegetables, meat and fish dishes. Tamarind syrup makes a delicious and refreshing cold drink, prepared like lemonade with water and sugar. This spice is not so exotic in the West as it may seem at first: Tamarind is an ingredient in Worcestershire sauce.

Za'tar is the Arabic name for the herb thyme, but it also denotes a delicious mixture of two parts thyme, one part sumac, one part sesame seeds and a little salt. (Proportions may vary, and other spices may be added according to each family's taste.) Served with a high-quality olive oil and flat Arab bread, it is a popular breakfast throughout the Middle East.

A black Bedouin tent is set up in a desert at night. The tent is made of dark cloth and is supported by several poles. Inside the tent, there are some cushions and a small fire. In the foreground, there is a large fire made of sticks and brushwood, which is burning brightly. The tent is pitched on sand, and the background is a dark, hazy desert landscape.

The Desert Tent

Years ago, in the sands of Arabia, there was no more welcome sight to the weary traveler than a black tent on the horizon. Whether it belonged to a friend, a stranger, or even an enemy, a traveler knew that he could claim from its Bedouin owner three days of hospitality. That was the way of the desert and its fame spread all over the world. The black tent became, for many, a symbol of Arab hospitality.

But Bedouin tents were much more than symbols. They were—and still are even in an age when popularity of camping has brought forth dozens of new, efficient, portable shelters—a marvelous adaptation of simple materials to stringent requirements: they had to be easy and fast to erect, light, portable, wind and water resistant, airy, insulated against the sun's rays, easy to maintain and repair, and preferably handsome.

The basic element of the Bedouin's tent was a long, narrow strip of heavy cloth woven from black (or brown) goat's hair or sheep's wool (not, as many believe, from camel's hair). The average shaikh used to have perhaps six extra-broad strips of cloth some 75 feet long sewn together to form a great rectangle, which became the roof of the tent, supported by four poles. A more modest,

one or two-pole tent might be made from three or four narrow strips of cloth 25 feet long. In either case, the cloth was woven by the women of the family from yarn they spun themselves, if they were real desert dwellers, or bought from village weavers if they were not. Another long narrow strip, the ruaq, was pinned to three sides of the roof of the tent by a series of six-inch wooden pins, then draped to the surface of the ground, where the lower edge was buried in the sand or, if the ground was hard, pegged down. The open side, which always faced away from the wind, was further divided by a number of qata, vertical curtains of intricate design which separated the various sections of the tent. These generally consisted of a men's section, which doubled as a guest room, a kitchen and women's quarters, called the muharraq. The tent floor was the desert itself, sometimes covered by locally woven rugs or, by those who could afford it, with bright carpets from Persia. Support for the heavy tent came from long hemp ropes, two affixed to each pole, and three at each side of the tent. The rope-ends were pegged to the ground if the earth was sufficiently hard; otherwise they were tied to large clumps of brushwood and buried two feet beneath the surface of the sand, bracing the tent as firmly as a ship's anchor.



When a Bedouin family moved, the tent was dismantled, rolled up and put on male pack camels. Moves were usually dictated only by the need for water or forage for the flocks of sheep, goats and camels, so the site of the next camp was always in the vicinity of a well or ungrazed land. The pitching of the tent was one of Bedouin women's main functions in life, with the individual jobs strictly divided among members of the family. Raising the main tent poles was the work of men, for example, but driving the tent pegs was usually done by young girls. The whole operation, honed to perfection by centuries of practice, went according to a drill as rigid as a military maneuver, with the head of the family acting as top sergeant: "Spread out the tent, O my people," he would cry, and then, "Stretch out the ropes, O children," and so on through the whole litany until the last, "Spread out the carpet and the dazcashek (mattresses) and prepare the men's and women's portions of the tent." It was done with remarkable dispatch and when the furnishings were laid out the family was ready to receive guests.

Though the furnishings were few, each article had its place. The master's rifle, for instance, was always hung on the tent pole of the guest

chamber (which in Eastern Arabia was always on the east side of the tent), the fireplace was built in the exact center of the same "room," and the row of three coffee pots was ranged alongside the hearth, together with the coffee roaster, the wooden tray for cooling the hot coffee beans, the coffee grinder, the incense burner and the host's camel saddle, in case a guest needed a back rest.

In hot weather the ruaq shielding the sides were rolled up to allow the free circulation of air without admitting sunlight. In cold weather—temperatures on winter nights in some parts of the desert can drop below freezing—the long qata were drawn across the open end of the tent, completely enclosing it, so that the fire kept the occupants cozily warm.

The black tent, of course, is not extinct. Bedouins still roam many areas of the desert, and the famous "houses of hair" are still their favorite shelters. But whereas it was once a necessity, today it is becoming an anachronism—a striking contrast by which to mark the sure progress into the world of the skyscrapers.

This article by Daniel da Cruz first appeared in the May 1966 edition of Saudi Aramco World.



Kenzō Tange: A Japanese Architect & Kuwait

“Architecture must have something that appeals to the human heart, but even then, basic forms, spaces and appearances must be logical.”

Kenzō Tange (1913-2005) is the architect who designed the Kuwait International Airport and the Embassy of the State of Kuwait in Tokyo, Japan. As the winner of the 1987 Pritzker Architecture Prize, Tange is one of Japan's most honored architects. As a teacher, writer, architect, and urban planner, he is revered not only for his own work but also for his influence on younger architects.

Tange was born in the small city of Imabari, Shikoku Island, Japan in 1913. Although becoming an architect was beyond his wildest dreams as a boy, it was Le Corbusier's work that stirred his imagination so that in 1935, he became a student in the Architecture Department of Tokyo University. In 1946, he became an assistant professor at Tokyo University, and organized the Tange Laboratory. His students included Fumihiko Maki, Koji Kamiya, Arata Isozaki, Kisho Kurokawa, and Taneo Oki.

Tange was in charge of the reconstruction of Hiroshima after World War II. The Hiroshima Peace Center and Park begun in 1946 made the city symbolic of the human longing for peace. Architecturally, the Peace Center shows a deep understanding of traditional culture while at the same time is a signpost in the search for a modern style in Japan.

Tange's research and interest in urban planning extended throughout his career. His doctorate, completed in 1959, was titled, "Spatial Structure in a Large City," an interpretation of urban structure on the basis of people's movements commuting to and from work. His "Plan for Tokyo 1960" was the Tange Team's logical response to these problems, giving thought to the nature of the urban structure that would permit growth and change. His Tokyo Plan received enormous attention world-wide, for its new concepts of extending the growth of the

city out over the bay, using bridges, man-made islands, floating parking and mega structures.

The Embassy of the State of Kuwait in Tokyo, Japan uses many of Tange's architectural theories. The building utilizes a unique sense of movement through space by way of its exposed concrete that seems to break the boundaries of horizontal possibilities and structural heights. According to architect Dr. Hisham Ashkouri, the concrete allowed Tange to use the material he needed to work with in the modern era of Japanese architecture. Tange then compartmentalized the massing of space by separating the building along vertical shafts to house elevators, stairs and mechanical and electric utilities. He employed such shafts as the main structural supports of the building, a design concept found in the early examples of Bauhaus architecture in Germany.

The Kuwait International Airport was also designed by Tange. It utilized a similar expression of concrete forms that seemed to defy gravity, with large columns and slabs in the shape of sails or tents that seemed to rest on air. Unfortunately, the airport suffered from severe damage during the invasion of 1990/91, and today the interior looks far different from Tange's original design.

In the year in which he won the Pritzker Prize, Tange revealed his plans for the new Tokyo City Hall Complex. Since built, the complex comprises an assembly hall, a civic plaza, a park, and two tower buildings. The Akasaka Prince Hotel (1982) in Tokyo has become an important landmark. Others include the Sogetsu Center (1957), the Hanae Mori Building (1979), the Hyogo Prefecture Museum of History (1982), the Ehime Prefecture Culture Center (1985) and the Toin School (1986) in Yokohama.



The Embassy of the State of Kuwait in Tokyo, Japan.

In all of his projects, Tange has verbalized a recurrent theme: "Architecture must have something that appeals to the human heart, but even then, basic forms, spaces and appearances must be logical. Creative work is expressed in our time as a union of technology and humanity. The role of tradition is that of a catalyst, which furthers a chemical reaction, but is no longer detectable in the end result. Tradition can, to be sure, participate in a creation, but it can no longer be creative itself."

In addition to his architectural practice, Kenzō Tange has been a guest professor at Massachusetts Institute of Technology, as well as a lecturer at Harvard, Yale, Princeton, Washington University, Illinois Institute of Technology, the University of California at Berkeley, and the Universities of Alabama and Toronto.

The Kuwait International Airport.





NEW MAP OF JUPITER SEES BENEATH THE CLOUDS

Astronomers using the upgraded Karl G. Jansky Very Large Array in New Mexico have produced the most detailed radio map yet of the atmosphere of Jupiter, revealing the massive movement of ammonia gas that underlies the colorful bands, spots and whirling clouds visible to the naked eye. The University of California, Berkeley researchers measured radio emissions from Jupiter's atmosphere in wavelength bands where clouds are transparent. The observers were able to see as deep as 100 kilometers (60 miles) below the cloud tops, a largely unexplored region where clouds form. By studying these regions of the planet's atmosphere, astronomers hope to learn how global circulation and cloud formation are driven by Jupiter's powerful internal heat source. These studies also will shed light on similar processes occurring on other giant planets in our solar system and on newly discovered giant exoplanets around distant stars. The radio map shows ammonia-rich gases rising into and forming the upper cloud layers: an ammonium hydrosulfide cloud at a temperature near 200 Kelvin (minus 100 degrees Fahrenheit) and an ammonia-ice cloud in the approximately 160 Kelvin cold air (minus 170 degrees Fahrenheit). These clouds are easily seen from Earth by optical telescopes. The map also shows that hotspots - so-called because they appear bright in radio and thermal infrared images - are ammonia-poor regions that encircle the planet like a belt just north of the equator. Between these hotspots are ammonia-rich upwellings that bring ammonia from deeper in the planet. The observations also resolve a puzzling discrepancy between the ammonia concentration detected by the Galileo probe when it plunged through the atmosphere in 1995 - 4.5 times the abundance observed in the sun - and VLA measurements from before 2004, which showed much less ammonia gas than measured by the probe.

NEWLY SYNTHESIZED MOLECULES MAY HELP MANAGE JET LAG



Scientists in Japan have designed new molecules that modify the circadian rhythm, opening the way to the possibility of managing jet lag and improving treatments for sleep disorders. The negative impacts of jet lag and shift work could be significantly reduced if it were possible to reset our 24-hour natural circadian or sleep/wake cycle. Researchers at Nagoya University's Institute of Transformative Bio-Molecules (ITbM) have taken the first step in that direction by synthesising molecules that can shorten the circadian period. These molecules act directly on one of our "clock proteins," called CRY. Most living organisms, including humans, have a biological clock that resets every 24 hours, regulating functions such as sleep/wake cycles and metabolism. When this cycle is disrupted, like in jet lag, sleep disorders ensue. Long-term sleep loss may affect the cardiovascular, endocrine, immune and nervous systems with severe consequences including hypertension, obesity and mental health disorders, among others. Our biological clock is basically run by four "master regulator" proteins that work in tandem. CLOCK and BMAL1, when combined, promote the production of the proteins PER and CRY. These proteins, in turn, block CLOCK and BMAL1, thus closing the cycle. This cycle of activation, production and stop/block goes around once a day and is also influenced by a compound called FBXL3, which flags CRY for degradation by cellular enzymes. A molecule discovered in 2012, called KL001, lengthens the circadian cycle by competing with FBXL3 for the same spot on the CRY protein, preventing its degradation. By carefully analysing its structure, the ITbM researchers prepared compounds that were similar to KL001, thus synthesising the first circadian shortening molecules that target the CRY protein. This tailor-made approach to designing molecules holds great potential for the future.

RUSSIAN COMPANY DEVELOPING NEW “MOON TAXI”



Energia, a Russian rocket company, has announced that it is working on a space taxi that will shuttle crews from the International Space Station to the moon. The plans were announced at a recent international conference on space exploration just outside Moscow. The craft, provisionally named “Ryvok,” would be permanently docked on the International Space Station or its replacement with the aim of transporting cargo and crews to the lunar surface. Each flight would be powered by fuel in an “accelerator block” brought up from Earth on the back of a Russian rocket. The report explains that it is likely to be the Angara A5, a heavy-lift vehicle that is intended to replace the aging Soyuz rockets. Once it is time to return to the International Space Station, the craft will blast off from the moon for the five-day return journey. In order to slow its speed on approach, the ship will deploy a 55-square-meter “umbrella” that will reduce its speed like a parachute on a drag racer. The craft is expected to be developed by 2021, with the first launches anticipated to take place in 2023. The company is suggesting that its concept would be cheaper and faster to implement because there would be no wait necessary for the Angara rockets to be certified safe for human transportation. While Ryvok is not the only space shuttle currently in the works for Energia, the company believes that it may be the most efficient option. According to Energia, the cost of the Ryvok reusable manned spacecraft mission is a third lower than the costs of alternatives. The development of such a space taxi, if actualized, could have major implications on the future of space travel.



SCIENTISTS TURN CO₂ GAS INTO STONE

Researchers have developed a way to capture and store carbon dioxide by turning it into stone. Their technique, described in a paper published this week in the journal *Science*, could provide a safer, faster way to sequester CO₂ and limit global warming. Scientists have long seen carbon capture and sequester, or CCS, as a potentially significant way to combat carbon emissions into the air. The idea is that storing CO₂ emissions underground would prevent the greenhouse gas from entering the atmosphere, but previous efforts have made little progress. Most experiments involve pumping CO₂ into sandstone or deep aquifers, though there are concerns that the gas could eventually escape and reenter the atmosphere, whether through human error or seismic activity. The approach aims to reduce this risk by dissolving CO₂ with water and pumping the mixture into volcanic rocks called basalts. Once that happens, the CO₂ turns into a solid mineral (calcite), which can then be stored. Researchers from Columbia University's Lamont-Doherty Earth Observatory and other institutions tested this approach as part of a pilot program called the CarbFix project at the Hellisheidi power plant in Iceland — the world's largest geothermal facility. Previous studies suggested that it would take hundreds or even thousands of years for the calcite to form, but the researchers' technique worked much faster. They injected 250 tons of CO₂ (mixed with water and hydrogen sulfide) into basalt about 1,500 feet below ground. Within two years, 95 percent of the carbon injected into the basalt below the plant had solidified into stone. It's not yet clear whether this approach could be viable on a large scale. The process requires a significant amount of water — 25 tons for every ton of CO₂ — and some question whether it could be easily applied to other parts of the world.

A photograph of a man with a beard sleeping in a bed. His arm is extended, and his hand is resting on a golden alarm clock on a bedside table. The clock shows the time as approximately 10:10. The man's mouth is slightly open, and he appears to be in a deep sleep. The background is a plain, light-colored wall.

THE IMPORTANCE OF SLEEP

In a country like Kuwait, it is not uncommon for something like an afternoon nap to become firmly embedded in the country's social norms and culture. Blistering hot summers force many in the country to seek shelter indoors during the unbearable heat of the daylight hours. This, in turn, leads to many people staying up later into the night than they usually would. However, what many people may not realize is that proper sleep during the nighttime hours plays a very important role in terms of the quality of our health. Missing out on restful sleep can have very negative consequences on one's overall health.

Introduction

Sleep is very important in terms of good health and wellbeing throughout your life. Getting enough quality sleep at the right times can help protect your mental and physical health, and it can also improve the quality of your life. The way you feel while you're awake depends in part on what happens while you're sleeping. During sleep, your body is working to support healthy brain function. Sleep also allows your body to maintain your physical health. In children and teenagers, sleep helps support growth and development.

The damage from sleep deficiency can either occur quickly or it can harm you over time. For example, ongoing sleep deficiency can raise your risk for some chronic health problems. It also can affect how well you think, react, work, learn, and get along with others.

Healthy Brain Function & Wellbeing

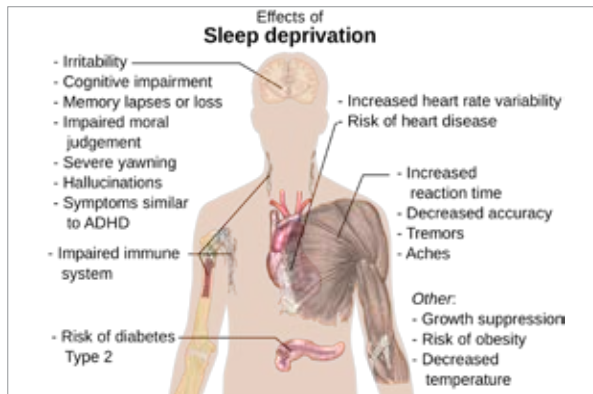
Sleep helps your brain work properly. While you're sleeping, your brain is preparing for the next day. It's forming new pathways to help you learn and remember information. Studies show that a good night's sleep improves learning. Whether you're learning math, how to play the piano, or how to perfect your presentation skills or become better at your job, sleep helps enhance your learning and problem-solving skills. Sleep also helps you pay attention, make decisions, and be creative.

Studies also show that sleep deficiency alters activity in some parts of the brain. If you're sleep deficient, you may have trouble making decisions, solving problems, controlling your emotions and behavior, and coping with change. Sleep deficiency also has been linked to depression, suicide, and risk-taking behavior.

Children and teens who are sleep deficient may have problems getting along with others. They may feel angry and impulsive, have mood swings, feel sad or depressed, or lack motivation. They also may have problems paying attention, and they may get lower grades and feel stressed.

Physical Health

Sleep plays an important role in your physical health. For example, sleep is involved in healing and repair of your heart and blood vessels. Ongoing sleep deficiency is linked to an increased



risk of heart disease, kidney disease, high blood pressure, diabetes, and stroke. Sleep deficiency also increases the risk of obesity. For example, one study of teenagers showed that with each hour of sleep lost, the odds of becoming obese went up. Sleep deficiency increases the risk of obesity in other age groups as well.

Sleep helps maintain a healthy balance of the hormones that make you feel hungry (ghrelin) or full (leptin). When you don't get enough sleep, your level of ghrelin goes up and your level of leptin goes down. This makes you feel hungrier than when you're well-rested. Sleep also affects how your body reacts to insulin, the hormone that controls your blood glucose (sugar) level. Sleep deficiency results in a higher than normal blood sugar level, which may increase your risk for diabetes.

Sleep also supports healthy growth and development. Deep sleep triggers the body to release the hormone that promotes normal growth in children and teens. This hormone also boosts muscle mass and helps repair cells and tissues in children, teens, and adults. Sleep also plays a role in puberty and fertility.

Your immune system relies on sleep to stay healthy. This system defends your body against foreign or harmful substances. Ongoing sleep deficiency can change the way in which your immune system responds. For example, if you're sleep deficient, you may have trouble fighting common infections.

Sleep Affects Daily Performance

Getting enough quality sleep at the right times helps you function well throughout the day. People who are sleep deficient are less productive at work and school. They take longer to finish tasks, have a slower reaction time, and make more

mistakes. After several nights of losing sleep, even a loss of just 1–2 hours per night, your ability to function suffers as if you haven't slept at all for a day or two.

Lack of sleep also may lead to microsleep. Microsleep refers to brief moments of sleep that occur when you're normally awake. You can't control microsleep, and you might not be aware of it. For example, have you ever driven somewhere and then not remembered part of the trip? If so, you may have experienced microsleep. Even if you're not driving, microsleep can affect how you function. If you're listening to a lecture, for example, you might miss some of the information or feel like you don't understand the point. In reality, though, you may have slept through part of the lecture and not been aware of it.

Some people aren't aware of the risks of sleep deficiency. In fact, they may not even realize that they're sleep deficient. Even with limited or poor-quality sleep, they may still think that they can function well. For example, drowsy drivers may feel capable of driving. Yet, studies show that sleep deficiency harms your driving ability as much as, or more than, being drunk. It's estimated that driver sleepiness is a factor in about 100,000 car accidents each year, resulting in about 1,500 deaths.

Drivers aren't the only ones affected by sleep deficiency. It can affect people in all lines of work, including health care workers, pilots, students, lawyers, mechanics, and assembly line workers.

As a result, sleep deficiency is not only harmful on a personal level, but it also can cause large-scale damage. For example, sleep deficiency has played a role in human errors linked to tragic accidents, such as nuclear reactor meltdowns, grounding of large ships, and aviation accidents.

Tips for Sleeping Better

- Stop using all technology 30 minutes before bed. For example, no cellphone, no laptop, no TV. The light blocks melatonin, which is a chemical your body produces to help you fall asleep. A 30-minute wind down with relaxation and reading (a paper book) can make it easier to fall asleep.
- No caffeine after 3 PM.
- Sleep only an hour longer during the weekend than your latest weekday wake-up time.



Al-Razi: A Towering Figure in Islamic Medicine

When you hear the name “Al-Razi” in Kuwait today, you may think of a well-known hospital in Shuwaikh, specifically the Al-Razi Orthopedic Hospital. But how many of us have actually wondered who, exactly, that hospital was named for? In the article that follows, we will examine Al-Razi, a towering figure in Islamic history who, through his various discoveries and enormous body of work, is widely considered to be one of the most important figures in medicine.

Introduction

Abu Bakr Mohammad Ibn Zakariya Al-Razi (854 CE – 925 CE), known in the West as “Rhazes,” is widely regarded as the leading scholar of the early Islamic world. His stature is comparable only to that of Ibn Sina a century later. Influenced by Hippocrates and classical Greek medicine, Al-Razi wrote numerous books on a range of medical and scientific subjects. The *Al-Mansuri* and *Al-Hawi*, his encyclopedic reviews of medicine, were translated into several languages and became a standard text for Islamic and European medical students for centuries.

Al-Razi was a keen experimenter and observer. As director of a large hospital in Baghdad and physician to the royal court, he engaged in medicine on a practical level, and these experiences can be found throughout his writings. He saw the importance of recording a patient’s case history and made clinical notes about the progress and symptoms of different illnesses, including his own.

One of Al-Razi’s most innovative assertions related to measles and smallpox. Previously, the two diseases were grouped together simply as a disease that caused rashes, but through careful observation, Al-Razi recorded the differences in appearance of the skin inflammations as well as the accompanying physical symptoms, and proposed correctly that they were indeed two distinct diseases.

A Physician & Philosopher

Abu Bakr Al-Razi is said to have been born in Ray, a city not far from modern Tehran in Iran; however, some historians dispute his origins. Al-Razi is believed to have devoted his early years to the study of music and philosophy. An accomplished lute player and singer, he enjoyed music throughout his life and even compiled an encyclopedia on the subject.

Authorities differ on precisely when al-Razi began to study medicine. Some maintain that he first left Ray and journeyed to Baghdad as an older man, and others that he was still a youth when he arrived in the capital city of the Abbasid empire. As Baghdad at that time was the cultural and intellectual center of the Islamic world, there seems to be little doubt that he learned much about the healing art in Baghdad’s well-equipped hospitals and remarkable libraries and in the research institutes that the Abbasid caliphs had richly endowed.

When he returned to Ray, Al-Razi was appointed chief administrator of the municipal hospital. He was soon summoned again to Baghdad, having been offered the post of chief physician and director of one of the capital's most important hospitals. His appointment occurred during the caliphate of Al-Muktafi, who reigned in Baghdad from 902 to 907.

Al-Razi's success as chief physician of Baghdad is indisputable, and his services were in constant demand. Much of the remainder of his life was spent in traveling from city to city attending to rulers and nobles as well as the poor, to whom he bestowed alms and ministered without charge.

Diet was a fundamental therapeutic procedure in Al-Razi's medical methodology. He emphasized the importance of consulting the wishes of the patient concerning food, especially during the period of recovery. Theoretically, no single factor in the treatment of the sick was more important to Al-Razi than was the doctor-patient relationship. He stressed that a physician by a cheerful countenance and encouraging words should instill hopes of recovery in his patient even when the practitioner doubted that the case could terminate successfully. He also advised patients always to choose a physician in whom they had confidence and then to abide by his instructions exclusively.

His Works

Al-Razi's writings, according to one authority, number over 230 and range in subject matter from medicine and surgery to mathematics, chess, and music. During the Middle Ages, his most esteemed composition in the West was the concise handbook of medical science that he wrote for a ruler named Mansur, generally believed to be Mansur ibn Ishaq, who was appointed governor of Ray in 903. Called by Al-Razi the *Kitab al-Mansuri*, the Latin translation was known in Europe as the *Liber de medicina ad Almansorem* or *Liber Almansoris*, and its ninth book in particular formed part of the medical curriculum of almost every European university through the 16th century.

Al-Razi's most important medical work, the *Kitab al-Hawi*, is a compilation of the notes on his thoughts, reading, and practice that he amassed throughout his entire medical life. Perhaps never intended to appear as a single book, it was assembled posthumously by Al-Razi's friends and students. In consequence, though the complete title of *Al-Hawi* in Arabic means "System of Medicine," the book lacks the unity of design that only its



author could have given it. Because of its immense size, copies of this medical encyclopedia were always rare, and even in the Islamic world it was not until modern times that a complete Arabic text was compiled for publication.

Since it is composed of extracts drawn from the writings of Greek, Islamic, and Hindu physicians enriched by Al-Razi's own observations and comments, the book's utility was recognized early in the West, where a Latin version, entitled *Continens*, was prepared for Charles of Anjou, King of Sicily, in 1279. The first Latin edition of the *Continens*, published at Brescia in 1486, is the largest and heaviest book printed before 1501. The *Continens* has been termed one of the most valuable and interesting medical books of antiquity, and Al-Razi's reputation as the greatest Islamic clinician rests in large part on the case histories recorded in this work.

The most highly esteemed of Al-Razi's works today is the monograph on smallpox and measles. Although smallpox had been described earlier, his account is astonishingly original and seems almost modern. Composed late in his life, the small work was translated from Arabic first into Syriac and Greek. The earliest Latin edition of the work, printed at Venice in 1498, was a translation from the imperfect Greek text, but in 1747 a more accurate version was prepared on which the first translation into English was based.

In his declining years, Al-Razi was hindered by the slow deterioration of his sight. An anecdote relates that when urged to have the films removed from his eyes surgically, the old man rejected the proposal, replying that he had already seen enough of the world.



VISIT LAUTERBRUNNEN

By the time this issue of The Kuwaiti Digest has reached your hands, Kuwait will be in the midst of another scorching summer. If you haven't made travel plans yet, why not consider Lauterbrunnen in Switzerland, arguably one of the most beautiful places on the face of the planet?

Lauterbrunnen is situated in one of the most impressive trough valleys in the Alps, between gigantic rock faces and mountain peaks. With its 72 thundering waterfalls, secluded valleys, colorful alpine meadows and lonely mountain inns, the Lauterbrunnen Valley is one of the biggest nature conservation areas in Switzerland.

The very name 'Lauter Brunnen' ('many fountains') suggests the magnificence of this landscape. There are 72 waterfalls in the Lauterbrunnen Valley, the most famous being the Staubbach Falls. Plunging almost 300 meters from an overhanging rock face, they are one of the highest free-falling waterfalls in Europe. In 1779, Johann Wolfgang von Goethe visited the valley

and was inspired by the roaring waters to write his well-known poem, *Spirit song over the waters*.

Another deafening natural phenomenon are the Trümmelbach Falls in the Black Monk Mountain, hidden behind mighty rock faces. Up to 20,000 liters of water per second cascade over the ten glacier falls from a total height of about 200 meters. This spectacle can only be reached in summer by tunnel lift.

The valley town of Lauterbrunnen (795 m) is the starting point for some of the best-known excursion destinations in the Jungfrau region. A rack railway links Lauterbrunnen with the sunny terrace of Wengen on the eastern flank of the Lauterbrunnen Valley and the Kleinen Scheidegg, the station where you change trains for the onward journey to the Jungfrauoch. On the opposite side of the valley is the holiday resort of Mürren, accessible from Lauterbrunnen and Stechelberg. The cableway from Stechelberg continues to the peak of the Schilthorn, famous

for being the setting where the James Bond 007 classic, *On Her Majesty's Secret Service*, was filmed.

A few kilometres further up the valley from Lauterbrunnen, accessible along a narrow mountain road, is the peaceful little mountain village of Isenfluh, a starting point for walks in the romantic mountain landscapes and valleys. In all, a total 500 km of footpaths extend over the Jungfrau region. An afternoon snack in one of the Jungfrau region's mountain restaurants tastes particularly good, and those who are tired can easily climb into one of the trains or cable cars and be transported back down to the valley.

Allmendhubel is a mountain for families, hikers and those who appreciate the good things in life. In a few minutes, the funicular takes you from the pedestrian village of Mürren up to the top of the mountain. In the panorama restaurant, you can spoil yourself with delicious Swiss chocolates and food. The sun terrace is the perfect place to relax and enjoy the fantastic view of the Eiger, Mönch and Jungfrau. There is something for the little ones too: the big outdoor playground offers excitement, fun and a lot of variety. The Allmenhubel is the starting point of many of the walks around the area.

With its 10 glacial waterfalls inside the mountain, illuminated and made accessible by tunnel-lift, the Trümmelbach Falls are unique in Europe. The Trümmelbach drains the mighty glaciers of the Eiger, Mönch and Jungfrau and carries 20,200 tons of boulder detritus per year. The Trümmelbach is listed under the "Federal Inventory of landscapes and landmarks of national importance," and is part of the UNESCO world natural heritage. It also has a three star rating the internationally-respected Michelin Guide.

If trains interest you, the Schynige Platte railway takes you from Wilderswil up to the Schynige Platte viewpoint. Along the way, the diversity of nature never fails to impress, where you can take in views of forests, Alpine meadows and the superb view of the famous Bernese Oberland scenery with Lakes Thun and Brienz. Whereas the Pre-Alps have dominated the landscape until now - with the Alpine pastures, forests and lakes - a clear view of the glistening white giants of the Bernese Oberland opens up. Opposite are the Eiger, Mönch and Jungfrau. After passing the Grätli Tunnel, the change in scenery is unique.





Willis Carrier & The Invention that Changed the World

Willis Haviland Carrier was born in Angola, New York, on November 26, 1876, a member of an old New England family. Young Willis was educated at Angola Academy and taught school for two years before entering Central High School in Buffalo, New York, to meet college entrance requirements. Carrier then won a state scholarship to attend Cornell University. He graduated from Cornell in 1901 with a degree in electrical engineering, whereupon he joined the Buffalo Forge Company in Buffalo as a research engineer. Carrier became chief engineer of the firm in 1906.

Genius can strike anywhere. For Willis Carrier, it was a foggy Pittsburgh train platform in 1902. Carrier stared through the mist and realized that he could dry air by passing it through water to create fog. Doing so would make it possible to manufacture air with specific amounts of moisture in it. Within a year, he completed his invention to control humidity – the fundamental building block for modern air conditioning.

The “Father of Air Conditioning,” Willis Carrier’s invention gave rise to numerous industries that power our economy today, and this is especially true for desert environments such as Kuwait. Manufacturing of everything from baked goods to industrial supplies was made possible by air conditioning. Air conditioning made life in Kuwait much easier. Can you imagine a modern Kuwait without air conditioning? Our lives would be very different to say the least. The precise control of temperature and humidity made possible by his invention even enabled shopping malls, transatlantic flight, and the computers and servers that power the Internet.

During the 1920s Carrier began installing complete air conditioning systems. One of the earliest and most significant of these was in the massive J. L. Hudson

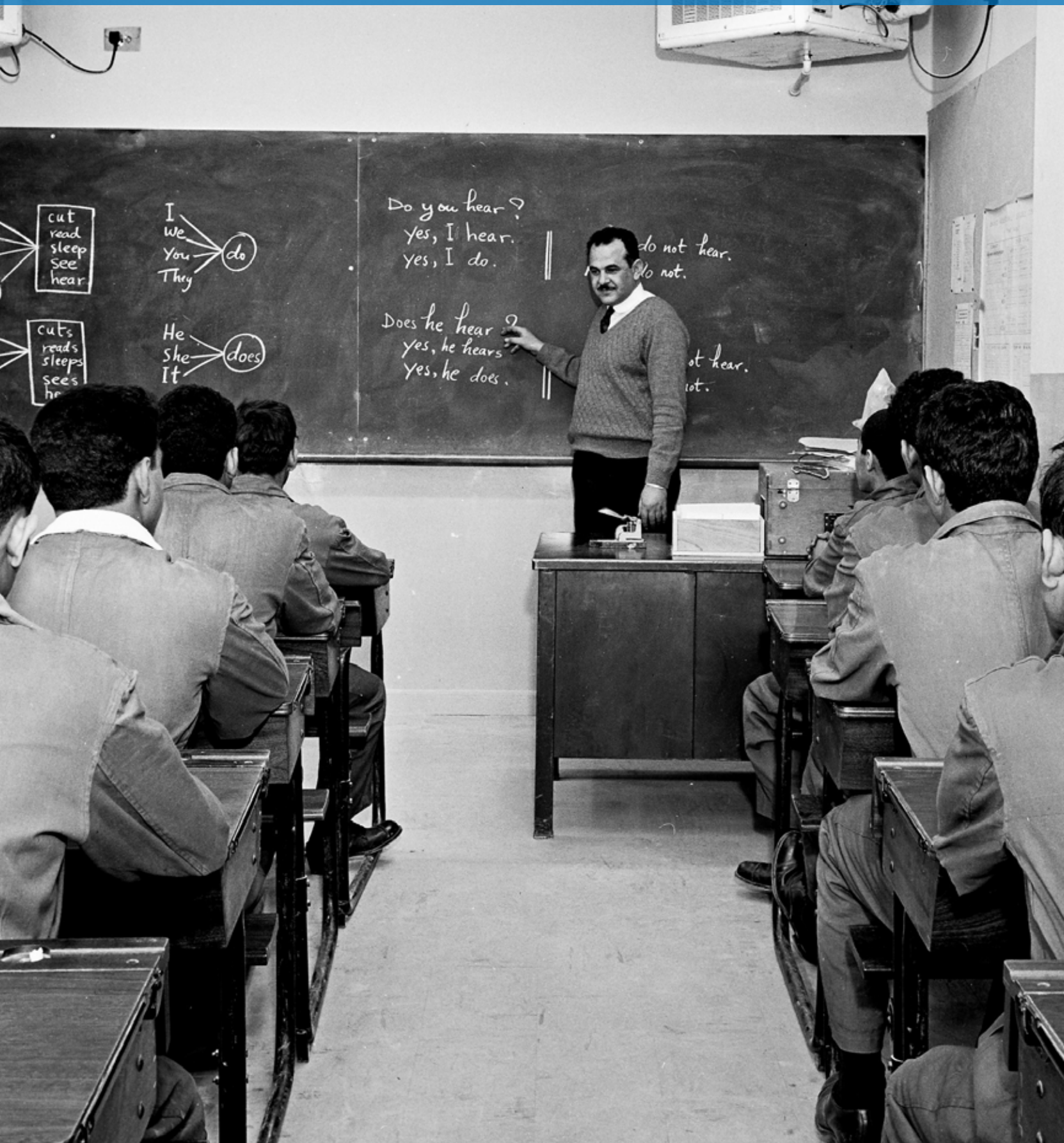
department store in Detroit in 1924. This was followed in 1928-1929 by installations in the House and Senate chambers of the American Capitol. Of more local significance was the fact that by 1930 more than 300 movie theaters had installed air conditioning systems. The company, which Willis Carrier had started on a shoestring in 1915, prospered as a result of these and other installations and by 1929 was operating two plants in Newark, New Jersey, and a third in Allentown, Pennsylvania. In 1930 Carrier Engineering merged with two manufacturing firms—Brunswick-Kroeschell Company and the York Heating and Ventilating Corporation—to become the Carrier Corporation, with Willis Carrier as chairman of the board.

Willis Carrier recognized early on that climate, comfort and production requirements would determine the value of air conditioning. From the beginning, he began to develop a network of international dealers, distributors and customers. Success with early installations in Europe and Asia were indicators of air conditioning’s universal application across international borders.

Carrier's achievements were numerous, and at his death he held more than 80 patents. Besides those things previously mentioned, he also played a significant role in the development of the centrifugal pump, determined and published basic data pertaining to the friction of air in ducts, developed practicable means to ensure uniform and effective air distribution and circulation within buildings, designed the diffuser outlet, and developed the ejector system of air circulation in which a relatively small volume of air is ejected through converging nozzles in such a manner that it induces the movement of air from three to five times its own volume, thereby providing an effective circulation within the given enclosure.

1960s

An instructor delivers a lesson to KOC employees.





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