

Shred Plant Optimization with Jeff Beaudoin

The Shred Coach Podcast Transcript

TOM

Jeff Beaudoin, welcome to the Shred Coach Podcast. I'm glad you're here.

JEFF

Well, thanks for having me today, Tom.

TOM

Yeah, it's good to it's good to talk to you. So, tell me a bit about the company you work for, the role you play, and then dig in a little bit deeper and tell me what an average day looks like for you.

JEFF

Okay, so, the company I work for is Ameri-Shred Corporation. A lot of people in your audience are probably familiar with our equipment. Been in the shredding industry for, oh, about 40 years now. My role currently with the company is the Vice-President of operations, so, a typical day for me is kind of overseeing all of the operations of the business. So, I oversee the sales team, engineering, manufacturing and also the service team. You know, by trade I'm an engineer at heart and by degree, so I'm always drawn to that side of the business. So, I do probably spend a little more time with the design and manufacturing teams, but I do really enjoy, you know, working with customers, helping understand some of the new applications that come our way and working on plant layouts. Then I even make quite a few site visits to some of the customer locations that we're going to place equipment with.

TOM

Got it. So, give me a picture of like, how many secure shredding companies have you worked at? You said 40 years. So, like that's- this is a long time and you guys have been around for a long time and... but tell me a little bit about the nature of the work you've done with them. I know you just said site visits, but again, from you run operations. You're an engineer by training. So, when you go out and work with a shredding company, tell me a little bit about what an engagement looks like from your perspective.

JEFF

Oh, I've been with the company about 20 years. I actually was a co-op student here during my college years and hired on full-time immediately after. Prior to that, my father's actually worked for the company, so I've been working a shredder since I was probably 12 or 14 years old. So I've, in all capacities, I've went out and been covered in grease from head to toe and torn machines apart and rebuilt them out in the field. I've done a lot of new installations. When we do site visits, a lot of times we go out with customers and, you know, walk their building and make sure that the building's a good fit for the equipment, number one. And if it's not, talk about ways

that maybe it could be improved, if that's, you know, adding different access points or additional loading docks or things like that. And also interact with, you know, customers daily over the phone with questions and even help troubleshoot stuff. Not as much as I used to, but, you know, still get a few calls here and there.

TOM

Yeah. So, in your work with these shredding companies and in all of the interactions you've had over the 20 plus years you've been doing this what are some of the biggest mistakes you've seen shred operators making related to their equipment and their shredding system like you said within the context of the building? So, what are some of the mistakes you see? What are some of the issues that you see showing up?

JEFF

Well, I guess with the equipment in particular, it's generally people kind of underestimate their production needs. I know a lot of equipment is purchased based on budget and I understand that side of it as well. But I think a lot of people aren't necessarily looking forward to the future as much as they should be. So, they buy a piece of equipment that can meet exactly what they need to do today. And then a few months or a year down the road, they find themselves working the machine 8 to 10 to 12 hours a day to keep up. Where had they bought a slightly larger system up front that wouldn't be the issue. So, you see excess labor and then you see excess wear and tear on equipment like that too that's being overworked, you know, trying to do to keep up with a volume that maybe it's not set up to do.

TOM

So, how, from your perspective... because you've been doing this a long time, how do you, accurately estimate your future production needs? Like what's a process that you work a customer through to make sure they're actually seeing the future?

JEFF

Well, there's a few ways. I mean, part of it's just to look at the geographical area people are in and based on population density you can kind of determine, you know, what kind of paper volume there is. A lot of customers nowadays when they come to us for plant based, they've already been involved in the shredding business on a mobile side. So, you kind of have a good idea of what their volume of paper is there. Which kind of presents another thing; we can help them, you know, bail some of that paper with a mobile bailing setup. But we also help them, show them the savings that could come by converting some of those clients to more plant-based destruction in bringing that paper back in house to destroy.

TOM

Right, right. So, the first major error that you see people making or mistake is underestimating that future production need. And do you see that in like, one-year periods or is it even shorter than that sometimes?

JEFF

We've seen it in both. In document destruction it's usually like a one-year period is probably the shortest. Where we've seen it more now is in hard drive destruction. We've seen people... we do sell a small machine. It's 120-volt unit, so a lot of people are drawn to that. You know, price wise it's priced very competitively and it does the job. But as soon as they hang their shingle out saying they're doing hard drives, all of a sudden the volume is way more than that machine's intended to do.

TOM

Got it. Okay.

JEFF

So, we've seen that and we've seen people buy a one-horse machine and three months later they're calling us for a 10 or 20 horsepower machine, you know, to keep up with the volume that they've found.

TOM

Interesting. Right. So, it- once you have the system set up... But it really comes back to making sure you're doing some advanced planning and some, I guess, analytics and understanding the nature of your marketplace. Maybe more specifically, if you're not an existing operator, if you're getting into this new, it's really more important to do some of that advanced work so that you're not under buying your machine.

JEFF

Absolutely. The other part I guess is understanding, you know, if you're a start-up and you're just a one-man operation or if you have employees, a lot of times too we see with shredding equipment, if you have employees, it's sometimes you try to size that equipment so that you're shredding can actually be done in, you know, 20 hours out of the week. And then the other 20 hours that employee's time are available to do all of the other things that are, you know, pertinent to the business, like loading trucks or unloading trucks or servicing clients and things like that. So, there's kind of that mindset too, if you have employees. That's one way to think about it as well. You don't just want somebody standing at a shredder 40 hours a week.

TOM

Right.

JEFF

If you have the volume, great, but I mean, most people don't have the volume for that. So, that way one employee can, you know, do multiple jobs for you.

TOM

So, what other mistakes are you seeing in the world of buying and implementing shredding systems?

JEFF

Some of it's building related, and I don't want to necessarily say it's a mistake, but I know real estate markets are, you know, different in different areas. But we see people sometimes acquire buildings that are way too small and they ask you to pack a lot of equipment in a space that it really doesn't fit. And we can always make the equipment fit, but sometimes the operational flow of it's not so great once it's all in there and they're trying to move around, you know, there's no space to stage things and to move bales and make space for incoming documents. So, that's one of the other issues, I guess, is make sure that the space that's available is big enough. Or if you move in a multi complex building that maybe makes sure that the space on either side of you could become available as your business grows. Something like that.

TOM

Got it. Yeah. Yeah. So, it, you know, in some respects, I think a lot of times, people buy buildings and attempt to fit stuff into it. But it sounds like, if you're actually thinking about this and you've got future plans, it might make sense to map out the kind of building you need and then buy the building after the fact.

JEFF

Exactly. Get with a manufacturer and have them do some equipment layout and it gives you an idea of the size that you would need for that system. We can lay in the equipment and we can also lay in, you know, bale storage and container storage and truck unloading areas and then make sure you have enough loading docks. Typically, you want to have more than one especially if you're doing any kind of volume because most of the paper companies will stage a trailer at your facility so you can put the bales in it. So, one of your docks is kind of tied up for that at all times. And then you need at least another dock for your own trucks to bring material in and out.

TOM

Right, right, So, in terms of- because I know you make much of the base shredding equipment, but you know, shredding systems are wrapped, you know, with a whole bunch of stuff from conveyors to bailers to all that kind of stuff. Is part of, you know, an effective planning process to understand in advance what all the pieces of equipment and how they all fit together? You know, because I see... because I've been in many of the plants that you guys have built or put your equipment in and, you know, not everyone has the same, even though they have capacity or the space, they have very different requirements for stuff. So, it's not like, you know, some of them want it to go a certain way and they want the line to go a certain way. And they have a cross, you know, they have two machines. And so, it's not always just about space, it's about all these different pieces and parts that go into it. So, how do you think through, and what are

mistakes you see in terms of all of the extras that go into these systems versus just the plane, the base shredding equipment itself?

JEFF

Well, that's a great question, but it is important to have an understanding of all of the equipment that you're going to need. And to your point, some of these shredding facilities have, they have just a single shredder and then others have a cross-shred system. And do we want to set those machines actually at 90 degrees so we get a better, an actual better cross shred? Or some are set in line. A lot of that is dependent on the building. The shredders themselves are fairly fixed in dimension. I mean, we customize a lot of things as well, but the conveyors is kind of what allows us to customize the system because those are easy to configure, either longer, shorter, you know, we can change angles and incline. So, it helps with.

And then some of these companies are also involved in product destruction. So, they have other equipment. They may have a whole separate shred line off to the side that does clothing or rejected products or consumable goods, you name it, they're destroying that to keep that from, you know, entering a black market or a secondary market or sometimes to keep consumers safe, just to keep that out of the market. So, there's all of that as well. So, those are all things to consider. When someone's setting up a facility, you know, if you have any inclination of doing that, even if you're not going to do it up front just kind of pre-planning all of that so, in the future, if your business grows into that, you have space allocated for it.

TOM

Right. And then, you know, and this is, while this has been around a while, more recently there's been a real uptick, and you mentioned it earlier in terms of some of the e-scrap, hard drive, SSD kind of, shredders that are added, and that can't be connected to your paper, you know, to your paper line. You've got to think very differently about that,

JEFF

Correct. Those are two very different processes and two very different materials. And, you know, the processing of the e-scrap and the hard drives can, you know, can generate some sparks and things too, which obviously do not mix well with paper. So, those two things do need to be kept very separate.

The benefit, I guess, in the hard drive shredding side is it typically doesn't require a lot of space. A smaller machine can still process thousands of drives a day which is, you know, high volume for most people, especially in the document industry that are kind of crossing over. So, that is a pretty easy thing to add to your current offering. Even if you, even if you are limited with space.

TOM

Yeah. So, any other issues or mistakes you're seeing people making? Cause as they're thinking about their plants, their operations, in terms of configuring it at the beginning? We'll go into some after the fact stuff, but like right off, what else do you see? I mean, people sit down with

you and they say, "I want to do this", and where do you often have to say, "Okay, put on the brakes. You're going the wrong direction there"?

JEFF

Well, we typically don't put breaks on unless they're really headed down a really bad path. I mean, I think some people have over... maybe they overestimate what they can get for a dollar at times. So, they want to develop something that's much more than maybe what their budget allows at the moment. So, then we try to work with them to pair it back to give them as much of that as we can but also kind of stay within a budget. Because we understand that everyone, you know, every business has a budget. You have to make the numbers work at the end of the day.

The other thing that may come into play is, a lot of times, is like pit conveyors. It's always nicer to have a pit conveyor because it's easier to sweep things into and definitely easier to put material into. But you run into issues where if you lease a building or you're renting a building, sometimes that's not, you know, the landlord doesn't allow that. Sometimes there's city ordinances that maybe don't allow it or things like that. And then sometimes buildings have plumbing and other things running through them that don't allow that either.

TOM

Oh, through the floor.

JEFF

Yeah, unfortunately we've found that out the hard way in a few customer sites, you know, they dig up a floor and, oh, there's a conduit or there's a plumbing. And then you have to kind of pivot and figure out how to work around that.

TOM

I guess there's no call before you dig kind of services?

JEFF

Well, I mean, most of the buildings have architectural prints, but unfortunately, sometimes it's not where it says it's supposed to be. So...

TOM

Yeah. It's- there's been a workaround somewhere else in previous days, so...

JEFF

Yeah, something in the production and of the building initially didn't jive with the actual blueprints.

TOM

All right, so a brand-new operator comes to you and they've decided they're not going the mobile route, they're going plant-based. And they just... they've got no existing constraints, so they don't

already have a building. What are the top three pieces of advice you're going to give to a new operator who's just getting into this? What are you going to say to them before they go down the path of even getting a quote? What's the starting point?

JEFF

Well, I guess the starting point with someone like that, again, it all goes back to volume. I mean, everything's based on how much production are you looking to do. Someone like that typically may have access to like a records- like a record center where they maybe have some anticipated volume. They know they're going to pull X amount out per month or per year. So, that helps in determining that equipment.

Then we would kind of talk about, based on that tonnage, that would help us determine, you know, how many loading docks should you have? How much capacity should you have to store bail? Do you want to sort paper or not? There's not a lot of that going on today, but you know, in years past there's been a big enough price differential where some of that material was run across sort conveyors. So, you have some of those conversations with them.

Do they anticipate ever going the mobile route because you may want to plan for that to be able to dump your own mobile, shreds and bail it at your own facility. So, those are, I guess, would be the main questions we would, you know, kind of cover with them initially.

TOM

And so though, all of those questions, so, what's your perceived volume, what's your loading dock capacity going to be, what's your capacity for storage, are you going to be sorting, and do you see mobile in your future, are all things that new operators should be asking themselves before they go out and start doing RFPs or getting pricing or even potentially looking at a building. I think the one that, you know, has been really helpful that you've said already is the number of loading docks because I've helped, over the years in my role, you know, people who think about this and they typically come to me more for, "Is this a good idea or not? Help me think through it". And loading docks is the one that isn't high on my list. And it- given what you've said, it sounds like it's a really massive priority that you got to be aware of and know about and be prepared to deal with because it's such a big part of being able to both move paper into your facility and, more importantly, move it out so you get paid well for it.

JEFF

Yeah. And often it's challenging to find a building that has both, that has ground access and dock access. I mean, that's a specific thing that not all buildings have.

TOM

Right.

JEFF

You know, a lot of distribution warehouses and things only have dock access. So that's, you know, if you're going to do both, that's kind of a requirement. Without ground access, it makes it

more challenging to install some of this equipment as well, just to get it in and out of the building. Not that it can't be done, but it adds another level of challenge to it for sure.

TOM

Got it. So, let's move from buying a system to actually ongoing management and maintenance of a system. So, I guess, you know, this is obviously a major investment. If somebody from in their shredding business decides to do a plant-based system, it's building plus equipment. How does... how do you encourage people to make sure they leverage that investment or amplify that investment versus it becoming a train wreck? Because, you know, a lot of people don't understand equipment, don't work well with equipment... they might have a business mind, but they don't have an equipment mind, if that makes sense. What are some of the ways people can leverage the investment they've made in their equipment for the long haul? What are your thoughts on that?

JEFF

Oh, well, you kind of hit a sweet spot there with, you know, a lot of people are business minded and aren't necessarily mechanically minded, so sometimes the equipment itself gets kind of forgotten about. And some of the operators, depending on the employees, I mean, some employees are great, some aren't. We all understand that. But the maintenance of the equipment is crucial and that it's done daily or weekly or whatever your specific equipment requires. That preventative maintenance is, I can't stress that enough how important that is because we get phone calls here weekly from people that have issues that could be avoided had, you know, the maintenance been being done.

So, having someone on your staff that is mechanically minded or a vendor that can maybe come in on some frequency to at least make sure that the daily, you know, lubrication and things like that is being taken care. Or someone within your team that actually does a checkoff sheet. We offer, you know, maintenance checkoff sheets for a lot of our equipment for a daily, weekly, quarterly, yearly type thing. We also offer preventative maintenance programs where we'll send a tech out, you know, once a year or twice a year to kind of go through the machine from front to back and kind of give you a heads up of things that we see that maybe starting to wear, give you an understanding of perishable items you should keep on your shelf, like belts and fuses and simple things that can cause you downtime that are literally, you know, inexpensive parts, but after you add overnight shipping and downtime, it becomes a pretty expensive ordeal.

TOM

So, let... before you go on, let's go... because I think this was really interesting because a lot of people go, well, it's machinery, it should just work. But give me an example of what would've been a simple maintenance issue that turns into a massive expense and not just the cost of the machinery networking, but what's an example where people go you know, it's so easy. It's like all of us with our health, like, you know, we don't really go figure things out until we get the diagnosis. But give me some examples or a major example of a massive cost that could have been saved by daily or weekly maintenance.

JEFF

A simple one would be a main bearing, you know, on any shredder. They all require frequency of lubrication, you know, typically daily, if not daily, every like 20 hours. And if that, if people just simply fail to do that literally turns into thousands of dollars, if not tens of thousands of dollars. Because then you have to do kind of a complete tear down on a machine to replace that bearing. So, those type of things can really lead to some really costly mistakes. And if those maintenance practices are done there, there would never be any reason for that bearing to fail. I mean, it would, it should run for a hundred years. I mean, we have equipment that's 40 years old that is still operational because the people that have that do take care of it and they understand that. So, that's part of it is, you know, that's probably one of the main things.

TOM

So, a simple bearing, like putting oil or grease on a bearing...

JEFF

Yeah.

TOM

...is the difference between a 10 to \$20,000 potential nightmare?

JEFF

This also sounds funny, but it's not, and we've seen it happen multiple times is we go to a customer site and say, where's your grease gun? They'll bring it over and the thing's empty. The guy's probably been pumping the thing for six months, but there's no grease in it. So, obviously he thinks he's doing his job, but he is not. I mean, that's it... It sounds crazy, but I've seen it multiple times.

TOM

Yeah, that's the thing that, like when I'm... that so often happens, which is there's a whole bunch of assumption, but there's not a process or a checklist, which is why, you know, pilots get on planes and they have to go through checklists. Doctors go into surgery with checklists, and a lot of times with equipment you go, it should just run. But just knowing that the grease gun could be empty means, did you check, like, did you check off on your checklist that the grease gun is full when you actually grease the equipment?

JEFF

Yeah.

TOM

Wow. Wow, wow. So, any other any other kind of things you see from your perspective on the service side that come as a result... that really amplify the ability to have that equipment last 40 years? What else can people be doing or should people be thinking about related to it?

JEFF

Just general cleaning often helps too. I mean, just cleanliness. I mean, obviously shredding paper is dusty even with dust collection systems and things that we have today, there's still dust generated in electric motors and things that are covered in dust. It's kind of like wrapping a blanket around yourself in the summertime. It's not good for it over long periods of time. So, simple things like blowing that stuff off making sure it's not covered. It, you know, can prevent a fire and it can also prolong the life of some of that equipment.

The other thing, I guess, would be like oil changes on gear boxes and things like that. Shredders are operating in a tough environment. I mean, they're doing a tough job, so paying attention to that, you know, oil in their gear boxes and things and changing that on the required intervals is, becomes pretty crucial.

TOM

Yeah, that's, that's really good. That's really helpful. So, you guys do a lot of different types of equipment and you're an engineer too, and engineers are always, like, figuring new stuff out. But I'm interested from your perspective, what are some cool innovations or things that you're seeing show up on the horizon that are particularly exciting or interesting? Beyond basically where we are today, because where we are today is pretty cool. There's some cool stuff that you know is happening, but what do you see in the future? What, you know, what do you see coming, you know, if we sort of had a ability to step five to seven to 10 years into the future. What do you think's going to be happening with equipment? What's changing, what's evolving?

JEFF

I mean the biggest involvement in equipment is probably on the electronic side. I mean, you're seeing obviously more sensors and things being applied. People want to collect data off of these shred systems. They want to, they want to understand... they want to be able to know when the motor's going to fail because they've been watching it for 10 years and they know exactly when it's going to fail, you know, to the second. They want to have sensors on bearings and things like that. So that instead of physically going through a checklist, you know, a computer will tell you, "Hey, someone's not doing this properly, or there's an issue going on with bearing number four". We're seeing requests for more and more of that. So, I'd say that'll probably be more of the bigger innovations is on the controls and sensor side, adding more and more of that stuff to shredding equipment.

TOM

And so, is that... while it's potentially out there, are there already elements of that that are already being implemented now? Like are you actually putting this into equipment already?

JEFF

Oh, certainly, certainly. We've got some shredding systems that we monitor the motor loads every second that they're operational. And ours is more so from a jam perspective. We're trying to understand how frequently the machine jams and what it's shredding so that we can continue

to refine our designs and our hook designs and things like that to optimize that machine is really what that boils down to. But overall, on a full system, it'll help maintenance teams and everyone else with these things that maybe were a manual checklist before it'll automate some more of that stuff and hopefully catch issues before they become catastrophic.

TOM

Mm. Yeah. So, is there potential of sensors that can measure whether there's grease in the bearings?

JEFF

Sure, yeah. They can measure like, you know, friction loads and heat. Obviously, heat's a big indication. If there's no grease, they're going to have, you know, added heat. So, that's one of the biggest areas they would monitor and then be able to kind of tip you off that somebody's not maintaining that properly.

TOM

So, there's sensors and electronics, data driven stuff. Is there anything in terms of, like, hard drives or SSDs or things like that are coming up that you're seeing in the horizon?

JEFF

Yeah, the hard drive is continually evolving. Just we're being forced for our equipment to evolve because the hard drives themselves are evolving. I mean, there's drives...

TOM

How so?

JEFF

Well, there's hard drives being produced today that are way more dense because they have way more storage capacity in the same footprint. So, they're much harder to shred than the drives that were produced 10 or 15 years ago. So, we're constantly evolving, you know, kind of trying to keep tabs on what's coming out and making sure equipment can process it. If it can't, then we're at the drawing board trying to figure out, okay, what's the next model we need to make to be able to handle this?

And then on the SSD side, yeah, we're seeing more inquiries about that those are becoming more popular and they're going to become more prevalent. Right now, it's, you know, everyone wants to follow an NSA spec and take them to two-millimeter particle size. So, they'll probably be some more innovations on that front to get drives down to that small particle. Hopefully at a higher volume. That's, you know, that's probably the next innovation you'll see there.

TOM

Well, this has all been really helpful just in terms of getting a sense of where we're going, what some of the insights you have. But I'm particularly interested because you mentioned earlier, you're an engineer by training and by profession, and you run a manufacturing facility, right? You build stuff, you service stuff, you, you know, support stuff like that. But I'm really intrigued because, you know, a lot of... obviously the shredding industry is a service business, not that yours isn't, but as an engineer, you walk into shred companies... what's your brain do? You get into these shredding companies, your engineering brain goes to work, and what... if you could give some, you know, unvarnished advice, and it's, it's to the general mass of people, not to a specific. So, you know, you're not hurting anybody by saying this, but like, what's your engineering mind say to people to do differently than what you often see happening? How do you reconstruct something? Because I believe every engineer I know looks at something and goes, how do we make that more efficient, more effective, better work, more cleanly, clearly? What the advice you'd give to the average shred operator who's, not from the equipment side, we've already talked about that, but just from running their business?

JEFF

Well, you're right. An engineer, the way you think about things is obviously systematic. I think most engineers inherently have that trait and then they, that's what they teach you in school too, is really more of a systematic thought process. So, I guess the first thing you typically would look at is just how the material flows through their facility. Are they bringing things in and out the same door? Is material crossing or people crossing paths all the time that's causing someone to stop working so that someone can get through? Those, I guess, are the biggest things.

And then, you know, looking at how they're... a lot of times we look at how they're feeding a shredder. If, you know, if they're doing it by hand, that's one thing. But there's many different automated ways to feed equipment. And often maybe we can put a piece of equipment between their conveyor and the shredder to help with that, to help meter things out or help make that a smoother, a smoother transition, which overall will give them more production because they won't jam their machine or overfeed, or underfeed is the other thing. So, those would be the main things you would that catch my attention, I guess, when I would walk into a facility.

TOM

Well, Jeff, this has been really helpful. Lots of good stuff, lots of valuable information and I really appreciate you taking the time and sharing this with us. I know there's a lot of cool things coming up on the horizon for this industry and really appreciate your insights today in sharing them with us.

JEFF

Well, thank you. Thank you for having me. It was a pleasure.