

Case Study

Ad-Tech launches their first *zirconium-based pretreatment 8-stage spray washing system*

Gardobond® X 4548

Chemetall's pretreatments advance the standard

- + Multi-metal capabilities.
- + Energy saving, ambient temperature operation.
- + Phosphorus-free and no heavy metals result in environmental sustainability.
- + Reduce wastewater treatment.
- + Virtually no sludge.
- + Versatile application — spray, immersion, and wand wash.
- + Expert design and installation available.
- + Caterpillar 1E 4093-B approved.
- + Meets the highest quality standards of John Deere.

 **BASF**
We create chemistry

Chemetall
expect more+



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Ad-Tech Industries, Inc. (Ad-Tech) is a principal supplier of a wide variety of coating and finishing services, such as ecoat, powder coating, liquid coating, and electroless nickel plating, for major manufacturers in Watertown, Wisconsin and the surrounding Milwaukee area. Ad-Tech is a convenient, one-stop shop. They are innovative, proactive, and committed to superior workmanship and customer satisfaction. In business since 1978, Ad-Tech's ever-expanding footprint now encompasses 245,000 square feet and their motto is, **"When we paint, you're covered."**

As part of their reputation for innovation, Ad-Tech has been a Chemetall partner for 15 years, and, like Chemetall, Ad-Tech holds itself to the highest standards, and a proactive commitment to superior workmanship and customer satisfaction. It was with this firmly held philosophy that Ad-Tech decided, about 2 years ago, that it was time to enter the market for advanced pretreatment. Chemetall was the obvious choice, as a longtime, reliable, and expert partner, in addition to the clear leader in innovative advanced pretreatments. The project commenced.

substrates. **Gardobond X 4548** makes it possible to treat a wide array of substrates. It operates at an energy saving ambient temperature, and generates essentially no sludge, which makes it perfect for a business like ours. Our customers come in with a variety of materials and finishing needs, and, for our lines to sustain us economically, they must be versatile."

Brian Groubert, Technical Account Manager, Chemetall, picks up the story, "The overall project was to build a brand-new 8-stage spray washer system, and, of course, incorporate **Gardobond X 4548**. It took nearly 2 years of planning to execute the new line from design to finish. It was Ad-Tech's first experience with zirconium-based pretreatments. The planning included their customers, ensuring that the new line was commissioned in a manner that would enhance their business relationships."

The new process went online in January of 2020, with Chemetall's support to ensure best practices.



Here are a few of the comments offered by the Ad-Tech operators:

"This multi-metal cleaner **Gardoclean® S 5489**, does not have the silicate components that typically cause a lot of extra maintenance with our processing equipment."

"Despite all the zinc-coated substrates we process through the zirconium-based pretreatment we have found the waste treatment of the **Gardobond X 4548** to be unexpectedly easy."

"We made the decision to put in a filtration system that Brian Groubert recommended for our advanced pretreatment bath. The filtration is so effective we can see the bottom of the tank months after initiating the bath. Can you imagine!?"

"**Gardobond X 4548** has proven to be more forgiving than iron phosphate which is one of the concerns you hear about in the industry."

"**Gardobond X 4548** was capable of treating a hardened aluminum project that required uncharacteristic adhesion properties."

"I always volunteer to promote new technologies and sometimes you find a winner and sometimes you don't. **Gardobond X 4548** is absolutely the winner."

"I truly believe this product is versatile enough to meet the demands of any job shop."

Steve Loritz, Operations Manager for Ad-Tech, describes the project, "We were very interested in a new technology developed by Chemetall, **Gardobond® X 4548**. It is designed for multi-metal operations including ferrous and non-ferrous substrates as well as Zn-coated and aluminum

All the processes are meeting their customers' paint performance expectations. This even includes a very demanding Direct-to-Metal (DTM) powder to aluminum application which requires uncharacteristically higher than normal adhesion properties. This is achievable through the

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combined efforts of the advance pretreatment and a unique acid conditioner to prep the substrate surface. This is exactly the kind of situation where Chemetall's expertise, laboratory analytics, and process simulations are invaluable.

Chemetall is known for expertise and dedication to customers. This is a perfect example of how customers can expand using new technologies from Chemetall.

Ad-Tech's need for continuous improvement, which combined with Chemetall's own commitment to innovation, supports Ad-Tech's goal of sustainability into the future by reducing energy, improving environmental stewardship, and improving quality.



Freshly powder coated product.



Gardobond 24T zinc phosphate pretreatment prior to cathodic epoxy ecoat paint.

+ Chemetall supplies to Ad-Tech

- a. Cathodic-epoxy ecoat paint pretreatment — 12 stages including acid pickle and automotive-grade zinc phosphate finish. Meets MIL SPEC TTC-490. Cathodic epoxy ecoat provides superior corrosion protection for a wide array of applications.
- b. Powder coat pretreatment — (2) 7-stage spray washers operating acid pickle and iron phosphate finish
- c. Powder coat pretreatment — (1) 8-stage spray washer operating acid pickle and advanced pretreatment finish**
- d. Powder coat pretreatment — (1) 5-stage spray washer operating iron phosphate finish
- e. (1) Manual pressure wand iron phosphate bath finishing line (for larger parts)
- f. (1) Electroless nickel plating line
- g. Paint stripping chemistry (mostly for internal stripping needs)
- h. (4) Continuous wastewater treatment systems
- i. Boiler water treatment chemistry

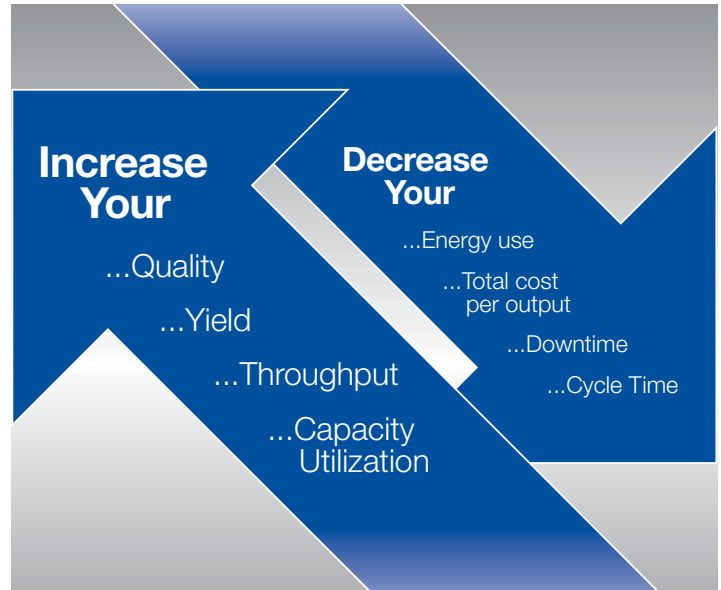
Ad-Tech is very pleased with these improvements. All of the operations provided by Chemetall in the plant are running at high efficiency and maintain their costs at a minimum while at peak performance. Ad-Tech continues to grow, and the partnership with Chemetall strengthens. Chemetall provides chemistry for every application in the plant and that is a testament to their faith in Chemetall's products/services.

Steve Loritz had more to say, "Chemetall has achieved the one metric for us that is always the most important. Chemetall has helped our customers be happier with us! In my 38-years in this business I have not seen better service than what Chemetall has provided. Brian and his team are always looking for ways to bring value to Ad-Tech, whether it be a new technology or new best practices. This seamless and easy transition has made this investment a true win-win."

Cut it. Clean it. Coat it. Control it. Conserve it.® with us!



Powder coating in progress.



Our focus is you, our pretreatment customer!

At Chemetall, we are dedicated, so you can expect more. Our global specialists are locally available. Our experts provide focused, passionate, and accountable support. You can expect the highest quality from our integrated portfolio of innovative products. Our labs are fast and accurate. We will collaborate with you to increase the efficiency of your process performance.

We are the Surface Treatment global business unit of the Coatings division of BASF, operating under the Chemetall brand, a leading supplier of applied surface treatments and services for metal, plastic, and glass substrates in a vast range of industries and end markets. As process innovators, fully dedicated to your success, we develop, manufacture, and provide best-in-class technologies, systems, and expertise.

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