

“Made in St. Paul: Stories from the Ford plant”

Maggie Heisterkamp

Contract employee/engineering drafter, 1994-2017

Interviewed by Peter Myers, May 2017

QUESTION

If you could state your name, your role with the Ford plant as an outside contractor.....

MAGGIE HEISTERKAMP

My name is Maggie Heisterkamp. I started working at Ford in January of 1994 in the plant engineering department as a drafter. I was brought in to make a general arrangement of the equipment and I did that in AutoCAD and that was when AutoCAD was fairly new to Ford and so after I finished the general arrangement of the equipment they never let me go. I started to work on drawing the building and then I started working on drawing the utilities and I just worked in the plant engineering department doing whatever was needed to be done for engineering purposes. And I still work there today. I'm still helping out on the demolition site. So in the meantime I had seven or so employers, all either a CAD service or an engineering service or a job shop, a staffer, self-employed, many employers there. And so that would be 23 years.

QUESTION

So when you first started you were doing as-built drawings ... so you were drawing the plant as it existed at that time?

HEISTERKAMP

Yes, as I started just making as-built drawings, sometimes there was a new equipment installation that I would help with layouts. But mostly I just maintained the as-built drawings and we had them for every plant system. It was a big project. And as soon as you got to the end of thinking you were done making the as-built, somebody would change something back over there. So, it was an ongoing thing.

QUESTION

Talk about the rather unique role independent professionals like you had within the plant. Were there many other people like you who were neither salaried nor hourly and how did you fit into the whole operation?

HEISTERKAMP

There were a few of us that were contractors, who never actually worked for Ford. There was one—only one who actually stayed on contract longer than me. And it was mostly engineering staff that was employed as contract employees. And some of us came and went. Many were there for a long time. There was one drafter for each department. Final body shop paint and then I was central. And central just took care of the building. And then the other departments, they mostly did their own thing. The drafters in those departments did more equipment installation, rearrangement, stuff like that. They did a lot of electrical logic drawings. So I was kind of different from everybody else. I was the one who was there the longest. I was the first AutoCAD drafter there and I'm the last AutoCAD drafter there.

QUESTION

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Think back to the first week you went to the plant. Earliest memories coming into the plant, what it looked and felt like....

HEISTERKAMP

Well, my first thing that I noticed was that well there was a cafeteria. And you could go and get a hot meal there. And that was something that I'd never experienced anywhere else that I'd ever worked was a hot meal. It wasn't the most amazing, wonderful food but it was a hot meal. So that was neat. And then there were the smells. You didn't always notice the smells right away but if you fell away and stayed away for a long time, like I had a couple of hiatuses during which I did not work here for a few months and then when you'd come back you'd be like 'Aha, the smells!' And just the grease and welding smells, it's a unique kind of smell. And then of course my drawings all had kind of a smell too. Kind of a musty, dusty smell. But I still love the smell of my drawings. And I maintained all of the paper drawings from all the way back to the ones that they kept there in 1925. And all the ones that were made from up until we started doing everything on the computer. And so there were probably about several tens of thousands of drawings. Some on linen, some on Mylar, some were blueprints, some were diazo prints, but they all had a certain essence.

QUESTION

What about sounds as you went to different parts of the plant?

HEISTERKAMP

Ooh, there was a rhythm. And to the sounds in the plant. Conveyors would cachunk, cachunk, cachunk, cachunk, and then there'd be some other equipment over in the distance making another rhythm. So it was kind of musical in a percussion sort of a way. And that was from in my office, I didn't I didn't hear that much it was fairly quiet in my office. I had a noisy server and fan rack that was next to my desk that hummed at me all the time for a very long time. Until I finally was able to encourage that to be removed.

QUESTION

What are some examples of a typical assignment you'd be given?

HEISTERKAMP

I had a number of interesting special projects. Back in the 90s we worked on creating lockout, tagout placards for energy control and power lockout per OSHA standards and the Ford UAW National Joint Committee on Health and Safety also created their own standards which exceeded what OSHA required but we made these kinds of beautiful graphical maps of all of the equipment. And their associated equipment and the energy sources so that a person who was working on the equipment would know where all the valves were and where all the disconnects were. And they were lovely and they were beautiful and graphic maps that we made and we had a problem with keeping them from fading in ultraviolet light. So of course we had to put them up on the roofs for all the unit heaters but they would only last for a few months and then they'd be all faded away. So that's why I was especially interested in graphical output in a UV kind of a UV-protected sort of—we tried a lot of different strategies for that. But ultimately it pretty much ended up being you just have to keep an eye on 'em. Go back, print 'em out again, review 'em. And so that was a big project that we did. It took us a little over a year and then it had to be maintained.

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Another fun project that I did was when Brad Bystrom created the Bystrom Memorial Highway down at the hydro plant after the 2001 flood, he wanted the hydro plant to remain chronologically correct for all of its signs and stuff like that. So I was asked to make a series of bronze cast signs that looked like the original bronze cast signs that were already in existence down there at the plant. And so that was a fun project that I did.

They had some upgrading at the hydro plant. They put in some new switchgear and such. And they wanted to make sure that what they had done was actually creating greater efficiency for the generation. And so I fooled around on Excel with a bunch of data that was collected on the daily log sheets by the hydro operators. And I made great big spreadsheets and I made charts and I did all kinds of interesting studies on the on the hydrologic data that we had collected.

Probably my favorite thing that I ever did was at the very end after we had decommissioned the plant and all the equipment was gone and they were preparing for demolition, I was asked to predict what was underground. Underground structures. Based on these drawings that I had in this collection I went through every one and I found everywhere where there was a pit or a tunnel and I put them onto a sort of a giant reference drawing. And then I catalogued each legacy drawing so that we could submit that to the demolition contractor and they would know what to expect when they started tearing up concrete. So that was a lot of fun. That was a huge job. And I like to think that it worked out pretty well. I didn't find a lot of surprises while they were digging. A couple of things were unexpected, but, mostly everything was where I said it was going to be.

QUESTION

Talk about the tunnel network under the plant....

HEISTERKAMP

There were tunnels for mining sand, for the glass operations, there were two big tunnels that connected to the sand mining tunnels. Those were the traffic tunnels; there was a big elevator that came down out of the F series body shop. And I drove the cars—you could drive the cars out those portals. There were big concrete-lined tunnels. Sand tunnels were just smaller, sandy little things. There were cable tunnels that carried electricity from the hydroelectric plant up to the main plant substation. Those are just not much different from the sand mining tunnels except they have electrical cables in them. And there was a steam plant tunnel that carried coal from the hopper house where the trains dropped coal, and they carried that under the plant and under the boulevard and over to the steam plant where it was used to fire the boilers to make steam. Which in turn the steam went back up to the main plant to some turbines that circulated water and heated the plant. So that was the steam tunnel.

There was an oil house tunnel that went from a building that was initially separate from the main building. It was out to the east side and back. And that was later connected but that was where they would send paint from paint storage to the paint shop which was originally in the main building. And that's about it for tunnels.

QUESTION

I wonder how many total feet of tunnels there were....

HEISTERKAMP

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I have heard it's maybe about 3 miles altogether. They had a plan to continue to excavate for sand assuming that they hadn't shut down the glass plant in 1957 or whenever that was. But they had a plan to continue to excavate and they were going to keep going and going. And they only did a tiny fraction of what they originally planned for excavate for sand.

QUESTION

You spent at one point close to a year in the steam plant doing projects, is that right?

HEISTERKAMP

I spent some time in the steam plant on a valve tagging program. They had decided that it would be handy if each valve had a name. And so I spent some time mapping all of the major systems in the steam plant. And tracing and documenting each valve. And then going back to my desk and naming each valve in a way that was sensible in its nomenclature. I worked with a couple of the guys down in the steam plant who helped me with that. And then I ordered the brass tags and then I got those, handed 'em off to the steam plant guys and they put them on. And then I had a drawing that I made that showed where each valve was and each number associated to each valve. But really, we only did the major systems. There was a lot of other piping down there that kind of got ignored so we just did the ones that were mostly used. So, there was a lot of abandoned piping down there that wasn't in use anymore.

QUESTION

Can you give a brief description of the steam plant and then the hydro plant and what they were like inside?

HEISTERKAMP

I suppose today they would be considered antiquated. The steam plant was very beautiful and very well-maintained, lovingly by our chief engineer and it had these hand railings that were made of what I later found out was solid benedict nickel. Now I'm not sure what that implies, but Benedict Nickel—it was so beautiful and shiny when it was shined up. And later on when they stopped maintaining it, it would get a tarnish on it. Except for in the places where people's hands were. And then it would still be shiny there. There was an interesting elevator down in the steam plant that was just a little skinny little one- or two-person elevator. Sometimes people would get stuck in the elevator. But there was a phone in there, so I guess you could call for help if you needed to. But that was neat — it had a sliding door on the outside and then it had one of those expandable gates just like an old freight elevator, only small for people. And in the steam plant there was quarry tile flooring and there were a lot of windows. And after the 1952 flood they had brought in some fill to bring the grade up. So basically they made the second floor into the first floor; that's how we ended up with a basement and a sub-basement. And when they did that, I believe they filled in all most of the windows on the west side of the building.

But the windows were really neat. You know they had these wheel sash operators that had a crank handle. And I think it's a beautiful piece of early 20th century industrial architecture. Similarly, the hydro plant was a little bit more 'luxurious' I guess would be the word. They had lots of wood and marble and big, thick marble bathroom stall doors. And stall dividers. And they used a lot of more luxurious materials there. But also quarry tile on the floor. Quarry tile was sort of the thing and it's tough as nails. I mean you never had to hardly do anything to quarry tile. And also in the hydro plant were big, big windows and some of the fellows used to find that it worked really well as a greenhouse gardening place. So they would grow tomatoes and things

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there. A stop was put to that at some point along the way; there were no more tomatoes after the old guys retired. But compared to other hydroelectric plants, it's really really beautiful. I've had occasion to be in a couple of other hydro plants, one especially dismal one in which there wasn't a window in the whole place.

QUESTION

Talk about the flood of 2001, how people had to scramble to protect the buildings and what it was like.....

HEISTERKAMP

There was a lot of work that needed to be done as a result of the 2001 flood. As far as floods go, it was nothing compared to 1965. But it did undermine the road that you drove on to get down to the hydro plant. And so the road had to be taken out and new fill brought in and some sheet piling placed and then as long as were at it we put in some sidewalks and some light fixtures and some hand railings. And I think 2001 was the year that all the fish got stuck underneath. There was an opening, an empty space, a void, and when you're looking at the hydro plant it looks like a patio on the downstream side. And underneath that is a void and when the water came up the fish got into the void and when the water receded, the fish remained in the void and eventually started to smell bad. So they had to lower a bobcat down into the hole. And that poor bobcat operator had to scoop out this slurry of dead fish soup. And I understand that it was not for the faint of heart. I did not go down there and check it out. Now, I wish I had just so I could say I smelled it.

QUESTION

There was a high level of dedication among workers, camaraderie, people having pride in their work.

HEISTERKAMP

I did have a unique perspective being on contract and neither laborer nor management so it was easy for me to be friends with everybody. It wasn't all lollipops and rainbows, you know. The hourly people had their own Christmas parties and the salaried people had their own Christmas parties and never the twain shall meet. But I think generally everybody was very proud of our plant. It was in a nice neighborhood, it was a nice plant, we made a great product, and everybody played their part. They all made a very good living doing it. We did find out rather quickly once the contract was renegotiated that new people coming in were making much less than the former union employees. I did find that it was harder to get people to show up for half the money. There were a lot more absences, there was just a little bit less dedication. My boss used to have a sign on his wall that says 'People work for money. If you want loyalty, buy a dog.' And I think that's true. Ford always treated its employees very well. So I do think that that kind of inspires a certain amount of loyalty. Of course you know we were still proud of our little satellite plant out in St. Paul.

QUESTION

What's the total square footage of the plant?

HEISTERKAMP

2.4 million is what comes up to my mind. It's about half the size of the Mall of America square footage.

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HEISTERKAMP

I remember that was another project that I worked on that was a real lot of fun. Was I figured out all the square feet of all of the separate buildings, all the different additions that were added on. What they had for a roof, what they had how—how much cubic feet they contained. when they were built, there were twenty-some additions put onto that plant over the course of time. It just kept growing and growing, and they just kept adding on and adding on. It’s funny to notice that towards the end there, the newer parts of the building had more roof leaks than the older parts of the building.

QUESTION

Because you had climbed up in the rafters of the plant, you found some interesting things people had hidden up there. What did you find?

HEISTERKAMP

There was the elevator that went down to the traffic tunnel that carried vehicles, you could climb up into the penthouse of that elevator, and you go up a ladder and along a catwalk and up another ladder and then through a door and then inside there I found an old black-and-white television set and a sofa. And it just looked like that was where people were hanging out for a while. And there was an attic at each at the north and south end that you could climb up into on a ladder. And there would often be bedrolls up there. There was a skid return conveyor that you could climb up into, and I think people were hanging out up there, they weren’t cleaning up after themselves so there was a lot of potato chip bags and pop cans and stuff. And there was a fun trip up above the second ceiling of the old showroom. You had to duck-walk along and there were two ceilings if I remember correctly. One probably that was put there in the fifties and then one that was maybe put there in the eighties or something like that down below it. Suspended from the first ceiling and then up above that was the ceiling that was the original showroom ceiling that had lovely pendant light fixtures hanging and some really terrific plasterwork. I think there was something like a bee. Have you seen it? Like an insect, a bee. I don’t know if it was supposed to be like a busy bee or something like that.

HEISTERKAMP

And there was folk art, you know, those guys were so creative. They made stuff out of scraps that were laying around. There was a snake. There was a guy who was famous for making an owl and the claws would be made out of screws and washers and things like that. Some really beautiful folk art. There was all kinds of it around there. And bicycles, some people would have a personalized bicycle and have like a horse. There was one guy in the body shop, ME Manager, who had a horse on his bicycle. And they put it right in between the upper bar and the lower bar and put that horse right there. His horse had a little beaded chain through his nose and had two little nuts on the back. You probably can’t use that.

QUESTION

Was it you who told me about people getting around on bicycles inside the plant? When people had to get from one end of the plant to another fairly quickly, how did they do it?

HEISTERKAMP

There were some people who had electric carts. Managers had three-wheel electric carts. The maintenance guys – if they merited a cart they had a four-wheel electric cart. Welders had a cart

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with a welder on it. And people who didn't need to have a cart had a bicycle—or some people didn't have anything. They just had to walk. But if you had a bicycle, you didn't always get your own bicycle right away. You had to borrow somebody's bicycle or their might be a sort of generic bicycle that was used by anybody who didn't have a bicycle. Eventually the bicycles were determined to be unsafe and so they removed all the bicycles and replaced them with Schwinn industrial tricycles. And there were far fewer of those, so the rest of us were left walking.

QUESTION

Let's switch now to your interest in industrial art. Wasn't there a tour a few years ago of the steam and hydro plants that you were on?

HEISTERKAMP

I was. I just helped them by preparing some paperwork, some information about it, some photographs. And they let me tag along and so all these people from the Society for Industrial Archaeology that these guys they just they had the greatest time. Just tooling around and that was after the steam plant was no longer in operation. And so we got to go around and look at all the stuff, some of the antiquated abandoned stuff. They especially liked those oil-filled circuit breakers that were downstairs. They had a really good time.

QUESTION

Thinking about the original design – from the point of an industrial archaeologist, what do you find most interesting about those plants, especially given their age and when they were built?

HEISTERKAMP

The main plant, the steam plant and the hydro plant, sort of a triad, all kind of depended on one another. And really pretty self-sustaining. All we had to really bring in to run everything was coal. And coal went down to the steam plant and the steam plant extracted water from the river, made steam and heated the plant. And then the hydro plant made electricity that went to the steam plant and went up to the main plant. Just add parts; it's an assembly plant. I sure would have liked to have seen it back in the day before we covered up those skylights. Those skylights in the main building which were necessary means of natural lighting before high-intensity discharge lighting was available. I'm sure it must have been quite the sunny, lovely place, and had windows, great big windows all the way around the whole thing. All gone now. By the time I got there, they'd put that big addition on to the west side of the building. They filled in all the windows on the north side of the building. Added additions onto the east side of the building, so no more windows there. And a bunch of additions on the south side of the building. So all those windows were gone. That would've been a cool thing to see.

QUESTION

Why was that plant and your work important to you personally?

HEISTERKAMP

Well, it was never a dull moment. There was so much variety in what I did. And I got to know the people. And I worked with the people for all those years and some came and some went and they had great retirement parties. The fellows out in the shops were always cooking something. They'd have a corn feed and they had a stainless-steel corn cooker. I think it had a couple engine block heaters underneath it that heated up the water to boil the corn in, and then they'd serve the corn and get a pie tin full of nails if you wanted to stick nails into the end of your corn. And a

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pound of butter and we'd all stand around and eat corn. And at Christmas, we'd have a terrific Christmas spread. And they'd take sawhorses and sheets of plywood and they'd make enormous tables full of food. And they were they were a creative bunch all those guys. But personally for me, I learned so much working there. I did things that I never expected to do. And I became interested in things I never expected to be interested in. And just I learned to love the early 20th century industrial architecture.

QUESTION

When you first started did you have any idea you might be there for twenty years?

HEISTERKAMP

No, it was supposed to be a temporary assignment. And then when I finished my first temporary assignment and started on my second temporary assignment, that was also supposed to be a temporary assignment. And I got my contract renewed year after year and each year I thought, well, this'll be the last year. But on and on it went.

HEISTERKAMP

I have to say that my favorite thing about the place was the food. Just like I was talking about the all those guys with their—at fishing when it was time for fishing opener, they'd go and they'd clean out last year's fish out of the freezer and bring it in and they'd make some fried fish and use potato chips or Funyuns for the batter. And they'd cook that up and they'd have an electric frying pan and they'd just keep cooking and cooking and cooking. And we'd come out and the smell would kind of waft into my office and I'd think 'Somebody's cookin.'

QUESTION

How often would the guys cook stuff? Usually on a Friday afternoon?

HEISTERKAMP

Oh I don't know, maybe they might cook once a week or so. Sometimes I'm sure they probably cooked more on the weekends when there weren't as many bosses around.

QUESTION

Did any of the salaried workers ever get food from the hourly workers?

HEISTERKAMP

Well, there was kind of a separation there I think. Maintenance cooked for maintenance, hourly people cooked or the production people cooked for production people. Sometimes there was a blur and you could come around and there was one fellow who always had hot dogs. You could go and get a hot dog at that guy's place any time you wanted. Anybody could go. And there were a couple famous coffee stops around the plant. I got my coffee from the welder's shop. It was terrible coffee. But it only cost a quarter, and it was very handy for me too.

QUESTION

It sounds like people found their own way to kind of personalize their job or their division....to make it their own.....

HEISTERKAMP

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Even if you only worked 8 hours a day, that’s a third of your life you probably spent there. And a lot of these guys worked 12 hours, some of ‘em worked 7 days a week. And so, if you spent half your life somewhere, you’d find ways to make it comfortable. And more enjoyable. And it didn’t ever seem to be at the expense of getting any work done.

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