



AMERICAN INSTITUTE OF MINING,  
METALLURGICAL, AND PETROLEUM ENGINEERS

## ORAL HISTORY PROGRAM

**A 103 Year Odyssey and The Philosophy of Shared Responsibility**

**George Jedenoff**

**2020**

## **PREFACE**

The following oral history is the result of a recorded interview with George Jedenoff conducted by Britt MacKinnon on December 4<sup>th</sup>, 2020. This interview is part of the AIME and Its Member Societies: AIST, SME, SPE, and TMS Oral History Project.

## **ABSTRACT**

George Jedenoff's 103-year odyssey began in Petrozavodsk, Russia in 1917 where he grew up the son of a railroad inspector and Russian nobility. Soon, the revolution in St. Petersburg began and the Jedenoffs fled the violence and destruction of the Bolshevik forces by immigrating to America in 1923. Transitioning from a life of luxury in Russia to a hovel and the onset of the Great Depression in America, George learned to face problems as opportunities and took to himself to excel academically and athletically. Jedenoff was granted the opportunity by Stanford University to study engineering and has devoted his career to developing leadership and motivation in the steel industry. Jedenoff recognized how the lack of job satisfaction and worker performance affected the effectiveness of companies. With his philosophy of shared competitive responsibility and positivity, Jedenoff began the error zero program and has helped more than 25 different companies improve job performance and productivity. By converting troubled steel plants into efficient ones, Jedenoff has had a noteworthy effect on the success of the steel industry.

Readers are asked to bear in mind that they are reading a transcript of the spoken word, rather than written prose. The following transcript has been reviewed, edited, and approved by the narrator.

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## **PART 1**

### **00:05 Introduction**

MacKinnon:

Today, December 4th, 2020, marks the first-ever virtual oral history project interview for the American Institute of Mining, Metallurgical, and Petroleum Engineers Incorporated, AIME. Today, I have the absolute pleasure of interviewing Mr. George Jedenoff via AIME's Zoom account due to the COVID-19 pandemic. George has a wealth of experience in the steel industry thanks to over 30 years at United States Steel Corporation, followed by three years as President of Kaiser Steel Corp. and eight years of consulting in the steel industry in general management. My name is Britt MacKinnon. I am a Process Engineer-in-Training at Hatch and a Young Professionals Chair at the Association for Iron & Steel Technology, AIST. George, thank you for your willingness to help us capture your story in this way.

Jedenoff:

Thank you, Britt. You are very kind, and I feel very honored to have this opportunity.

### **01:27 The Beginning of My 103 Year Journey – Emigrating from Russia to America**

MacKinnon:

George, let's start at the beginning of your 103-year long journey. Please tell me about your early childhood. Where did you grow up? I understand you are a descendant of Russian royalty.

Jedenoff:

Actually, of Russian nobility, Russian royalty is a small group of the Czar family and nobility is the much broader group. But, the ancestors of both my parents, for many centuries, were members of the Russian nobility. I have had a long life, a hundred and three years, surprisingly. I was born in a town you have probably never heard of, called Petrozavodsk, which is a couple hundred miles from St. Petersburg. It was the central office of the Murmansk to St. Petersburg Railroad. My dad was an official of the railroad as a graduate engineer from Kyiv Polytechnic Institute. He was stationed there, and I was born in 1917, about two months before the big revolution that started in St. Petersburg, very close to us.

It was a very violent revolution, and my parents decided they should get further away from there because it was just too dangerous. There were just no questions asked; you got shot or tortured or something else. So, we got moved to a couple of locations, and then, as the revolution progressed, my dad filed for a transfer. And, he was moved to the Chinese Eastern Railroad in Harbin, Manchuria. It is a very interesting railroad. It was built by Russia, operated by Russia on land that was leased from China by the Czar in 1897. The railroad was built about the same time as the Trans-Siberian Railroad, which is much better known. But, it is a shortcut to the Seaport of Vladivostok, which was very important, especially during the revolution because that is where supplies and armaments were brought into Russia.

So, it was a shortcut and was across a relatively flat land compared to that portion of the Trans-Siberian Railroad, which was along the Amur River and was quite unstable. We were there for several years until it became apparent that the revolution was going to hold fast. So, my dad decided to investigate going to America. When I was four years old, he sent my mother, my older brother, and me to California, where he had some contacts. We were there for several months and then decided to come back and make a

recommendation to my dad that we should emigrate. Now, my dad and my mother, neither one of them spoke any English, so this was going to be quite a change.

My dad filed for immigration, and we were granted admittance into the United States. So, in 1923, when I was not quite six years old, we emigrated and settled in Seattle, Washington. We had to have a sponsor, and we were sponsored by the Russian Orthodox Church. But, it was kind of an unfortunate period, as it was a complete change of life for my parents not knowing the language, and the economy was not too good at that point. Earlier in his career, my dad served as Chairman of an international railroad committee that came through Russia. The head of the Milwaukee St. Paul railroad was very impressed with my dad and he said, "if you ever come over, look me up." So sure enough, when we landed, my dad tried to get in touch with this gentleman, but, unfortunately, he died about three months before we landed.

We had no contacts whatsoever. So, we started life in Seattle, Washington. Then, about that time, the depression came along, and that really was tough. So, that was my earlier beginning. My parents went through a terrible adjustment period. Even if the economy were better, the strain was pretty heavy. So, when I was about 11 years old, unfortunately, my parents separated, and my mother moved to California. She was awarded me by the divorce judge, and my brother stayed with my dad in Seattle. So, that is where the beginning started.

#### **09:14 Stanford University – Engineering in My Blood**

MacKinnon:

Wow, what a journey! Now, I understand your father was a mechanical engineer, so it seems that engineering may have been in your blood?

Jedenoff:

Yes, it was. The only real technical university in Russia was called the Kyiv Polytechnic Institute. My dad took mechanical engineering with a major in railroad management. That was his start. You know when you are growing up, you are thinking what do you want to do with your life, and engineering seemed the most attractive to me.

MacKinnon:

Awesome! Why did you choose to study at Stanford?

Jedenoff:

Well, Stanford is an outstanding university. Even in those days, when it was not quite as famous as it is today, I just felt it was the best university in the area. Having visited it once, I just fell in love with the school. I just thought this is the place, but I did not have any money. I was playing football for the Polytechnic high school, and we won 10 games out of 10; we had the city championship. I applied for a scholarship. Of course, I am only five foot seven, but people were not as big in those days. If you had a lineman that weighed 280 pounds, he was a giant. So, I applied for a scholarship, but times were tough, and there was not much money for scholarships.

#### **12:00 "You got any guts?" – First Pick and Shovel Job at a Magnesite Mine**

Jedenoff:

The depression was hitting. The Alumni Association had a program where they would interview people who they were considering for athletic scholarships. So, I went, and I met the Chairman of the Hercules Powder Company. He was a guy about my height and outweighed me by 50 pounds, and he sized me up. He says, "Hey kid, you're kind of little." What are you going to say? Then, he looked at me, he says, "You got any guts? Are you willing to work?" I was not sure I knew the answer, but I said yes. So, he got me a job working underground in the mines at age 18. The first job I had involved working with a pick and shovel, and it was a magnesite mine, which is a mineral that I, later on, found out was very important in the steel industry as a refractory.

We got paid 50 cents an hour working in [the mine]. We were located way out in the sticks, and they had a dormitory where all the miners lived because it was just too far from any other place. We had to pay out a dollar and a half a day for room and board. So, that left two and a half bucks a day for the work. I worked all summer, and there was another fellow that was on the same program with me. He also went to Stanford. We were lifelong friends, and his name was Paul Durckel, great guy. He and I got to work seven days a week, even though the mine worked just six. There was nowhere to go, and we just did general cleanup maintenance work.

We stayed at the dormitory, and the miners, [there were] about 250 of them, were a pretty tough bunch of guys. They drank red wine after dinner and played poker, but they would not let us do anything like that. As a matter of fact, it ended up like we had 250 fathers. They took a personal interest in us, and they wanted to make sure that we made something out of our lives. For young kids, that was pretty hard to beat. So, that was my experience. During that summer, I was notified by Stanford that they did not have enough money but not to get discouraged. I could borrow money; they would help me find jobs. So, I went ahead and decided that I would try and go as long as my money lasted.

I had enough for about two-quarters of three. Stanford was on a three-quarters system. And, I said, well, I was going to go two quarters, and I could always say I went to Stanford. It lasted me six years. So, it turned out to be a good decision. At the end of the first year, which was very, very difficult, I qualified for their best scholarship, the George Gamble's scholarship. I was able to maintain that for the rest of my four years in Stanford undergrad. So, that is the way it went.

### **16:47 Mentors at Stanford – A Professor for Two Generations of Jedenoffs**

Mackinnon:

Amazing. Now while studying at Stanford, did you create a mentorship relationship with any of your professors?

Jedenoff:

Yes, there were a number, but my most favorite one was rather unusual. His name was Stephan Timoshenko, and he was a world-famous engineer. He wrote the bible on strength of materials. Oddly enough, he was from Kyiv Polytechnic Institute, and he was my father's professor in 1910. Then, he went into Westinghouse research after the war. He preferred teaching, and so he became a professor at Michigan, and he wrote the bible [on strength of materials] at that time. A few years later, Stanford talked him into coming to [teach at] Stanford. It was interesting that he was my father's professor and my professor, 1910 and 1940, [respectively]. He was a wonderful teacher and an excellent man. He was one

that really helped me. In the Graduate School of Business, which [is where] I got my MBA, I majored in production management.

There was a professor, Paul Holden, who was a brilliant guy. As a matter of fact, as the war started, he was picked by our government as the head of the OPA, which is the Office of Production Administration that handled all the material. We shifted from a peacetime economy to a wartime economy; all the demands for materials and everything became different, and there were shortages. There had to be a Czar that decided who got what. Well, Paul Holden got that job. But, at Stanford, he taught executive management and had been a consultant, and he was brilliant. Maybe one reason I liked him is he gave me two A+'s on my grades. He only gave three of those out in his lifetime, so I felt pretty good about that. Paul and I remained friends for many years. So, that is kind of my background there.

### **20:11 Developing Leadership and Motivation in the Steel Industry**

MacKinnon:

George, what was your first professional job in the industry?

Jedenoff:

Well, I worked every summer because I needed the money, number one. Number two was that I was trying to find out what I wanted to do in life, and, by working in the mines, in the oil field, in the petroleum refinery, I had at least a glance at what life was like [in those industries]. One of my jobs was to work for US Steel in the steel mill. I enjoyed that job more than anything because I could see there was a place for my technical education, but also it involved working with people, and I decided that is what I really wanted to do. Throughout my life, I have really enjoyed the challenge of getting people to enjoy their work and to improve productivity. That was the thing that, professionally, I enjoyed the most. Having worked in blue-collar jobs and working up through the steel industry as a foreman, I was able to eventually become president of a steel company. The challenge there for me always was working with the people. What used to bother me was somebody who would say, "Oh, I don't know, I just work here. I just work for the money."

There was no job satisfaction, no pleasure. How do you get people to enjoy what they are doing? That was what motivated me, and I had some wonderful experience developing the leadership and the motivation. A lot of it was just the attitude involved in managing. I actually had my first experience in the Navy. I was in charge of a group of about 120 sailors, and how we could get maximum performance out of them was the challenge. You could say, "I'm an officer, so, therefore, I order you to do this." The performance you get to your face is something, but to get maximum performance takes leadership.

That is what really interests me.

### **24:05 My Most Telling and Important Experience – Managing the Geneva Steel Plant in Utah**

My greatest satisfaction came when I was in my second stint at managing a steel plant. I went from a small plant in Pittsburg, California, to a larger plant in Utah called Geneva Steel. There, I had an opportunity to try out my theories and what was involved. The [experience at Geneva Steel] was probably the most important experience I have ever had. It did not start out that way. It started out with a steel plant that was in trouble. It was a war baby built 800 miles from the coast so that it would not be bombed by enemy submarines. There were raw materials there but not the best.

It takes coal, iron ore, and limestone. Those are the three things you need to make steel. Utah had those but not to a great extent. So, the [United States] Defense Corporation, when we were still in the National

Defense Program, authorized the [Geneva Steel] plant. Then, as the war started, there was a shortage of people, there was all the recruitment to the military and then the expansion of other war facilities. The [Geneva Steel] plant was started by hiring experienced people as supervisors, but a lot of them were ones that had no leadership experience. They just knew the operations and the way they ran. [Geneva Steel] was in a rural area, in the farm area. They had very little employment opportunities. So, there were people who graduated from BYU University, University of Utah, that would take jobs in this new mill, even though they were non-professional jobs.

But, a lot of their supervisors were brought in from other plants that were available, again, because they knew the operation but not how to manage. So, in many cases, the employees had a lot more education than the supervisors. There was a lot of friction, but, because of the war, there was still some patriotic reason. But, after the war ended, and US Steel was managing this plant for the United States Defense Corporation, they were going to walk away because they did not need the big plates and structures that were there for shipbuilding. They did not need any more ships, but Geneva became the single biggest industry in Utah and the political pressure was tremendous for US Steel to buy the facilities so they could continue to operate in Utah in spite of the problems.

The conversion was difficult, and there were some bad labor influences that realized that there was a shortage of steel for domestic purposes and took advantage of the situation. The plant developed a terrible reputation for work stoppages, even though the labor agreement did not permit unauthorized work stoppages. The plant averaged about eight of these a year for about ten years. Geneva was supplying material for my plant, and I was general superintendent of the Pittsburg plant, but it was terrible material. So, I, in a scientific way, marked down all the problems that we had and documented all of that stuff. I went to my boss and showed how our performance was adversely affected.

Finally, one day my boss called me and said, "You know, we have a solution to your problem." And I said, "Well, what is that?" He said, "We're going to send you to Utah to be in charge of that plant?" I thought, "Oh boy, that's what happens when you complain too much!" I went over there, and I thought I was being sent to Siberia because no one really knew that area well. As it turned out, I was there for six years, and I really loved the place. [Utah] is where, at age 43, I took up skiing for the first time. [Skiing] became a lifetime activity, including this year. I have gone 54 years without missing a single year of skiing. But, anyway, that is the story.

### **31:21 Converting A Troubled Plant into an Efficient One – Improving Leadership and Communication**

Jedenoff:

I really built my life and strengthened my beliefs in that [Geneva Steel] plant, in converting it to a very efficient plant from a very troubled plant. [Geneva Steel] is where I developed this theory of shared competitive responsibility where employees share the responsibility for their own success, let alone improvement in the performance. I had a lot of trouble with organized labor. I had trouble internally because a lot of our supervisors just were not adequately trained. My first effort was to do our own job right – to do our own housekeeping, improve the leadership, improve the knowledge, and it all got around communications. You've got to understand what is involved and what is at risk. So, we started with that, by sending supervisors through six weeks of organized training, about 12 supervisors at a time, and that training approach became very important.

In the meantime, we communicated with the employees. The union put out their regular newspaper. At one point, they charged me with negligence and industrial immorality in headlines. But, gradually, as we solved the problems and improved our leadership and improved communications, there was an election of



the union officers. Two guys ran against the incumbent, who had been there to the point where they even called the union hall, the Wilford A. Biggs Hall. These two guys ran against him, and Mr. Biggs came out third of the three on the ballot. The theory there was that you got to do your own job right, and if you do your job right, then you can be as strict as necessary.

But, what was happening is that the management was not always that careful on what they did. So, they would have the strikes, and then top management could not defend them. So, that became an incentive for people to, even if they knew what they were doing was wrong, always to follow the union rule. I was not anti-union; I was anti-irresponsible union. Well, my theory here was that every person in the organization must have a viable job. If he has a job that is not important, get rid of it. Even though the union will buckle you for it, but you have got to get rid of it.

Every job that is viable has to be important. If it is important, it is just like in a football team. The ball carrier makes a lot of the yards, but there is somebody blocking for him who does not get much credit for it. But, if he does not block, the ball carrier cannot make those yards. So, we tried to build a same-team concept where everybody understands his role and why it is important and that any mistake he makes is not a mistake against management or one he can get away with. He is hurting his own teammates in their performance in trying to compete. We try to get that feeling of responsibility and the importance and the personal satisfaction that you get from doing your job right. Even if your job is menial, if it is important, it must be done, and mistakes made hurts the team.

### **37:05 Error Zero and the Theory of Shared Competitive Responsibility – Incentivizing Job Performance**

Jedenoff:

This is how we started this [Error Zero] program. We finally got to the point where we also had to have a tremendous amount of communications throughout this to understand what our situation was, whether we were competitive. We had a plant that was no longer in a place where there was a market. So, we had to compete with the West Coast, 800 miles away. You have got transportation charges; you have got materials, some which are not as high grade. We have to overcome all those things in order to be competitive. We could not afford mistakes. We call this Error Zero. I started this program where we are relying on everyone to do his job better. We had incentives for better performance.

We would talk to our employees; a foreman would call in guys and say, "Look, we got this problem. What can we do to solve it?" So, now he is asking them for help. Now, they become involved in doing this, and they get the personal satisfaction of being on the winning team. That is what we would build-up, and it took time. It took several years; it took training. It took a lot of personal change in attitude. Once they could see results, and they could share in the success of it, then the wrong performance improved. They felt better. They felt they were going to work to do a job, not just to get paid and not to just go through the motions. This is what took years to do. We converted this plant to the highest dollars per ton produced profit of any plant in the US Steel Corporation.

Not total profit but profit per ton because we were not as big as some other plants. The [Geneva Steel] plant gained quite a bit of success. In the West Coast, we got hit by foreign competition right away. The rest of the country did not really feel it, but some ten years later competition, foreign competition, was affecting the whole country not just in steel but in all products. There was a lot of concern of what is the matter with American productivity. Congressman Charles Gubser was on the foreign relations committee of Congress. He called for an all-day meeting and got ahold of all the top business people, corporate leaders in all industries to come to this conference.

The Chairman of US Steel was invited, but he called me in and said, "You know, you should go in there, George, and represent us". So, that was quite an honor. I spoke to Congress on what we did. Again, it was shared competitive responsibility, and it was very well received by the Defense Department and by NASA. They were all very complimentary with what they heard. So, that was really an important experience in my life.

#### **42:23 Work Duty, Personal Satisfaction, and the Importance of Listening – Outcomes of Error Zero**

Mackinnon:

What are some of the results of the Error Zero program?

Jedenoff:

Yes, there were some very interesting results. There are the typical ones that certain operations where work was done better. Here is an example, there is an operation called stopper-making. A worker performs manual labor in installing the stopper that fits in the ladle that the steel is poured in. The problem is workmanship, and sometimes you develop leakers, which leaks some of the molten steel. So, it is a very skilled operation but manual. It is interesting how the ladle stopper-makers took the program and would keep score of the number of consecutive ladles that they fixed without a leaker. Some of them were able to double the performance that they had before. Of course, they had to be very proud of it, and it became competitive among the employees. This performance improvement resulted in big dollar savings.

Another example, in my office and at the steel plant in Geneva, my assistant, Carl Forkum, and I each had an office, and then there was an office in between which his secretary and my secretary shared. One time, I came in, and there they were reading to each other. I said, "What's going on?" And, they said, "Well, you know, we've been typing out these letters to employees and others about error-free work. We just decided that, by gosh, there was not going to be a single letter going out of this office that had a mistake in it. So, we were checking on each other to see." I thought, gosh, here is something they took on all by themselves.

Another unusual example is in our work duty, where occasionally we have employees who get injured, and they no longer can perform their assigned job. So, we try to provide other employment for them. This is a case of a rigger, which is a pretty high-priced guy, who fell and injured himself. He was no longer able to perform his job. So, he got a job as a custodian in the men's change room. That is kind of a menial job, but this rigger got the message, and his job now was a custodian not a rigger. He thought, "We got all this talk about workmanship and neatness and whatnot, and these change rooms are messy. Sometimes the toilets are not flushed and the papers on the ground. So, I decided that I was going to make this change room as neat as could be so that when employees come to work, they see right away a clean place, and it encourages them to do better work." And, he just did this on his own. Then, he felt so much better that he was now really contributing to the program, even if it was not a skilled job. There were hundreds of these kinds of examples that occurred that not only improve the performance but gave personal satisfaction to the employee involved.

Let's see, there was one more thing. One thing I have learned over the years is that you have to learn how to listen. Now that has taken a little effort on my part. If you are trying to understand a person, what he is doing and try to help, you got to also listen to what is involved. You may disagree with him, but unless you hear what his story is, you can never come to solution. So, listening is very important, and staying positive and communications are so important. That is what brings about understanding. So many problems could be solved if people tried to listen to what the other person's viewpoint is. You may not want to accept it but at least understand why. That takes a certain amount of maturity on your part and discipline to do that, and

I think that is very important.

## **PART 2**

### **00:19 World War II Naval Service – Restoring Planes from the Boneyard to the Battlefield**

MacKinnon:

You mentioned that your work was interrupted by your Naval service and World War II. It sounded like you gained some very valuable experience there that served you well later on in your professional career. Tell us more about that experience.

Jedenoff:

One of my assignments after I went to naval boot camp and learned, what were called Rocks and Shoals, Navy regulations, and whatnot, we were assigned for duty. Because of my engineering experience, my first assignment was to the Douglas Aircraft Plant in El Segundo, California. Their problem was that they had a boneyard of over a hundred airplanes; all were missing parts or had some problems. So, how do we get these to the battlefield instead of in the boneyard? Our government assigned a group of naval officers working with Douglas Aircraft Plant to try to solve these problems.

As an example, we had a problem in the assembly of the landing gear; it was always behind schedule. In that department about 90% of the employees were black, and many felt that it was because black employees did not work so hard. Well, I felt that was bologna! So, I talked to them, I looked around, and they had several different supervisors. I said, "You got mostly black employees; why do you not pick one of them and make him the supervisor of the group?" And, we did. Before long, that group was producing about twice as much as it was before. It was just an example of people solutions rather than technical solutions. I think a hundred percent of the problems in this world are caused by people, not by machines, by breakdowns, but behind every [problem], there is a person. That is why the people end of it appealed to me so much.

### **03:22 People Solutions Over Technical Solutions – Employee Participation**

Jedenoff:

Back to employee participation, there was a couple of things, and I did not start either one of these. We had a division that made wire rope, wire cable, and the general foreman, Charlie Romani, was a real people guy. He got employee interest, and he had probably the best housekeeping of any wire rope mill in the country. He got the employees to take a personal interest in what they were doing in their workplace. For instance, these different machines would work around the clock. So, when an employee came in for his shift, he put his name tag on his unit that says this machine is operated by Joe Jokes. So, at the end of the day, he takes that down. The next guy comes in; he puts it on there. So, you put a face in with a machine, and then these guys would show pride in what they were doing. He got them, when there would be a breakdown or a delay, instead of them just sitting on their rumps, like they do at most places, he got them to clean up around the place, clean excess oil off the machine, wipe this down, so that the workplace was one he could be proud of.

It was amazing how that department worked. They all had this pride, and Charlie did a real great job. Later on, when I was in charge of a number of steel plants, one of which was Homestead Works, we had a huge machine shop because there were about three or four steel plants in the area. Instead of investing for expensive machinery in each plant, we supported one large shop at Homestead Works, the big shop we

called it, which would provide the mechanical services for the other US Steel plants that were in the area. The guy who ran the big shop was Steve Simco. He was an amazing guy. He came up through the ranks. He did not have a college education, but he had the feel for performance.

He had a committee of wage-earners who would select the worker of the month for his performance. This became such a recognition effort that when the people would get this appointment, they would invite their families to come over. I have had some of these people actually cry from the emotion of being selected as the craftsmen of the month. That was Steve, that is the way he ran this place.

### **07:50 Technical Degree or Job Performance – Leadership Where It Counts**

Jedenoff:

It is interesting, later on in the modernization program, there was a bunch of new computer-operated machines that were bought, and they wanted to pick a superintendent for the shop. They looked around, and the general superintendent of the steel plant said, "Well, here are the names of the guys that we want to pick, but they are all college graduates except Steve." I did not put his name down because I think I would be criticized by upper management for not having a technically trained guy with all this high-ticket equipment.

We talked it over, and I said, "Well, is he going to do all this programming himself?"

"No, we are going to have guys that are going to do this." I said, "Well, who is going to get the best performance out of the people, even if he does not have a college degree?"

"Well, I think Steve would," I said. "Well, let's pick him." And, that is what we did. Sure enough, he inherited this high-tech stuff, and he delegated and learned as he went along and ran it. So, there again, sometimes we overstress a college degree. It is a great thing, and on the resume, it is super. But, it is the performance that counts. I think if a fellow has a college technical degree and has performance, [this combination] is going to be pretty hard to beat. It is what you put into that job. We have had, in our promotional program, not just a college degree, but we left openings for people like Steve, who could learn a lot of the management things because of their leadership.

### **10:46 Career Challenges at US Steel – The Boss Becomes the Student**

MacKinnon:

George, what were some of the key highlights and challenges during your career at US Steel?

Jedenoff:

Steelmaking is a very extensive process and knowing all the operations is important. This is where the Association of Iron and Steel Engineers, of which I have been a lifelong member, was very helpful because it provided background to know these things. I started in the finishing operations of this new, modern plant in Pittsburg, California. Then, when I got sent to Geneva to so-called "straighten it out", I realized I really did not know those operations. So, I started a self-conducted training program. Every Saturday afternoon and Sunday, while my family was still in California, I would put on work clothes and assign myself to one of the departments, like the blast furnace department. I would ask for the general foreman to be my teacher for that day. At first, there was a lot of misgivings in what I was doing. Also, I did not want the general foreman's boss to feel that I was spying on him. Once they understood that I was sincere in wanting to

learn how that operation worked, I got very good cooperation from the people. In fact, a couple of times, the wife of the general foreman, knowing I was coming over, would fix an extra sandwich for me while I was en route with them.

It gave the general foreman a chance to show what he knows about it and also to learn from me about the broader picture. So, every week I went to a different operation, and they got used to the idea that I was doing it. Even though I was the boss, I was just the student during that time, learning what the problems are, what they were involved in. That was extremely valuable to me. So, that was one of the challenges. I relied considerably on the AISE and their articles, and this was very helpful. There was another big challenge, when I went to Gary, there were still new facilities. But, I did not have the self-conducted program there; I was picking it up as I went along.

#### **14:58 Combating Racial, Political, and Technical Challenges – Modernization of Gary**

Jedenoff:

The challenge was that, of course, there is always the competition; it is involved. But, my real challenge was how do you get performance and workmanship out of your people? I ran into that problem at Gary. Gary, even though it was the pearl of the industry, it had lots of problems, racial as well as technical. It was interesting, the political aspect. Gary was built in 1906, and the town of Gary was built to support the steel mill right at the bottom of Lake Michigan. So, when they built the town, the mayor of the town was selected by US Steel, and he was a Republican.

He was the last Republican that they had at Gary; ever since that time, they were all Democrats. When I arrived the mayor of Gary, his name was Martin Katz. He was not running for re-election, but he decided he was going to try to improve the racial problems in the town because the town of Gary was about 50% black and the other 50% were East Europeans that came over that worked the steel mill in those days. He had a committee for racial improvement, and he picked me to be the co-chairman and the management representative. A fellow named George Coker, who was black and head of the urban league was selected co-chairman to represent the town's people.

George Coker turned out to be a wonderful person and a great friend, very capable, and we worked on many things together. So, our problem was to try to improve the situation. It was especially true in the city of Gary because there was a housing shortage. There were a lot of unemployable blacks, people who had gotten in jail or in trouble. In some cases, there would be six or eight of them that would be living in one room. How do you solve this problem? There was a democratic administration in Washington, and they granted a number of requests for modernization of the city of Gary. The problem was they could not move the people out of these places because there was no place for them to go in order to make the modernization.

So, one of my responsibilities was to try to work with the city of Gary to see what we could do to take care of the people and to enable the construction of these facilities. That was one of the challenges. It turned out that I was able to work out a program with US Steel to build 280 apartments, financed partially on a loan from the US government. That permitted many employees to be moved to these facilities while other parts of the city could be modernized. Anyway, that was a complicated program. If you look in the book that I wrote, that we will cover in a few minutes, it describes in considerable detail what we did in order to solve this problem.

One other problem was the challenge I had to face was that I was a Westerner. In the steel industry, most of the managers are all from the East, and they looked upon a lot of us as Indians. The challenge was winning a position to move up in spite of the fact that I was from the West.

## **21:17 Consulting Experience**

MacKinnon:

Well, George, you definitely tackled those challenges. Going back to your football career, that is something you do great, tackling challenges. I also read that, in your retirement, you worked as a consultant. How did you like that experience?

Jedenoff:

Yes, that was very interesting. It was very low key, and it involved, oddly enough, people. Finding people for some operations that were needed and through my experience, and through being National President of the Association of Iron and Steel Engineers, it was called in those days. Through other assignments, I got to know a lot of people in the steel industry all over. I was able to suggest people that would be experts in fields. I also helped various [people], like Kaiser Engineers, to get business by contacting people that I knew.

MacKinnon:

Sounds great!

Jedenoff:

One of my more unusual experiences was to be a consultant for Southern Pacific Railroad Company. What happened is that there was a major downturn in business and Southern Pacific had cut costs. So, they retired early a number of executives and cut down on maintenance and other items. Well, lo and behold, suddenly there was a big pickup in business, and they could not face it. They had let their head of their maintenance go, and they had all these locomotives that were not fit to be operated. They had to select someone they had employed an engineer, who was an excellent engineer in the railroad, but he had no management experience. So, Ben Biagini, the Chairman, called me in and said, "I want you to take Mr. Burns here and work with him, and see if he can handle that job, and then come in and tell me."

I said, "Well, I cannot help him and spy on him at the same time. You let me work with him, and, if he cannot do it, he will come in and tell you that he cannot do it. I'm not going to do it." And, he said, "Okay." I worked with this guy who was working day and night trying to get these problems solved. My first challenge was to convince him that I was not trying to get his job or to spy on him. I was there to help him. And, two is that he was so busy himself that I was mindful of taking up his time when he had no time to spare. Gradually, I worked with him, and he was a very bright guy. He used me for a sounding board, and he would say, "You know, we have got this meeting coming on, and I had a couple of ideas, but I do not want to be laughed out of it because they are different. What do you think?"

I said, "Well, let's discuss it. If you're going to take a risk, then you got to look at your fallout position, or plan B, and the bigger, the risk, the better the plan better be. [MacKinnon: Absolutely.] Then, you can fall back on it, if necessary. Let's discuss that."

So, that is kind of how I worked with him, and he became more confident, and he was able to really impress Biagini, the Chairman. That was kind of a fun experience. One of his places was managing the various repair shops. Well, managing a shop was old hat to me. So, I even said, "Well, I will help you; I will work with these plant managers in Sacramento."

## **26:31 Improving Productivity for 25 Companies**

Jedenoff:

There were about four or five of these shops. I worked with them to improve their productivity. A couple of plant managers were new in their jobs, so I helped them to organize. It is interesting that I mentioned this Steve Semco in Homestead, Pennsylvania. And, I got a hold of Steve, and I said, "Steve, I got three guys who need some of your background, would you talk to them?" I got permission all the way around, and Steve's manager was a previous employee of mine. He went out of his way to help. So, we flew these guys over to Homestead, and Homestead put on a real show of how they get employees motivated to work.

As we went along that way, and the chairman of Southern Pacific was pretty pleased. But, he had another major problem. One between what we call the production department and the sales department, regarding what Southern Pacific could take on and what the production department could perform. Instead of snapping at each other and pointing fingers on each other, what can we do to work together with a plan that would improve the performance of Southern Pacific and run the place more economically? So, I worked with them, and it was interesting. At one point, there were loggerheads at a compromised position, and Biagini called a number of these guys in and called me an outsider. He says, "I'm sending all of you over to the John Hopkins hotel, nice hotel in San Francisco, and, you guys, you're going to stay in there until you come out with a plan. You're not going to leave. You're going to stay there until you get this resolved."

And, he said, "George, I want you to go with them." Gosh, here I am, an outsider. But, at the same time, I had independence that others did not have. We were having these meetings, and I listened, and, pretty soon, I hit the table, and I told these department heads, I said, "You guys are just going around, loggerheads, you got to solve those problems, quit holding your position. You have to change it in order to make it go." And, we did that. So, I had a number of assignments like that with the Southern Pacific Company, which are all different, and I got paid for it, and it was fun.

MacKinnon:

Excellent!

Jedenoff:

There are a lot of other experiences, too many to cover, but most of them involved finding a top executive for something. There was a steel plant here in the bay area, and they needed some knowledge. The guy that used to be my assistant at Geneva, while I was doing all the motivation activity, he did all the technical supervision. I could not have gotten along without Carl. He was excellent. At first, when I moved up at Geneva, he thought he should have the job, but he was a great guy. We developed a wonderful working relationship. So, when this opening came up as Vice-President of operations, I said, "Well, why don't you pick Carl? He is available." So, he got the job, and he did an excellent job for them.

There were a lot of personal things like this. I used to laugh and say, "You know, this is a great job. I make a lot of recommendations that I would have made to my employees, and they ignored them. Whereas here are these guys paying me, and they are going ahead and doing it." I said, "That is a lot of fun."

MacKinnon:

Amazing!

Jedenoff:

I really enjoyed it, and you could kind of go at your own pace. I made a list the other day. I think I had 25 different companies that I did a little bit or quite a bit of consulting for. So, that was interesting. But then, I developed cancer, and I had to stop because I was not able to perform. That is all in the book [My Centenarian Odyssey], you can read about the details of that.

### **33:12 Traveling the World with My Wife**

MacKinnon:

Definitely. So, George, I know from your long and very exciting career that you were able to travel to many countries, and that your wife Barbara was sometimes able to accompany you. What is one of your favorite travel memories?

Jedenoff:

Oh, gosh, we made so many! Actually, I found China just fascinating. I got to see the big dam that was built, the world's biggest. I got to see that as they started and then got to see it some six years later when it was almost finished and the big lake that was formed behind the dam was about two thirds along. That was a tremendous project, but the whole experience through China was very interesting. I kind of looked over the list, and I think I made about a hundred trips all together. Barbara went with me maybe on four or five of these. Then, we went after I was retired; she went on a lot of trips with me. We traveled almost everywhere and enjoyed it very much.

### **35:06 Most Tech-Savvy 103-Year-Old**

MacKinnon:

Wonderful. Now, what milestones in the industry do you think have had the biggest impact on the industry over the years?

Jedenoff:

I think computers probably as much as anything. I think there has been a lot more scientific applications given to the steel industry, which has just jolted it up in performance. See, I still have my little iPhone. I also have an iPad, and I have this iMac that I'm working with. Not too many people my age do that.

MacKinnon:

I was going to say, you are, by far, the most tech-savvy, 103-year-old, I know.

Jedenoff:

I have a couple of grandkids that are real tech savvy, and they help me.

MacKinnon:

I love it.

### **36:30 Giving Back to the Stanford Community – Awarding Educational Opportunities**



MacKinnon:

Now, George, I read that you were recognized by Stanford with the prestigious Stanford Medal. Why is this the award that you are the most proud of?

Jedenoff:

Because Stanford had provided me with so many things that I did not have. I have been so anxious to try to pay Stanford back for all it has done for me and try to make the same kind of opportunity available to others who perhaps would not have a chance to participate. Stanford has a wonderful program of need-blind, which means in spite of the fact that there are about six or eight applicants for every one that is accepted, the financial ability to pay is not important. Depending on if the person is qualified, the payment of the tuition and education depends on the family's ability to pay.

If [the applicant has] no finance available at all, that applicant will get a complete scholarship. So, it is wonderful. It was not that easy when I went through, but I worked on some 75 years of a volunteer service for Stanford in gratitude for the opportunity it gave me. I received the Stanford Medal, which goes to three people a year for exceptional volunteer activity to help the school. I was very proud of that. It builds for the future. I have helped set up scholarships and fellowships in both the Graduate School and in Engineering. Then Barbara and I have established a scholarship in Engineering and one in the Graduate School of Business. I wish I could do more, but that is one of the awards that mean most to me.

MacKinnon:

Wow! You have made such incredible contributions to the Stanford community.

Jedenoff:

Well, look what Stanford has done for me.

MacKinnon:

Exactly. Two-way street.

#### **40:12 A Wonderful Life – My Wife of 74 Years, My Strongest Supporter**

Jedenoff:

I have placards all over. I have trophies and placards for services for the Boy Scouts, the Chamber of Commerce, and such from the different cities I have lived in. One of the things that has always appealed to me was trying to pay Stanford back for the wonderful opportunity it gave me. I mean, it gave me an education. It gave me a wife that was extremely important by life. We were married for a little over 74 years, and she was my strongest supporter, strongest backer. Her personality was entirely different from mine, which is a good thing. She kept a stable home. When my folks separated when I was 11, I was determined that this was not going to happen to me.

So, Barbara and I developed this relationship of the important thing is us, not you or me, but us. So, we tried to talk things out and tried to decide which one had to maybe give in a little bit so that us was the important thing. We followed that pattern, and Barbara created just a wonderful home for me. Much of my

success was the result of having peace and love at home and support. Barbara also had a very keen sense of honesty and fairness. She would not tell me what to do, but if I asked her for what she thought about something, she would give me an opinion, which was always good. That's how we lived, I think very happy in my married life.

We had no children of our own; we took risks. We adopted two kids before they were born, we were willing to take the risks, and it turned out to be one of the best decisions we ever made. We have a wonderful son and a wonderful daughter. We solved that problem together. We solved many problems together. I lost her just two years ago, but I'm so grateful for the wonderful life that she gave me and, in our relationship, I'm so grateful for something that very few other people have enjoyed.

#### **44:34 Philosophy and Responsibility – Look at Problems as Opportunities**

Jedenoff:

This brings me back to philosophy. I think one of the important things in life is to be grateful for what you got. I'm always so thankful for any help that has been given to me, and I appreciate it, and I try to repay in kind. As part of living, the important thing in life is to be happy, and you cannot be happy unless you are positive and you are willing to discipline yourself to look at the good things that you have, and not be overburdened by all the problems that you have. Look at problems as opportunities. If a problem comes along, get the joy of solving that problem rather than letting it throw you for a loop. Stay positive of what you are doing. That is part of living.

People say, throughout your life; you have been granted a lot of promotions. How do you get promoted? I just took the step early in the game, saying that, regardless of what job you have, do it to the very best of your ability. Try to do it better than what anyone else will do. At the same time, try to learn, grow, and then look at the next job and try to prepare yourself for it, but only after you have tried to fulfill all the responsibilities with the job you have. Even a job as a foreman say, okay, he has got 20 employees. That is not much of a job. But, there are 20 lives that are dependent on how you manage your job in leadership; their own welfare, their happiness, their job satisfaction depends on how you conduct yourself. Try to use that philosophy all the way up, and you got to be honest with yourself. You do not deserve the job unless you earn it, and you do not earn it unless you have the performance. So, that is my advice to anyone who wants to go up. Do not just look at the job ahead of you. Look at what you got now. Are you doing that to the best of your ability? And, then responsibility is awesome. Fulfill it first.

MacKinnon:

Great piece of advice.

#### **48:29 Life Member of AIST – Learning All Your Life**

MacKinnon:

Now, I understand you are a life member of AIST, having joined its precursor AISE. Why should young professionals in the industry also become members?

Jedenoff:

Well, I think it is the foremost technical association that can provide knowledge and training to people. Learning has to be a life-long process. You do not just go to school, and then that is the end. You have got

to learn all your life. I try to study, learn even now at this age; what am I going to do with that knowledge? Well, you got to keep it up, and you got to stay active. AIST, which it is now, is a great organization to help you technically and also to get to know people in the business. As you have contacts and you have a problem, then you can feel free to call that person for help or advice. At the same time, you got to make yourself available to help someone else who needs it. That is what makes the world go around. I think it is a great organization for that sense.

MacKinnon:

Absolutely.

### **50:26 Skiing, the Dessert of Life**

MacKinnon:

As a young professional involved with AIST and an avid skier, George, we have a lot in common. So, what has been one of your favorite ski memories?

Jedenoff:

Deep powder skiing is what I love. Physically, it is a little tough to handle now, but I love the powder. But, there is also the association, the fresh air. I remember when the kids were little, I would take them up on the chairlift, and it is amazing how, on a beautiful day with a purple-blue sky and snow around, fresh air, how suddenly they start talking. Where, at other times, you cannot get a conversation out of them. It just brings around the closeness. I think some of our best discussions have been on the chairlift, going up on the ride.

They will say, "How do you feel about skiing?" I said, "Well, I love it. To me, skiing is like dessert. After you have had a good dinner, then a dessert is great." But to live just on dessert, I cannot see that. There is too much in life to just devote it all to skiing. At least, in my opinion, you have got to stay busy. You have got to utilize the talents that the good Lord gave you. You have got to do something for which you are proud. Those are all the main course and then have a dessert afterwards, like skiing. It makes it a complete life. That is how I feel about skiing, and it has served me that way now for some 55 years.

MacKinnon:

I love it.

### **53:10 Long Lasting Advice – Stay Happy and Live Your Life Constructively**

MacKinnon:

Wow! George, like you, I love skiing, and I also loved reading your book, My Centenarian Odyssey. There were so many valuable lessons in there and great stories. So, I highly recommend that everyone take the time to read it after watching this oral history interview. Now, are there any stories that you would like to share with us now or any other philosophical observations?

Jedenoff:

Well, I think it is very important to live your life constructively. To make use of your talents and maintain a

positive, optimistic viewpoint. There are problems that develop. Unexpected things happen, and sometimes those overwhelm us, but we lose sight of all the pluses that we have. I think it is very important, and this takes self-discipline on your part, to look at the good things you have and compare it with the problems. You will find that you have a lot of needless worry and unhappiness from overstressing the negative. A glass is half full or half empty, but it is still the same amount, and it costs you the same to be happy as it does to be unhappy. I think part of living happily is to overcome the fears and the bitterness that comes from problems.

I think that has a very definite aging effect on you. Do the best you can. Be satisfied with what you are trying, and let that be the plus sign to be happy in your life rather than just another problem. I have been fortunate to maintain a positive, progressive attitude all my life. I'm sure that it has helped me in my longevity. I also believe you have to have a lifestyle where you exercise moderation in your food, in your drink, in your various activities. I maintained that part of my success is an exercise program that I started some 36 years ago. I try to exercise every single day, even today, for 45 minutes to maybe an hour and a half every day.

Knowing the problems of maintaining a rigid schedule, I try to do my exercise before breakfast so that the interruptions that come up would not deprive you of the habit that you have. So, if you do your exercise and then go ahead and have breakfast, it is a habit that you can maintain. There are times when you just do not feel like it. Well, do not let yourself talk yourself out of what you know you got to do. You got to do that exercise. I think that has helped me a lot mentally and spiritually. But, the main thing, stay happy.

MacKinnon:

Excellent advice! George, thank you. You have shared so many amazing pieces of advice with us, and you have had such a truly incredible career and life story. As a young professional and avid skier, it was an absolute pleasure to be able to spend this time with you for your interview. So, thank you very much again for your kind willingness to share your story with AIME.

Jedenoff:

Surely, thank you so much.