



Laser operator Florentino Sierra checks on operation of Bayless' Amada 2000-watt Lasmac 2415 laser, which is equipped with a model LMP3015 6-shelf pallet loader. Because of set-up speed and large material handling capability, the laser is used for lights-out production. It is also used for prototyping and production of templates used in setup of turret punch presses.

Reaching For The Sheetmetal Ring

How A Successful Sheetmetal Fabrication Entrepreneur Grew By Grabbing Opportunities As They Came Along.

by C. H. Bush, editor; photos by John Semonish, staff photographer

Back in the “old days” when you rode on a merry-go-round, one of the exciting things to do was to lean far out on your steed and try to grab a brass ring that hung just out of reach. Most riders who reached for the prize missed, of course, but there were always a few winners, people who made the extra effort needed to hook the ring. Their prize? A free ride and a chance to try again.

Earl Bayless, founder-president of Valencia, CA's Bayless Engineering and Manufacturing, is a man who always has made that extra effort, who has taken the gamble needed to win by reaching for the brass ring whenever it presented itself. In Earl Bayless' case, however, the prize in the end wasn't a free ride, but a highly successful sheet-metal manufacturing business.

So far, since starting out in business in 1978, Bayless has put together an enviable three-legged

organization consisting of sheet metal fabrication, job shop machining and a powder coating division, which operates under the name Powder Coating Plus.

“I really didn't plan it this way in the beginning,” he says, “but I've always been a gambler. When an opportunity comes along that I like, I do what it takes and go for it. So far, things have worked out really great, but I've always been lucky, too, which is important.”

Machine Shop Beginnings

Bayless started out in business as a one-man machine shop.

“I had a 1200 square foot shop in Sylmar, CA,” he says, “and I kept an army cot in it so I could sleep when I had to. At that time I wasn't married, so I was able to dedicate all my time to the business. I just loved what I was doing and



Earl Bayless and company vp Rod Smith discuss the bend radius and customer specifications for parts to be manufactured on an Amada 110-ton FBD III-3512-2004NT, 5-axis press brake. Software that drives the machine is Amada Bend Cam.

I used to live in the shop. Every other night or so I'd stay at Motel 6, so I could take a shower and sleep in a real bed. The rest of the time I was in the shop working or sleeping on the cot."

During the Sylmar years, which lasted until 1989, Bayless got his feet wet in the sheetmetal business as a service to Bendix, who was one of his best customers.

"I had a good rapport with the buyers," he says, "and they asked me if I would help them out with some sheetmetal parts. They needed shorter lead times, so I took their drawings to my sheetmetal friends and subbed out the work. I ended up being a sheetmetal middle man for a couple of years. In any case, we did well enough that we outgrew our small shop and had to move."

In 1989 Bayless moved his operation into a 5000-sq-ft facility in a multiple-unit industrial complex in Valencia, CA.

Bayless: "I was really concerned about how I was going to utilize all this space. It was an unbelievable amount after living with 1200 square feet. But then I got hooked up with a guy and I created a company called Kustom Tool Works. We produced a double-ended boring bar, which was successful for a couple of years. Also, we added other customers, like a stereolithography company, and that helped keep things going for us."

Brass Ring No. 1: Sheetmetal

Bayless continued acting as a sheetmetal middle man, even after he moved into his new facility.

"We were doing little parts," he says, "Little brackets, boxes, components, nothing fancy. Then some other companies heard I did sheetmetal and approached me and it kind of got overwhelming. But here's where some of my luck came along. Just at that time a sheet metal company moved into the complex three or four doors away. So I started farming out to them, which was really convenient, a perfect setup for me."

As it turned out the people running the sheetmetal shop didn't really understand the business.

"They were three brothers who had worked in a sheet metal shop and thought they could run a shop themselves," Bayless says. "So they went out and had their parents refinance their house so they could buy equipment. Unfortunately, after about 6 months or so they were about ready to go out of business, so I made them an offer for their company and they agreed to sell. Now I was official in the sheetmetal business, not just a middle man."

In order to run the company properly, Bayless knew he needed someone with a lot of expertise in the sheetmetal business to help him.

"That's when I called Rod Smith, who is presently my vice president," he says. "I asked him if he wanted to help me run a sheetmetal company. He got on a plane, checked it out and said, 'Yes.' We just celebrated his 10th anniversary with Bayless this year."

Brass Ring No. 2: Powder Coating

With an expert now to run the sheetmetal side for him, Bayless could devote himself to continued growth of the business.

"We were doing really well by then," he says. "We had all the ups and downs that other businesses have, but we were diversified enough that we were able to survive, even in tough times."

In those days, the machine shop was still the dog and the sheetmetal side was a growing tail.

"Back then on the machine shop side we were running 8 or more CNC machines, mills, lathes, a lot of Bridgeport's, some Hardinge's," he recalls. "The sheet metal shop had a beat-up old Amada turret press, which we later sold. I think our business was probably ninety percent machine shop, ten percent sheetmetal. Today it's 85% sheetmetal, fifteen percent machine shop. Although the machine shop still does outside work, it is really mainly a support for the sheetmetal side of the business."

At that time Bayless occupied four units in the industrial complex.

"We had two units for machine shop and two for sheetmetal," he says, "and then one day I had another stroke of good luck. A powder coating company called Powder Coating Plus moved into our same complex. Since I had been sending out all our powder coating to the San Fernando Valley, this was really convenient."

History repeated itself. Powder Coating Plus was in trouble and went out of business.

"By then I knew something about them," Bayless recalls, "so I went out and bought the company through the Small Business Administration. Now I had the synergism I wanted. Machining, sheetmetal fabrication and powder coating. I was a one-stop sheetmetal shop."



Sampling of hundreds of products produced by Bayless Engineering and Manufacturing. Products shown include high-end audio/stereo front panels, automotive after-market test equipment, heat sinks, gears, GPS radar horns, mountain bike parts, control panels and cylinder head covers.

Brass Ring No. 3: Winning Haas

For several years Bayless and his sales people had tried to break into Haas Automation, Inc., hoping to do sheet-metal work for the machine-tool manufacturer.

"We were in 15,000 square feet at the complex," Bayless says, "but we were really cramped. Haas came out and looked at our facility and they said, 'You're too small. You don't have enough floor space to deal with what we want you to do.' We got some small jobs from them, but nothing like what we wanted. Then our landlord, who also owned a 43,000 square foot building around the corner from us, called me and said, 'I hear you're interested in moving into my building.' I told him it would be great, but I didn't think we could afford it. He basically said, 'Let's make a deal.' And so we did. I signed a lease in December 1999. We had our Christmas party in that empty building."

As soon as Bayless moved in to his new facilities, he went after Haas again. And this time he was successful.

"I just told them, 'Hey, we got space now. We want to do your work.' They're tough as nails and very demanding about meeting their quality specifications, but if you meet their demands, you're okay. We've been working for them ever since."

Brass Ring No. 4: Amada Laser

A quick glance at the Bayless Engineering & Manufacturing equipment list shows a lineup of 27 machines used in sheetmetal fabrication, including 10 Amada turret punch presses and press brakes. The facility is complete with welding, powder coating, sandblasting and a major arsenal of inspection equipment. The machine shop also has an impressive array of CNC equipment.

But in many ways, the star of the Bayless equipment show is the company's Amada 2000-watt Lasmac 2415 laser with an LMP3015 6-shelf pallet loader.

"Getting that machine was another stroke of good luck," says Bayless vp Rod Smith. "Earl and I went to a trade show in Chicago and we were looking at lasers. We knew we needed a pallet loader. Our volume had increased to a

point where we had to automate to cut down on set-up times. We had looked at the Amada, but Earl thought it was a little beyond our budget, so we were ready to sign a contract for another machine."

But Amada, knowing that Bayless was very heavily an Amada shop, didn't want to see another machine sold into the company.

"What happened was they offered us a fantastic deal on the show machine," Smith says.

"We watched how it worked and you looked at it and went, 'Wow!' So, we bought the Amada and it's been a fantastic asset for us."

According to Smith, the machine's main benefit to the company was something they hadn't anticipated.

"When we first purchased the laser, the idea was to help us to run lights out," Smith says. "We were very busy and we figured that would be a big solution for us. What we have found is that with the laser we could quickly cut out a part, check it against the specs, then use that part as a template to do our setups on the turrets. It's really amazing how much time that has saved us. For instance, on a turret you might have twenty tools to set up. That takes time. Then you punch some parts and check them. If you're wrong, you start all over and reset the tools. All the operator is doing is wasting time putting tools on the machine. With the laser you punch in a program and a few minutes later you have your template. There's virtually no set-up time and we get clean, smooth parts."

In addition to producing templates, Smith also uses the laser to do prototypes for customers, as well as production runs. "So far the laser, in fact all our Amadas, have been totally reliable and accurate," Smith says.

The Next Brass Ring

Bayless Engineering and Manufacturing has grown to a point where it is highly respected in the sheetmetal field. At present it occupies 80,000 sq ft of manufacturing space and keeps 90-100 employees busy full time. The company's customers can be found in such diversified industries as medical, machine tool, gaming, telecommunications, water purification, computers, vending and high-end audio.

But with all his success, if you ask Earl Bayless, "Where to from here?" his answer is somewhat unexpected.

"I really don't know yet," he says. "People look at my white beard and ask me when I'm going to retire, too. I tell them the same thing. I don't know. I mean, if I retired what would I do? I enjoy what I'm doing too much. I guess you might say I'm waiting for the next brass ring to come around. I'll be interested in seeing what it brings." ■