



AMERICAN INSTITUTE OF MINING,
METALLURGICAL, AND PETROLEUM ENGINEERS

ORAL HISTORY PROGRAM

**Joe Poveromo:
A Proud Product of the Bethlehem Tradition**

2018

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00:00: Introduction

Blyth:

Today is Monday, May 7th, 2018. We are at Philadelphia at AISTech 2018. This is an interview with Dr. Joseph Poveromo who is president of Raw Materials and Ironmaking Global Consulting. The interviewer is Amanda Blyth of the Association for Iron & Steel Technology. This interview is being conducted as a part of the American Institute of Mining, Metallurgical, and Petroleum Engineers oral history project. We are here to discuss Dr. Poveromo's contributions to the iron- and steel-making field. Welcome, Dr. Poveromo.

Poveromo:

Thank you. Thank you.

00:55: The Early Years – Growing Up in Staten Island New York

Blyth:

Why don't we get started with your early years, talking about your childhood? Can you tell me about where you grew up?

Poveromo:

Oh yeah, I was born and raised in- in Staten Island New York in New York City. Sort of a suburban area, but really a part of New York City. It was a typical childhood in a nice area. Played Little League baseball and all the usual stuff.

I guess starting with growing up, my family, my father was a master cabinet maker. But, he was fortunate to have a job with the city of New York, so that provided a steady income, so that was good. And, my mother was a homemaker, an excellent cook. I have an older brother. He's an auto mechanic, so I learned a little bit from everybody about how to do things and so forth. So, that was my growing up. And then, when I was in graduate school, I met my wife. Well, it was not in graduate school, it was actually a fix-up from a relative, a cousin who was a physician, who had her as a patient and said, "Oh, you're a fine Italian girl, you should be married by now." So, he says, "I'll have my cousin call you up." So that worked out real well.

Blyth:

[Laughs]

Poveromo:

And, of course, she was a foreign language teacher, German, French, and English as well. She taught for about 10 years. And then, of course, once we started having children, she stopped. I have a daughter now who's a lawyer. She's working for Nationwide Insurance in their compliance area. She married a fine fellow who's in marketing for Pfizer drugs. They have three little boys, my three grandsons, and

they're wonderful. And then I have a son, and then he, um, well actually, I should say my daughter went to Muhlenberg College, which is in town. That was great. We allowed her to live there, so that was great for her. Then my son said, "Oh I think I'll go to Lafayette College," which is over in the next town, which was very convenient. So, he wound up graduating with degrees in economics and engineering. He went to work on the financial side of things, and he's now Director of transfer pricing at Pfizer in their finance department. He was able to marry a fine young lady, also a lawyer, whose parents were natives of Cyprus. He has two daughters. He's living in Hoboken.

I have a son in Hoboken, who is only about an hour and a half away, and my daughter is in Breinigsville, about 30 minutes west of Allentown. So, I have five grandchildren within close proximity.

Blyth:

And your hometown right now is?

Poveromo:

In Bethlehem PA. As I say, when I joined Bethlehem in 1974, we moved to Bethlehem. I bought a house there, which we're still in. And, it was a great place to raise our children. We have excellent schools in Bethlehem. Even though it was a steel town and, of course, the steel employment contracted. The fortunate thing about it is that it's in close proximity to New York City and New Jersey. So, a lot of people just started getting in their cars and driving. When you visit Bethlehem, you'd never know that, at one time, we had 20,000 people working for Bethlehem Steel. There are a couple of facilities still running under other names. There's a forging operation and a roll shop, maybe a couple of hundred people still employed in steel in town. The rest of the steel plant became a historical site, and they also built a gambling casino where the ore yard and the sinter plant used to be. So, they have diversified, but still, the fact that we have a large commuting population means you never know that there was a major employer shut down. And, of course, the Lehigh University has expanded. In fact, Lehigh University took over the Homer research labs. They took over some of the buildings initially, and, then, they took over the whole thing. So, the Lehigh University Mountaintop campus, that used to be the Homer research labs. That's how the Lehigh expansion went as well.

Blyth:

Now your wife being a former foreign language teacher and you with clients all over the world, do you speak any other languages?

Poveromo:

No, unfortunately, no. However, what we did in the summertime when the kids were still with us, we'd actually vacation in Europe. I would try and visit clients there, and companies there and, of course, my wife was invaluable. She could speak so well that people would say, "Are you homesick for Germany?" She would say, "No, I'm actually an American."

Blyth:

[Laughs]

Poveromo:

So, it was great to have her to talk to everybody, to smooth things out; so that was good.

05:34: Rensselaer Polytechnic Institute – Starting Out in the Oil Industry – Sinclair Oil

I did well in high school, and I did fairly well in technical subjects. I thought maybe a technical career in engineering or science would be good, so that led me to go to Rensselaer Poly in Troy, New York, which was a fine technological university in New York state. I had received a New York State Regents scholarship, which meant you could only use it in New York state, so that led me there as opposed to elsewhere. But that was good, that was fine.

After my undergraduate degree in chemical engineering, I went to work for an oil company, because I received a B.S. in chemical engineering. I went to work for Sinclair Oil out in the Chicago area, and the dinosaur was the symbol of the company. Unfortunately, that's about the way it was managed and run. That company only lasted one year. Actually, it wound up being taken over, but I spent the one wonderful year there. But I realized it would be a good idea to pursue a graduate degree and come back in the field that way.

06:47: Transitioning to Steel – Meeting Juian Szekely - Bethlehem Steel - Homer Research Laboratory

So I went to the State University of New York in Buffalo. They awarded me a Research Assistantship, and I had a good fortune to run into a professor, Julian Szekely. And, he was very active in steel industry research; he was doing research sponsored by the American Iron & Steel Institute. He's a very dynamic fellow. We had research money available, so I sort of joined his research group, and then I wound up working on research that was sponsored by AISI in the blast furnace area. It turned out that the overseers of the research project were actually from Bethlehem Steel, the Homer Research Laboratories. So, as I finished up there, I had a number of job offers available because the year I finished, 1974, was a good year for the economy. There were multiple activities available, but it seemed like a good fit to go to Bethlehem Steel because I also wanted to stay in the East Coast area. I had received offers from Republic Steel in Independence, Ohio, and some other places. But, the location of Bethlehem and the people there, it seemed like it was a great place to go. They had just finished building large blast furnaces and operating them at both Burns Harbor, and they were building a new one at Sparrows Point. So, they needed help in fluid dynamics, so the blast furnace process, which is the research process I had done. It's very unusual that people get to work in the same area as their Ph.D. thesis. They really do a thesis in something and go off to industry and wind up doing something completely different.

Blyth:

Right.

Poveromo:

But I had the good fortune to be actually continuing my work in a practical setting. That was great. So, the first number of years there at the Homer Labs were very good. And, of course, Bethlehem Steel also provided the opportunity for me to come to conferences, present papers, and so forth, so that got me heavily involved in the Iron and Steel Society (ISS), the predecessor society of AIST.

Blyth:

Okay, and about what year, when was that around?

Poveromo:

Oh, I should say yeah, I basically started my career in 1974. That's when I finished my Ph.D. I had worked for the oil company in '68-'69 and then headed off to graduate school. But, of course, in graduate school, I was doing work that was published in the areas of iron-making fluid dynamics in the blast furnace, so that was good. I started at the Homer Labs in 1974 and was really heavily involved in the blast furnace research and process assistance for a good number of years. Then, unfortunately, the industry fell upon hard times. The research center got smaller and smaller. And, Bethlehem Steel had an excellent raw materials research group. But, they contracted it severely because they felt many of their raw material operations were essentially joint ventures, and the other joint venture partners weren't contributing to it. So, they said, "Why should we?" They, unfortunately, cut back the size of the raw material research group, so the head of the Mine Department comes to me and says, "Help me look after Bethlehem Steel's iron ore mine properties." That's how I got involved more in the iron ore side than the steel business side. I spent, my time wound up being split between the blast furnace world and the iron ore world for the next number of years. And, then when I saw that Bethlehem Steel really wasn't going to make it long term, I didn't know it was going to be as bad as it turned out. But, at least by the end of '92, I was looking around for some other activity but related to iron ore.

Blyth:

Right.

10:36: From Quebec Cartier to Independent Consultant

Poveromo:

So, I approached Quebec Cartier Mining Company, which was an independent company but owned by Dofasco Steel company and some foreign interests. They were a merchant iron ore company that basically needed technical marketing and product development assistance. I approached them, and they said, "Okay, you can work for us virtually full-time but set yourself up as a consultant. Keep an office at home in Bethlehem, PA. So, I said this is really great, because my feeling by that time, I really loved living in Bethlehem, PA. It was a great place to live to raise a family. So, they said, "Yeah, you can do what you want, but we want to stay here." So that worked out really well, and I spent the next 15 years virtually full-time with Quebec Cartier Mining Company, but they allowed me to consult for others if it wasn't in conflict with the iron ore business. So I cultivated some other clients. too. And so, that was a great 15-year run where I was able to continue my ISS activities because they wanted me to be out in public, to be a public face for the company, promoting products, interacting with steel company customers and so forth and so on. My effectiveness there was also enhanced because I still had the reputation as a blast furnace process expert so, I was to get pretty much good entry to any steel company. I could help them solve their problems aside from introducing them to iron ore.

Blyth:

Okay. So, you already had this reputation, okay.

Poveromo:

Yeah, so that was extremely helpful for that activity. Then after about 15 years the steel company, Dofasco, became part of the global ArcelorMittal organization. And so, they then viewed, they renamed the Quebec Cartier company ArcelorMittal Mines Canada and said, "Well now this is a captive operation of ArcelorMittal." So, the role for a technical marketing person was really diminished. So, they offered me a very attractive buyout package, so I left and became a completely independent consultant.

12:40: Conventional Blast Furnace and DRI Activities

Blyth:

Okay. And that was around what year?

Poveromo:

So that was starting in 2009.

Blyth:

Oh, okay.

Poveromo:

In other words, I was with them from the beginning of '93 through 2008. So, in 2000, almost 10 years ago now, I became an independent consultant. But because I already had some clients, hold-over clients, I expanded my activity with them. But then, I started, you know, bringing on many new clients, but also doing a lot of one-off type of research projects for people, both iron ore, blast furnace research and also direct reduction and electric furnace activities, because one of the great features of Quebec Cartier Mining Company was that they made pellets for both blast furnace use and for direct reduction modules. So, that got me involved in the world of DRI, electric furnace activity, and so forth.

Blyth:

Okay.

Poveromo:

So, that was one of my motivations actually in picking them as a place to go because I could sense back then that the electric furnace sector was going to become much more important in the future.

Blyth:

Right.

Poveromo:

The blast furnace sector was becoming much less important. So that really was a good introduction to my current activities, which are roughly 50/50 between conventional blast furnace and DRI activities. So, for the last 10 years, I've been doing this, and as long as I stay healthy, I'll continue doing this.

Blyth:

[Laughs]

Poveromo:

So that's a pretty quick summary of what I've done, where I've been and so forth.

14:06: Mentors - Professor Julian Szekely - Joe Hlinka

Blyth:

Okay. Wonderful. Did you have any mentors during that time?

Poveromo:

Yeah, yeah certainly. Well, of course, Professor Julian Szekely at graduate school. He was also fairly well respected within the steel industry. So, he introduced me to people, which helped get me into Bethlehem Steel, so that was wonderful. And then when I joined Bethlehem Steel, the Homer Research Laboratories, there were some people there who were very talented technically, Joe Hlinka for one. H-L-I-N-K-A. He was a senior research associate, and we worked together on a number of things. He was a great mentor. And then some other fellows who were supportive of my activities, Pete Cheplick and Bob Bouman, they were my managers off and on for all those years, and they were very supportive of all these activities. And then within Bethlehem steel plant operations, the blast furnace superintendents that I would have to work with and sell things to. There were any number of them that were very good and very cooperative. Fred Rorick is prominent amongst them. And then also in terms of the Iron and Steel Society activities, I initially got involved through the ISS in something called the Process Technology Division. Which, speaking frankly, at the time, at that point in time, the operating divisions of the Iron and Steel Society, iron making and steel making, was really dominated by operating superintendents. So, if you weren't an operating superintendent, you really didn't fit on the operating committees. The process technology committee was where they put all the other people, the research people, all the academic people, and so forth and so on. There was a collection of all of us over there. But, this was a fairly dynamic group which had many outstanding individuals on it.

Blyth:

I can see how there would be advantages to having that wide range of participants.

Poveromo:

Yes, that's why ISS had been organized at that time into the operating divisions, ironmaking, steelmaking, electric furnace, mechanical working, and then this process technology group. So, I joined that group, and a fellow named Norm Mills, who just, unfortunately, passed away recently, he was at Inland Steel at the time. He took me under his wing and said, "Why don't you organize a specialty

conference in..." whatever area it was I think it was recycling? So that was my first major conference organizing activity. That worked out very well. Then I went from that to eventually becoming Chair in the Process Technology Division. By that time things had evolved on the iron making division side where they were more open to anybody who could contribute. They weren't really a closed group of shop superintendents, so I managed to get on the Iron Making Division and eventually became the Chair of the Iron Making Division. I was told that I was the only person ever to chair two divisions within ISS. Because these were, these divisions were larger than the current divisions here or what AISE had. We only had five divisions, whereas AISE still had I think 20 or 25 before the merger. So, this was considered somewhat of a big deal, I guess. I didn't know that.

Blyth:

I think so.

Poveromo:

So that was fun. So, these were some key people that played a role along the way that were very helpful to me.

Blyth:

Excellent.

17:33: Life Member of AIST – Association for Iron and Steel Technology – Benefits to Career

Blyth:

And I know you're a life member of AIST, and we thank you for your support of the association. But, how has your membership in our association benefited your career?

Poveromo:

Oh tremendously, because these events provide fantastic networking opportunities; also, if you have a chance to present a paper, people see you and hear you. So, they say oh, maybe we should talk to him; maybe he can help us with that. So that right there is rather priceless, you know. And, of course, AIST has been very good, and the predecessor group, ISS, with international outreach. So, that let us into some of the overseas organizations. We had some pretty good cooperative back-and-forth with some of them over the years. And, so that also helped me because now a good deal of my income actually comes from overseas. My clients are actually global in nature. So AIST has been a tremendous help that way.

Blyth:

That's wonderful, and, if you were to recommend AIST to someone interested in metallurgy or engineering, what would you say to them?

Poveromo:

Oh, I would say the only way - you really can't become internal and isolated in the company because you never know what the company's fortunes are. You know what direction they're going to take, and very few people really have the chance to advance all the way within a given company to the very highest level. Even if they do, it's very advantageous to know people outside your company and get involved in professional activities, to get recognition, and it really expands the options you have. It also makes you much more effective even for the job you're doing at a time because you really get exposed to a lot more than what's going on in your own company.

Blyth:

Exactly. Wonderful.

19:25: Technical – Economic Challenges - Technological Advancements

Blyth:

So, let's talk a little bit about technologies that you've been associated with and that you've seen over the years. What are some of the biggest technical challenges that you've experienced in your career?

Poveromo:

It's more the economic challenges associated with the industry not having sufficient capital at all times to put in place the very latest, the best technology as soon as they could. You really have to learn to work with what you have and do a lot of incremental improvements. But then you really, when there is a chance to do something big and new, you really have to focus heavily on the economics and be in the position to demonstrate or show that the project or the activity has strong payback and it should be pursued. So, the big challenge, then, is to really organize people and get them motivated, get them looking at things that can be positive both at capital expenditures and new operating procedures and materials, and being able to economically justify it all.

Blyth:

You talked earlier about being able to foresee the EAF share taking over. What other milestones or technological advancements have you seen that really stood out over your career?

Poveromo:

Well, I guess, starting in the blast furnace area, we developed flux pellets, blast furnace flux pellets in the mid-1980s. It was more or less a joint industry activity amongst a bunch of companies, working together, that really enabled us to extend the life of the blast furnace in terms of its process improvement and ability to achieve very high specific productivity and low fuel flow rates. So, that was a great thing to be part of in that era. Some of the other activities now are more related to the current electric furnace boom and also being able to provide high-quality feed materials for the electric furnace. And, this is where there could be a crossover between the conventional blast furnace world and the electric furnace world. We're involved now in projects to produce merchant pig iron in conventional blast furnaces that would be fed to electric furnaces. Some of the competitors of my clients are, of course, looking at DRI and HBI projects to do the same thing. So, that's where the traditional blast furnace-based people are finding a way to, sort of, work with the other side, and you know, help

themselves survive. But also, extend the industry and also extend really North American activity, because a lot of this, a lot of the feed materials, now come from overseas. And, I think we could virtually make it all here. So that's a big thing going forward.

Blyth:

Exactly.

22:33: A Different Way of Doing Things

Blyth:

That's great to hear that the integrated steel producers are finding a way to work with this, I don't want to say opposing technology, but a different way of doing what they had done for so many years.

Poveromo:

A different way of doing things. They could probably do a little more if they were to think a little more creatively and a little more businesslike about it. The way I look at it, if you don't supply the materials, somebody else will. So, I would encourage people to think more strongly in that direction.

23:08: Comparative Advantages and Disadvantages

Blyth:

And that is more of a U.S. problem because, globally, it's kind of the opposite. There are so many integrated producers.

Poveromo:

Yeah globally, well actually, when you look at the economics of what happened in the USA compared to what's happened overseas. We talked about technology as it relates to electric furnaces of replacing a lot of blast furnace capacity, but there's also a cultural component, which is something we don't like to talk about. But, it's acknowledged, that the electric furnace companies developed a better business model in terms of, you know, being able to site their steel plants in more business-friendly states to establish non-union operations, but, at the same time, emphasizing empowerment of the workforce. So, they're not just exploiting workers, they're empowering workers. When you go to a mini-mill steel plant, you don't really see people that are downtrodden and unhappy. They're very happy to be there and very productive. Nucor and Steel Dynamics are two companies I'm very familiar with that stand out very strongly in that area. So, when you were talking about the USA, in particular, the cultural side of it is as important as the technology side of it. Now in the rest of the world, it turns out that, my observation is that, you can't really produce or put in place that sort of a cultural change. The cultures and the practices of many countries in the world just won't allow or won't foster the kind of changes that you can do in the USA. So, the rest of the world, in the absence of the cultural component when you look at the actual process technologies, large-scale steel production really is favored globally by the conventional route. You can make liquid steel lower in most cases with the conventional route rather than melting scrap. And, of course, also scrap availability is a big factor because, in the rest of the world, many countries in the world, scrap is not available.

Blyth:

Right.

Poveromo:

You can't melt scrap that's not there, and if you have to import, it becomes very costly. So that's another factor, too. I could probably talk for hours about these comparative advantages and disadvantages, but that's the kind of things I do in my consulting activity because a lot of what I do is project evaluation. People come up with the project ideas, but then I say, "Well, what are the assumptions? How does this come into play? Where are you going to place this?" And then you find out they may not have thought through all the things that come into play beyond the basic core technology of what they're looking at.

Blyth:

One last question on this topic. Do you think we are going to see more facilities popping up that are similar to Big River Steel, trying to mix the broad product range and higher quality steels with the mini-mills kind of efficiency?

Poveromo:

Yeah, that's a question people ask is, "How far can electric furnaces go?" Well, the first thing I would say is that the easy pickings are gone. In other words, the electric furnace sector was able to knock out of business, so to speak, all of the blast furnace-based mills that were essentially making the wrong products in the wrong place, so to speak. The surviving blast furnace-based companies and the products they offer, they're really in pretty good shape. They have low liquid steel cost. They're focusing on high-end steel production. So, it's a little more difficult for electric furnace people to nibble away at that, although they are trying. I kind of think the opportunities for electric furnace people are, which is what Big River has done, to look at steel that's currently being imported into this country. What kind of steel can an electric furnace plant make to replace steel that's being imported? For example, a wire rod, for example, tire cord - wire rod is virtually all imported. It's basically made with blast furnaces overseas, but that's an area where a mini-mill will, with high-quality feed materials, be able to start making that material and make it here. So, if they look at those kinds of niches, there could be room for one or two or three more electric furnace plants that would focus on replacing imported steel products.

Blyth:

And that's pretty timely considering –

27:35: AIST Distinguished Members and Fellows – Bethlehem Steel

Poveromo:

But now we're getting into areas where this is beyond my personal expertise. I've made observations, but there are others who could really speak with great authority on, you know, a very specific steel product. The fellow that spoke this morning, John Speer, he's the product expert. He's also an ex-Homer Lab research fellow.

Blyth:

I know, yeah.

Poveromo:

In fact, he put up slides this morning, and almost every picture he put up was an ex-Homer research lab person. Rick Bodnar, Steve Hansen, you know himself, and I think there was one or two more, but I can't remember. But anyhow, it was, oh yeah, there's another ex-Homer lab person.

Blyth:

And they are all AIST Distinguished Members and Fellows; so, Bethlehem turns out some pretty good people.

Poveromo:

Yeah, I know. It was a great place to work. See Bethlehem, I would say, was technically and operationally superior, but on the commercial side, we sort of fell on our face. Those of us on the technical and operating side, we can make observations. We didn't really have the power or the control to say no, you should do things differently or try this or try that; so, it was commercial more than technical or operational. But, we had many fine people that, when they finally realized it was a good time to go, they went.

Blyth:

[Laughs]

Blyth:

So, you've had a lot of experience working with a lot of different companies and processes and what meaning have you gotten out of this field? What has made this meaningful for you?

Poveromo:

You always have to learn, be willing to learn a little bit more than what you know about the area that you're in and try to move to the area right next to it and say, "Oh, what can I learn about that? What can I do?" That's the key thing; you just can't stay. It's actually very hard. A lot of people are independent consultants, but once they've used up or exploited what they knew in that area, they sometimes don't have the ability or the wherewithal to expand, and so their income dries up, essentially. That's the biggest challenge of being a truly independent consultant, is to be able to go in slightly different directions.

29:50: Advice for Today's Young Leaders

Blyth:

And what advice would you give today's young leaders in the engineering profession?

Poveromo:

To become very good at what you're working on at the moment. Always look left and right to see where you can expand your reach, influence, and knowledge, and keep working. Then, at various points in time, assess your career and see if the organization or the activity you're with really has future potential for you or whether it's time to move on. So, that's it. Cause the old days of the gold watch and spending 50 years there doesn't seem to be working out for a lot of people.

30:29: Developmental Participation – Flux Pellets & Canadian Concentrate – Optimizing Blast Furnace Operations

Blyth:

Exactly. and looking back what would you say is your biggest accomplishment?

Poveromo:

Oh boy.

Blyth:

That wasn't on the list of questions, sorry. [Laughs]

Poveromo:

It's being able to participate in some of these developments like flux pellets in North America, with Quebec Cartier Mining Company helping improve the quality of some of their pellets so they can be sold anywhere in the world. Being able to introduce Canadian concentrate to sinter plant operations, where they weren't, where the use wasn't favored. So, these kinds of things I consider pretty good accomplishments. And then, within Bethlehem Steel, really helping optimize their blast furnace operations to where they became essentially a world-class operation. One of the funniest stories I like to tell is, in my final days with Quebec Cartier; it was part of ArcelorMittal. They would do a lot of global benchmarking of blast furnace performance around the world, and, of course, this included many advanced operations in Western Europe with the latest and greatest bells and whistles on blast furnaces and things like that. But then, when they put up all the numbers, the Burns Harbor blast furnaces of Bethlehem Steel were number one in many categories. And, you know, excellent facilities but still not in the same technological category as some of the European operations. But, yet, the work we had done, particularly with raw materials improvements, we were getting world-class performance, and, so, the Europeans were sort of cringing at this. It became a bit uncomfortable, but that's the facts. Yeah, so I would say that the pride in that accomplishment is good. I'm happy about that..

Blyth:

Great. Wonderful. It sounds like you had just a fascinating and rewarding career.

Poveromo:

Yeah, it's been fun, it's been good. I've been lucky, I've been fortunate. But, I also was able to spot a few things in time to make changes because a lot of people get caught by surprise, so that's not good.

Blyth:

Exactly.

32:33 Awards and Activities

Poveromo:

Now, on awards and activities, yeah, I was fortunate because I was able to participate in the Iron and Steel Society activities. The first award I received was the J. E. Johnson Award, which actually is an AIME Award. And, it was Mrs. Johnson who put in a big pot of money. It really started generating income and so forth. It was designed to encourage young men in the field of ironmaking, anybody under the age of 40. So, I was fortunate to get that award in 1981. And, of course, the value of that award was not only the award but also it gave me a chance to go to the conference because at Bethlehem Steel it wasn't automatic that you would get to go to the conference every year. You had to have a reason to go. Either you were giving a paper or on a committee and so forth.

Blyth:

I think it's still that way today.

Poveromo:

It's still that way today, yeah. So, that was the first award, and then there were also awards that came with being chairs of the committee, at the process technology division. They would give the John Farrell award for the outgoing chair. And then also there were competitive awards. I was fortunate to work with certain people – I mentioned Joe Hlinka as being outstanding. The technical paper that we wrote for the ironmaking conference in 1983, not for that conference, it was for a specialty conference, that won the John Chipman award, which is a competitive award where the papers are chosen on their technical value. So, I was fortunate to win the John Chipman award with Joe Hlinka back in the early '80s. And then, later on when I joined with QCM, I was doing some other activities in Australia, so I teamed up with professor Veena Sahajwalla. You have probably seen her name, I guess, so we- I co-wrote a paper with her on some topic of coal injection. We won the John Chipman award for that, too. That was mostly her work, but, still, I was still on the award. It was nice to win two John Chipman Awards. So, that was good. And then, of course, within the ironmaking area, the most prestigious division award we have is the T. L. Joseph award for lifetime accomplishment in ironmaking. So, every year, when I would get to go to the iron making conference, I would see someone getting that award, and I would say, "Boy, someday I wish I could get that award." So, sure enough, this happened in 1998..

Blyth:

Nice.

Poveromo:

So, that's when I got that award. And, today, I'm chair of the committee now. So, I was presenting it to a fellow from Holland, Martin Geerdes; he was here to receive that award.

And then, of course, a Distinguished Member of Iron and Steel Society in 1995. Actually, I got that award before the T. L. Joseph, in 1995 I received it. And, of course, that was great because at that time, in the ISS days, they would have all the distinguished members sit together at front tables. So, there I was, sitting at the table with all the greats, all the big names that were previous distinguished members. Because in ISS the award was, or distinguished member, they were more for technical accomplishment rather than organizational accomplishment. Now it's evolved a little bit, and it's about half technical and half organizational. About half of the people who are named distinguished members, it's more for activities within the organization and so forth. But, in the earlier days, I'd say it was about 80% technical. So, all the very big names in metallurgy were at that table.

Blyth:

At that table. [Laughs]

Poveromo:

They were sitting there at the table. So, this was great. So that's it on the awards side. I'm happy with it. This is all good stuff.

Blyth:

That's great. That's great. We're lucky to have such a distinguished member and such an active member in you, and we appreciate all that you've done for the association.

Poveromo:

It's good. It's good. it's fun. It's been a lot of fun.