



Sloan Career Cornerstone Center

Profiles of Mechanical Engineers



Beth Lemen

**Site Operations Manager, P&G Pharmaceuticals
Procter & Gamble
Cincinnati, OH**

Education:

BS, Mechanical Engineering, Clarkson University

Job Description:

Site Operations Manager, managing operations at sites operated by contract manufacturers. Also responsible for setting up manufacturing and process facilities.

Advice to Students:

"Junior year tends to be the year where you get bombarded. You get more into your major. You start taking classes that are specific to your major, versus compared to having all the general ones, and taking all the same courses as all the other engineering students. So, junior year was a big step up. That was definitely more challenging."

Comments:

Beth's work takes her beyond straight engineering into manufacturing, marketing, and purchasing. She feels that it's important for students to get a broad sense of engineering by taking a variety of courses. In her work she deals with problems that involve civil, chemical, electrical, industrial, and yes, mechanical engineering.

Video Transcript 1:

"I chose the companies I wanted to work for. Because I had taken the manufacturing systems concentration, I was gearing more towards using my engineering degree, but in a manufacturing type setting. Procter & Gamble happened to be one of the companies that was looking for people with engineering degrees, for manufacturing. I went through the interview process, and this company and the role I was going to be in matched what I wanted to do at the time."

Video Transcript 2:

"I think it's a great career, especially now. Most of -- most companies, even if you're being hired for sales, if you're being hired for manufacturing, they are looking for engineers because you may not use your technical book knowledge, but you've learned to problem-solve, and you've learned to analyze problems. You've learned to analyze data. You've worked in group settings, so you've learned team dynamics and how to work with people."

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Video Transcript 3:

"In my first assignment, I was a team manager. Basically, I was responsible for three packaging lines, and all the technicians that worked for those people. Within that role, though, I wasn't just a supervisor. I had to lead projects, coach the technicians. So, I went in, you know, understanding how a packaging line works, or being able to figure that out from my schooling, but where my biggest growth was, was working with people, working in -- with a team -- in a team setting. Resolving conflict."

Interview:

Lemen: I use what I learned in college, but I learned more of the skills than the actual formulas and text that I learned. I don't use my thermo-dynamics and fluid mechanics as much. But I do use a lot of my problem-solving skills; analytical skills; teamwork skills, by working on projects. As a woman engineer, I do not feel that my skills have been overlooked in the workplace. In one of my roles I work very closely with an engineer who seeks my advice on our projects, because he knows that I have technically sound ideas, that I know what I'm talking about, and that I work well with people.

Q: If you could just state your name, your age, your title and the company you work for; just for the record.

Lemen: OK. I'm Beth Lemen. Twenty-eight years old. Site manager for Proctor & Gamble Pharmaceuticals.

Q: Beth, how did you decide to be an engineer?

Lemen: I started out wanting to be an engineer, in high school. Just through being very good at math and science, and getting coaching from my guidance counselors. When I started looking at schools in-state, I looked at chemical engineering and mechanical engineering. Any school that had either of those. When I first started college, I actually went for chemical engineering. I took two semesters of chemical engineering, and decided it wasn't really what I wanted. I thought I wanted it because I was good at chemistry. I then took a semester of a mixture of courses. I took some electrical engineering, mechanical engineering, and one civil engineering course, to try to feel for what I liked. And the courses I tended to excel in, understood, could reapply, were mechanical-engineering courses. And, so, I switched my major, my sophomore year. Went to school, over the summer, to catch up with my classes. And I've continued on from there.

Q: How did you find the work in college? Was it extremely difficult for you? Or were you pretty evenly matched? How challenging was it?

Lemen: At first, I feel I was evenly matched. Junior year tends to be the year where you get bombarded. You get more into your major. You start taking classes that are specific to your major, versus compared to having all the general ones, and taking all the same courses as all the other engineering students. At least at the college I was at. So, junior year was a big step up. That was definitely more challenging. And, in my senior year, I was able to finish off my mechanical engineering courses, as well as take a manufacturing concentration.

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Q: Of those classes, especially your junior and senior year that you took, do you still apply that to what you do, now? I mean, do you still use what you learned in college?

Lemen: I use what I learned in college, but I learned more of the skills than the actual formulas and text that I learned. I don't use my thermodynamics and fluid mechanics as much. But I do use a lot of my problem-solving skills, analytical skills, teamwork skills, by working on projects. My role is not as an engineer. My title is not an engineer. But I use the skills I learned versus all the technical knowledge, to do what I need to do.

Q: How did you get your first job? What led you to your first job, right out of college?

Lemen: I went to Clarkson University. And they have a placement program. Basically, your senior year, you are interviewing. They have an interviewing program. You get to select companies you want to interview with. You interview on campus. And so, through that, I chose the companies I wanted to work for. Because I had taken the manufacturing-systems concentration, I was gearing more towards using my engineering degree, but in a manufacturing type setting. And Proctor & Gamble happened to be one of the companies that was looking for people with engineering degrees, for manufacturing. I went through the interview process, and this company, and the role I was going to be in, matched what I wanted to do at the time.

Q: Where did they start you out? What was your title, then? What were your responsibilities? What were you doing in the first job?

Lemen: In my first assignment, I was a team manager. Basically, I was responsible for three packaging lines, and all the technicians that worked for those people. Or worked on those lines. I was in that role for quite a few years. Within that role, though, I wasn't just a supervisor. I had to lead projects, coach the technicians. I was on a new product start-up, which involved new equipment. Starting it up, running it, writing reports, running process-capability runs on pieces of equipment. Doing that type of work.

Q: That's a pretty big job for someone just out of school.

Lemen: Yes, it was.

Q: How was that transition? I mean, that's a lot of responsibility, based on an undergrad education -- you just got your bachelor's?

Lemen: Bachelor's. Yes.

Q: And then you went to a management position like that. How was that transition?

Lemen: It was tough. Most of the people that worked for me were much older than I was. You don't take courses on how to manage people, in college. At least, not the college I went to. You didn't take courses on, you know, how to communicate with other people. So, I went in, you know, understanding how a packaging line works, or being able to figure that out from my schooling, but where my biggest growth was, was working with people, working with a

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team -- in a team setting. Resolving conflict. So, it was a big challenge. Like the coaching I got, the courses I took, within the company, helped me with that piece of it, and the engineering background actually was a benefit, because I didn't have to worry as much about the technical piece. I still had to learn that, but I had a good basis for knowing that. So, that piece was fairly easy, compared to the other side, which was the people-oriented side.

Q: So, that was your first job at P&G, right out of college. Where did that lead you? Kind of walk me through your past, at P&G. And your second job -- and what your responsibilities were.

Lemen: In my first role, besides being, as I said, a team manager, I also had some project responsibilities, and worked a new product start-up. From that, I went into a process-engineering role. And in that role, I still supported the packaging team. But I had no one reporting to me. So, I worked on improvement projects. We'd start up a new piece of equipment, and I took on a different role, ensuring that the lines started up correctly, everything was in place. I worked in a pharmaceutical plant, so we were under manufacturing procedures for drugs. So, I had to make sure that the line met those requirements, as well as our internal safety requirements. Made sure the equipment checked out, etcetera. I also had projects dealing with internal systems, internal procedures, trying to streamline those, make things simpler. Less complicated. More efficient. I've only been in my current role, which is my third role with P&G, two months, basically. I am going to be the site-operations manager for a contract manufacturer, on a new product that we're working on. And I'm in charge of the TGNP audit follow-up, which is basically making sure that they are ready to meet our requirements to run the product there. I'm also going to be, when we start production, the site manager, which includes being responsible for cost, quality, making sure they meet our production needs. So, basically, being the interface between P&G and the contract manufacturer.

Q: You've just recently relocated?

Lemen: Yes, I did.

Q: Now, how is that -- how do you feel about it? You asked to be relocated?

Lemen: I asked.

Q: How was it to be relocated with the company?

Lemen: It was great. Everything is taken care of for you, basically. The move. The move, the packing, the unloading. The trip to come out to see the area. The house-hunting trip. Everything was taken care of. I really didn't have any worries. I wanted to come to a bigger area. The plant I came from was in a smaller town. So, this has been really good for me.

Q: Now, do you have your PE license?

Lemen: No, I don't.

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Q: Do you see any value in that? What are your thoughts on that?

Lemen: I'm looking at other engineering opportunities, either environmental or packaging engineering. In the role I'm in now, I don't think it would make a difference. I'm in product supply and manufacturing. I'm not in an engineering assignment. I'm not in an engineering function. So, right now, I don't think that would be as valued. I do want to work towards it; so as I move towards a more technical assignment, I'll have that background and I'll have that credibility.

Q: Are you away from the real technical part of mechanical engineering? And going to the part of manufacturing?

Lemen: I enjoy working in manufacturing, even though I have an engineering degree. It gives me a lot more variety than what some of my friends have had in engineering roles. I've worked with marketing, I've worked with sales, I've worked with purchasing. I've worked with quality assurance. So, I've worked with a lot of different groups, and got some different experiences that most people wouldn't have in a strict, traditional engineering role. I do want to get into a more technical role. I do miss, at times, that part of my education. Using that part of my education. And, in fact, the role I am working towards next, is a more technical role that is in engineering. But I don't miss it, because I see that there are benefits outside of pure engineering.

Q: It sounds like you've worked with a lot of different people. Is it strictly "work only?" What's that like here?

Lemen: In my experience, I have found that I work and socialize with the people equally. Most of my time was spent at another site, and it was much smaller. You got to know everyone very, very quickly; very closely. You worked with them, and you did just about everything, outside of work, with them. And that was, I think, overall, a benefit. Because you got to know the people when you worked with them. You understood where they were coming from. You understood their background. What their values were. And, so, when you were working with them, you understood why their view may be different than yours, and it helped you come to resolution, reach consensus much faster. I've only been in my new assignment, in Cincinnati, for two months. So, I'm still meeting people. From observing, I have found that quite a few people do interact socially, outside of work, as well as at work. So, I just haven't had that experience, because I'm still meeting people.

Q: Did you log a lot of hours per week? Is it about average?

Lemen: In my manufacturing assignment, when I was a team manager, I had people across three shifts. Two to three shifts at any given time. So, there were times when I'd work, easily, twelve-hour days, most of the week. And most of the other managers I worked with did the same thing. It was very odd to work an eight-hour day. But there was a lot of camaraderie and a lot of support, and you didn't really think of it as abnormal, because everyone did it. In my new assignment, I've balanced my personal life, or outside-of-work life, a little better with my work. I work approximately ten-hour days. If there's a big surge, you know, you work the time you need to. I haven't had that, yet, because it's new. But I'd say, the average is ten-hour days.

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Q: How do you balance your personal life, outside of work? And work? What's your philosophy on that?

Lemen: I started out, out of college, being a workaholic. Basically. Twelve-hour days were the norm. Sometimes longer, depending on the problems we were having. Sometimes less. What I have found, in the roles I've been in is that I can make my schedule. And especially now, being in a different environment and sort of starting fresh, I've been more conscious of making sure I do what I need to do to take care of myself. What I've found is, when I get distracted at work because something outside of work is not being taken care of, then that doesn't do myself or the company or the job I'm doing any good. It tends to suffer. And it took me awhile to learn that. Now that I have, I basically make sure I'm taking care of what needs to be taken care of. I've been able to do some of that at work. And if I need to, I take work home. So, I've been able to find a way to balance that, without making my life or work suffer.

Q: What do you like to do in your spare time, now?

Lemen: In my free time -- I love sports. So, I'll run. I'll go to sporting events. That's one of the good things about moving to Cincinnati, there's a lot to do. I have gone to music concerts, most recently. That's been the easiest thing to get -- to go out and do, in Cincinnati. I'm going to plays. I like to read. I just bought a new house, so I've been working on that. So, just about anything. As long as I'm not bored and just sitting around, then I'm happy.

Q: How did you learn to be a good manager and a good leader? How did you acquire all those skills?

Lemen: At P&G, when you're a new team manager, there are courses you can take. Helping others succeed. There's leadership training. There's leading team meetings. There are all sorts of skills you learn. And you take classes, and, actually, during the classes, you not only learn, you actually do role-plays in those training courses. So that you get to use your skills. But one of the things that I found that helped me the most was just working with the people. You have interactions with them on a one-to-one basis, when you're a team manager. So, I basically talk to my team and ask them, you know, "What do you need from me? What do you like -- what did you like in your old manager, what didn't you like? What do you want me to do for you?" And you learn some skills in the classes, but then you go out and you talk to the people that you're working with, and find out what they need, what's going to help them. And it evolves. I didn't take a course and come out and I became a good manager. It's a lot of listening. It's a lot of probing. Finding out what people need. And then helping them. It's doing a lot of coaching and a lot of listening.

Q: What do you wish someone had told you -- or what are some tips you could give to students that would help them along the way?

Lemen: I think the biggest thing that would have helped me is to know that you don't have to lock into a specific degree, right away. Don't feel like you have to become a mechanical engineer, or a chemical engineer, right away. What I wish I had done, my freshman and my sophomore year, is to gain a variety of courses, to find out what I really wanted to do. I spent a whole year in chemical engineering, and found out that isn't what I wanted to do. And then I

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had to take extra courses. So, that's what I would have done. I would have wanted to go to a school that had a wide variety of engineering opportunities; more than just your basic four, mechanical, chemical, electrical and civil. I would have gone to a college that had a wide variety. I would have taken courses in multiple disciplines, and then chosen my degree area, and focused on that.

Q: So, overall, what is your view of engineering as a career?

Lemen: I think it's a great career, especially now. Most companies, even if you're being hired for sales, if you're being hired for manufacturing, they are looking for engineers, because you may not use your technical book knowledge, but you've learned to problem-solve, and you've learned to analyze problems. You've learned to analyze data. You've worked in group settings, so you've learned team dynamics and how to work with people. And those are the skills that most companies are looking for -- no matter if you're going into engineering, sales or manufacturing.

Q: Do you find difficulty, as a woman, especially in mechanical engineering?

Lemen: In college, I did find it difficult, because it was primarily male-oriented, and most of the people in my classes tended to clump together in groups. You know, four guys would work on a project; three guys would work on a project. And it was rare, for whatever reason, that you had a real mixed group. So, it was difficult in school. Coming into the work place, I have found credibility to be a bit of an issue. Even though you've got your engineering degree, you're still a woman. And the company I work believes in diversity and values everyone's background and everyone's view. So, being a woman engineer, I have not felt that my skills have been overlooked in the workplace. I worked very closely with a male engineer, in one of my roles, and he would seek me out for advice and to work on other projects with him, because he knew I had technically sound ideas, that I knew what I was talking about, and that I could work well with people on projects.

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