G. Hugh Walker • Iron & Steel Society

G. Hugh Walker, the 1986 president of the Iron and Steel Society (ISS), is the manager of coke and ironmaking at Dofasco in Hamilton, Ontario, Canada. A graduate civil engineer from Queens University, he also has an MBA from Western University, London, Ontario. After working for a lumber company for three years, Hugh took his degree and joined Dofasco in the summer of 1959.

According to Hugh, the transition from a lumber company to a steel company caused him an unusual problem: "Every time I saw an open flame I jumped. It took me five years to get used to seeing a free flame without thinking the plant was going to burn down." Hugh joined the ranks of ironmakers in 1963 as a blast furnace engineer. He became superintendent of the blast furnace and coke operations in 1973, and he assumed his current position in 1983.

The 1986 president has been a member of the Society since 1973. He has served on the Ironmaking Committee on Blast Furnace Practice in 1980/81. He is currently on the Board of Directors of the Eastern States Blast Furnace and Coke Oven Association.

Anyone who has ever had the pleasure of conversing with Hugh becomes aware of two subjects that dominate his professional career: ironmaking and management. Both subjects dominated his interview.

I&SM: What kind of activities do you see for yourself as president of ISS?
WALKER: I want to do everything that can be done to save our steel industry. In spite of today's problems, there is going to be a steel industry in North America. Nobody knows what size or shape, but there is going to be a steel industry.

Our industry is being punished on three fronts: the dollar, foreign subsidization, and the lack of new changes economically or politically, but we can continue to strengthen our main goal: the dissemination of knowledge about technical operations and processes in the production of iron and steel.

I&SM: Any specific direction?
WALKER: One of the problems we have when we talk about technology is that everyone thinks about great breakthroughs. Even the Society thinks this way. We want great landmark papers, originality, new technology and so forth. This is not where most of the progress is really made. Progress is made in the day-to-day solving of the humdrum problems caused by new technology, or new customer requirements. The Society does not address this and it should. The Society, besides what it is now, should be a vehicle for communication on day-to-day problems. The AISI was attempting to fill this need. They may be abandoning this and there will be a void. I don't know how we can serve this area, but in the next year I am going to try and lay some groundwork for this sort of communication.

I&SM: You're not implying that technology in our industry has reached its maturity?
WALKER: I do not think the application of technology in our industry is mature. It might be considered middle-aged, but it isn't mature by any stretch of the imagination. The basic knowledge is known. It's the application and the ability to put pieces together that we still have to learn.

For instance, take flux pellets. The basic knowledge is known in the sinter area. The problem is to take that knowledge and apply it to producing and using flux pellets.

I&SM: On the subject of coke ovens, there's been a great deal of concern expressed about tall ovens. Are you having any problems in this area?
WALKER: We have six-meter ovens. We have always treated our ovens like we would treat our mothers.

Mr. Ludberg, who was the coke oven superintendent, really started this philosophy. He came to Dofasco in 1951 when they built our first four-meter ovens. He came from Koppers. He built them and then he stayed on to run them. He had seen so many people destroying ovens that he was determined not to let it happen at Dofasco.

You saw our ovens when you came to the plant. They were built in 1951. Did you see any smoke coming out of the doors? Those ovens are 34 years old and we don't see the end of their life. We don't have any plans for new ovens on the books.

You must look after coke ovens with good operating and maintenance practices. If you don't clean your doors you get a door fire, the doors and buckstays warp, then you get air infiltration and burn your brick. What people have done to coke ovens shouldn't be done to a dog.

You also have to watch your raw materials. What happened in the case of tall ovens? We have not had problems with our tall ovens. But we didn't charge them with low volatile coal, either, and blow the walls out.

Coke ovens are very finely tuned combustion furnaces. Temperature control and proper coal mix are the important factors.

I&SM: Let's go back to your point about new applications of technology. Where will this information come from?
WALKER: Except in a very few cases,

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where steelmaking has been advanced by great breakthroughs like the Bessemer Furnace, the basic oxygen furnace, acid pellets, by-product coke ovens, continuous cleaning, continuous annealing, most advances have been made by small-step improvements in the individual processes. Those companies who put all the improvements together are the successful ones.

We, in North America, have in the past been unable to capitalize on this because we buy from our suppliers and engineering firms based on the lowest bid, often ignoring quality or capability and we do not feedback the results.

It is time to join with the supplier and engineering firms as cooperating partners, provide them with a consistent business level and give them feedback as to the quality problems of their products.

Some steel companies are now contracting out their operations to suppliers.

I&SM: Well, if you believe the suppliers are now becoming the operator's partner, you can't be too happy with the way the program committees tend to prohibit suppliers from presenting papers.
WALKER: You're right! We look upon suppliers as great guys. They give their economic support to our parties and they inflate the Society's membership. But we don't let them contribute to the technical forum. And if a producer and a supplier get together to work out an improvement, it must be to the producer's credit.

All of this type of thinking is based on the outdated tradition that suppliers don't have any real technical expertise. We think that operators have to tell them what to do and how to do it; and that we can't allow a supplier the podium to advertise his technical expertise.

This is one area that I would like to see change in the Society. I will use my year as president to try to get the conference committees of the Society to modify their thinking on supplier technical participation in our conferences.

I&SM: Let's talk about your relationship with the Iron and Steel Society. When did you first become aware of the Society?
WALKER: The first conference I attended was in Chicago in 1966. I was so green in the gills I couldn't even find a supplier's hospitality room.

You go to out conferences and there is a social aspect. But it is most interesting that this social aspect is only a vehicle for talking technical business. It's not like the old days thought. I remember the early meetings of the 60s and 70s – everybody talked about their disasters. Nowadays, the discussions relate to the application of new technology.

I&SM: From a professional viewpoint, what do you consider the most valuable benefit of membership in ISS?
WALKER: The greatest benefit of my membership in the Society is the technical interaction with members, the contacts. This gives you an opportunity to find solutions to your operating problems.

I&SM: Do you have any ideas on how we can convince companies and individuals that the benefits of active membership are worthwhile?
WALKER: Some companies have become insular to the outside world. The CEOs and managers of these insular companies have forgotten their roots. The roots of our industry are on the shop floor where it's happening. That is where they need the tools to do the job. The technology exchange that can be gained from participation in our Society is one of the most important tools. Again, I must stress that technology is available to everyone. It's the judicious application of the technology that we lack.

I&SM: Do you have any ideas on how to overcome this insularity?
WALKER: We have to keep communicating with the top management of these companies. Hopeless as it may seem, we've got to keep communicating.

Look at the companies that actively sponsor participation and look at the ones who don't. I think that if you look at the record, in general, you will find that companies who are poor supporters of the Society also have poor performance records.

The Society is attempting to provide information on the applied technology of our industry and make it available to the members. We have to convince top management of this fact.

Why would any engineer or operator want to be a Society member and advance in his knowledge? That is hard work. He does it only because he is proud and he thinks his management wants him to do this, whether management says it or not. He also knows that if he doesn't keep up in his field of expertise he is going to die on the vine.

Management in North America seems to prefer to run out on the market and buy expertise, or else they seem to believe that knowledge will be bequeathed by some benevolent god merely because they wish it. It takes time, work, dedication, study and training. And the rate of change is increasing. Engineers went to college with a slide rule from 1900-1960 – 60 years. They went with a calculator from 1960-1985 – 25 years. They are going with a personal computer from 1985-1995 – 10 years.

Is management going to throw out everybody after 5 or 10 years because they are technically obsolete? To survive, there must be a continually increasing rate of retraining. This costs money; but although today's profit is important, tomorrow's profit is vital to the life of the corporation.