“We need to constantly reinvent ourselves”

Michael K. Klauck is President of Can-Eng Furnaces International Ltd. with headquarters in Ontario, Canada. In this interview with heat processing he talks about the future of the energy industry and technological challenges and tells us about his personal contribution to saving energy.

What, in your opinion, will be the energy mix in the future?

Klauck: Fossil fuels and nuclear power will continue to play an important role for the short to medium term. As battery storage systems improve, wind solar and other alternative energy sources will become key in reducing our dependence on historical sources.

Germany in 2050: How will the energy turnaround have changed everyday life?

Klauck: Probably the most notable impact will be in personal transportation. There are a number of forecasts that predict the demise of the combustion engine by 2050. As demand for oil and natural gas falls, it will continue to make the combustion engine attractive for certain market segments/demographics. I do see many of the current developments analogous to alternative iron-making technologies developed 50 years ago. At that time they did predict that demise of the blast furnace, and while the percentage of hot metal from blast furnace sources has declined significantly from the 1960s onward, it is still a very important technology that is not going away any time soon.

Which regenerative energy source do you consider to have the greatest future?

Klauck: I am really excited about what is taking place at the Max Planck Institute in Germany. Sustained nuclear fusion with a net gain in energy without nuclear waste will be technology that creates a complete divergence from anything to date.

How do you assess the future importance of fossil fuels?

Klauck: I don’t see this going away any time soon, so very important. Even if we can wean ourselves off of fossil fuels at some date far in the future, oil and coal are important feedstocks for many chemical processes, so they can and will be diminished in importance, but they cannot be eliminated.

How do you view the abandonment of nuclear energy?

Klauck: Truthfully I am not in favour of this strategy. We have been increasing the amount of CO₂ in the atmosphere at a rate never seen in human history. Predominantly this is due to the burning of coal and other fossil fuels. Climate change and the increase in global temperatures are no longer disputed, and nuclear does provide a technology that does not produce greenhouse gases. The backlash to the Fukushima nuclear crisis highlights the risks of running fission reactors, especially in coastal areas, but the lessons learned should be utilized to strengthen, not abandon, the nuclear fission strategy.

On the topic of the energy turnaround: What will have to change at the political, social and economic levels for us to be able to talk about a genuine turnaround?

“Beginning with the collapse in commodity prices, we are seeing a drop in demand for new equipment.”
Michael Klauck is a graduate of the Metallurgical Engineering program at McMaster University in Hamilton, Ontario and is a registered Professional Engineer. He has spent nearly 30 years in all aspects of iron and steel production, from primary steelmaking to the finishing floor. Prior to joining Can-Eng Furnaces International Limited, Mr. Klauck held positions at Atlas Specialty Steels in the Metallurgical Technology Group, and was a Division Manager at the vacuum heat treatment operations of Bohler Uddeholm, the world’s largest producer of specialty steels. Mr. Klauck has co-authored numerous papers on specialty steels, heat treatment, and industrial furnaces. For a number of years he taught Metallurgical Engineering at the Canadian College level.

Michael Klauck began his career at Can-Eng in 2000 and has assumed ever increasing responsibilities as Manager and then Vice President, taking over as President in 2012. He developed and executed a successful launch of Can-Eng products in a number of global markets, including (but not limited to), India, Russia, Ukraine, and Mexico. Mr. Klauck celebrated 15 years with the company in September 2015.

Klauck: Unfortunately, something very serious, like increasing frequency of natural disasters, melting of the Greenland ice cap, or something on that order of magnitude. Today there is less talk of the Kyoto Protocol, but we have to recognize that nearly 20 years have elapsed since that agreement, and what has transpired since? A greater recognition that climate change is real, CO$_2$ concentration in the atmosphere is increasing, and the planet is getting warmer. It is like watching a train wreck, you can see it coming, but there is not enough concerted political will to stop it from happening.

What are your expectations from the federal government in this context?

Klauck: Canada’s compliance with the Paris Climate Conference unfortunately will not make a dent in the world CO$_2$ emission issues. The Big Five (5) – China, USA, EU, India, and Russia – have to take the lead on this and drastically lower emissions collectively, or the numbers will continue to climb. While the Canadian oil sands operations have been globally demonized, they would hardly make a noticeable contribution to the solution even if they were permanently closed.

What problems are there in implementing the energy turnaround?

Klauck: The divide between the developed world and the developing world is not something that is easily bridged. It is very hard to say to China and India that they must curtail their growth and energy security, so please do as I say, not as I do. Again, this comes back to a concerted global strategy.

Many people consider energy-efficiency to be the answer to the energy questions of the future. What do you consider to be the most important development in this field?

Klauck: The most important consideration will be low cost energy with low or no emissions. In the short term, the only proven technology is nuclear that can deliver on both.

What benefits do gas-heated process-heat processes offer in your opinion?

Klauck: Certainly regenerative, and in many cases recuperative burner technologies offer the lowest operating costs when compared to resistance heating or induction. Further, direct fired furnace systems offer the possibility for atmosphere stirring via properly positioned burner placement can result in greater temperature uniformity in some scenarios.

In your opinion, how will energy consumption change?

Klauck: On a global perspective demand for energy will continue to grow, especially in India and China.
What targets do you aim to achieve with your company?
Klauck: In the capital equipment business suppliers like Can-Eng need to constantly reinvent themselves. Industrial furnaces follow typical life cycles with stages of product development, launch and ramp up production, market saturation, followed by declining demand. Many styles of equipment that we produced 50 years ago, are no longer required in the marketplace, so we are continually looking for new applications for industrial furnace technology.

What economic and technological challenges do you think are approaching for you?
Klauck: Since the 2008/2009 financial crisis our business has enjoyed robust demand for new equipment. Beginning with the collapse in commodity prices, particularly steel and oil, we are seeing a corresponding drop in demand for new equipment. We anticipate 2016 will be a similar year to 2015.

How does globalization affect your business?
Klauck: I would say that globalization has led to considerable consolidation and merging of many industries and the global steel industry would be a good example of that. This means decision making has often shifted away from a production site in North America, to somewhere else in the world. Relationship selling is still very important, but it must be adapted for the new reality.

What globalization strategy are you pursuing?
Klauck: We pursue both the sales of our equipment, and sourcing of components on global level. In either case we are finding opportunities to sell our equipment, or supply components from countries around the globe.

How important is a brand name for the success of products in the industrial sector?
Klauck: This is one of the most important aspects of selling any product. For example, Korean automakers faced a quality perception 30 years ago, but have made tremendous strides in elevating consumer perceptions of their quality.

To what extent does the shortage of skilled and trained staff affect you?
Klauck: To date we have managed to navigate this, in part due to globalization and immigration. Canada is a country of recent immigrants and being able to draw from a global talent pool has been important.

How much media-handling skill does a manager need these days?
Klauck: Media handling, probably not so much, but a very high consciousness that our most important audience is our customers, and that a response, verbal or written, needs to be carefully considered.

What would you like to change in your company?
Klauck: We are a 50+ year old company, but I believe we share similar challenges to companies that are 150+ years old, and that is legacy systems. A start-up company can structure a business with the latest systems, and the current production methods. While we are constantly investing in new 3D modelling software, enterprise system upgrade, electrical drawing packages, there is always some element of customization and legacy from the previous systems that is unavoidable, and this can be challenging to overcome.

“Freedom, the ability to live free and express your opinion, this is the essence of who you are.”
What is your best energy-saving achievement as a private person?
Klauck: For 17 years I have driven a fuel efficient diesel car. Although this is common in Europe, it is very uncommon in North America. As plug in technology becomes more prevalent, I will consider this.

How would you describe your management style?
Klauck: It is a hybrid coaching / authoritative style, with primary emphasis on coaching. We need to empower our employees to show leadership and take ownership for areas under their control, but the authoritative style is sometimes necessary when you believe your team is going off track, or there is some clear history that validates a different approach. Management by committee, in my opinion, does not work, yes we want buy in from all the stakeholders, but at some point someone has to decide on a path forward, and this in some cases can only be done in an authoritative manner.

What ethical values are of special importance to you?
Klauck: Say what you will do, … do what you say.

How do you manage to get time for yourself?
Klauck: With global mobile device connectivity I do not believe any senior manager can disconnect from the day to day operations of the business. But having said this, I do have a vacation property in the beautiful Kawartha Lakes region of Ontario that is a priority destination for me in the summer months.

Who are, or have been, your great inspirations?
Klauck: General Isaac Brock. In the War of 1812 between Canada and USA he was left with the nearly insurmountable task of defending all of Upper Canada (Ontario) against an American invasion. By striking quickly he eliminated two of the three battle fronts, and could dedicate his resources to the defence of the Buffalo NY / Niagara Frontier. He led from the front, and died in action charging up hill on his easily recognizable white stallion. Such leadership is rarely seen.

How were you brought up and educated?
Klauck: I was educated in the public school system of Ontario, and subsequently attended Engineering school at McMaster University, Hamilton, Ontario.

How should children be brought up today?
Klauck: Treat children as the adults you want them to be someday. This again is very much the coaching style, but authoritative intervention is sometimes necessary.

What would you wish the next generation?
Klauck: I wish they do a better job of tackling the climate change issue than the current generation.

For what good cause would you give everything you owned?
Klauck: University scholarships for underprivileged children.

What is your motto in life?
Klauck: Ad astra per ardua – To the stars, through hard work.

What in your view was the most important invention of the 20th century?
Klauck: I am a metallurgical engineer, so I will say unequivocally advancement of materials technology.
Nothing and I mean absolutely nothing in our modern world would be possible without the advancements that materials engineering made in the 20th century.

What character traits are important for you?
Klauck: Dedication, how hard someone wants to work.

What three words describe you best?
Klauck: Tenacious, positive, creative.

Whose career has impressed you most?
Klauck: Ken Iverson – he took Nucor from a nearly bankrupt company in the 1960s to the largest most successful steelmaker in the United States, and along the way reinvented how steel would be made.

When do you not think about your work?
Klauck: It is very rare.

What has shaped you in particular?
Klauck: Probably my parents and family growing up. They laid the foundation for the person I am today.

What can you absolutely not do without?
Klauck: Freedom, the ability to live free, and express your opinion, this is the essence of who you are.

What was your dream job when you were a child?
Klauck: Metallurgical engineer (no kidding … from age 3).

How do you see yourself in ten years time?
Klauck: My hope is for good health, with all the positive energy necessary to take on life’s challenges.

What do you wish the world?
Klauck: World peace.

What country would you emigrate to?
Klauck: Austria or Italy would be near the top of my list.

Mr. Klauck, thank you for this interview.