

NAME:
Michael Caputi

JOB TITLE:
President

YEARS IN THE INDUSTRY:
30

YEARS WITH COMPANY:
20

A FORMULA FOR PROTECTING INFRASTRUCTURE

Epoxytec focuses on developing solutions to rehabilitate water and wastewater infrastructure

By Luke Laggis

Epoxytec has been in the water and wastewater industry for 30 years. As a manufacturer of restoration compounds, epoxies and protective coatings, the company has played a part in countless infrastructure protection and rehabilitation projects.

Today, the company's focus is on developing products and systems to repair, rehabilitate, coat and line wastewater and water infrastructure, while protecting structural assets from hydrogen sulfide and eliminating inflow and infiltration. Epoxytec prides itself on providing customized services and programs to combat corrosion, abrasion, chemical attack and other threats. The company performs inspections and helps prescribe specific protective lining and rehabilitative solutions for water and wastewater treatment plants, water distribution, sanitary sewer collections systems, manholes and lift stations.

Founded by Joe Caputi, the company's history demonstrates experience, resilience and drive for excellence in the protective coating industry. As an Italian immigrant living in New York, Joe began his career as an independent field technician in 1973. He mastered the art of selling, which combined with his business acumen and knowledge of protective coatings formed a recipe for success. He founded Epoxytec in 1991, and as various industries expanded, so did his product line. Joe's son Michael Caputi joined the company in 2001 and helped drive the company's growth. Today he serves as company president.

Municipal Sewer & Water recently spoke with Michael about the company's past, present and future.

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Michael Caputi



Epoxytec President
Michael Caputi

Other advancements have been the resin and reinforcement systems of the liners themselves. We're noticing a decline in engineers specifying thinner, multicoat traditional epoxy coatings; instead, they're selecting higher-build, higher-strength, reinforced 100% solids systems to accommodate many other forces that are at play in water and wastewater environments, especially when confronted with aged and highly fatigued infrastructure. In fact, we've noticed competitors transitioning from thinner-mil coatings, to higher-build, higher-strength epoxy or polymer lining solutions of which many offer enough strength to fit structural considerations with thickness calculations. Formulators are keeping busy as an incredible amount of material science and polymerization techniques are available today for R&D.

In recent years, we've been working with engineers who specify these advanced systems with the understanding that although possibly slightly higher in cost at the beginning, over the long term, the cost savings are extended and realized with higher performance due to extended life cycles. This is a terrific trend.

MSW: What kind of solutions and capabilities does Epoxytec provide municipal utilities?

Caputi: Epoxytec provides a variety of rehabilitative and lining solutions. Epoxytec focuses on applied, immersion rehab and lining specific to the water and wastewater industry by developing a portfolio of product solutions to protect against H₂S and seal against I&I — products to enhance structures and protect them long-term. This is done by screening and certifying contractors and assisting engineers and utilities with proper product selection based on specific conditions. Doing this correctly offers the owner a well-drafted specification and plan, with warranty inclusion for quality assurance.

MSW: Can you provide some insight on the company's product development process?

Caputi: Epoxytec launches R&D projects mainly due to market demand and customer feedback. It is a team effort, first led by field technicians who intimately understand the need for product deliverables from a contractor's perspective — material handling, usability, shelf-life considerations, flow characteristics, sag resistance, gel times and many other variables. This stage is important because before it goes to the formulator/chemist, our

MSW: How do you see the sewer and water infrastructure rehabilitation industry evolving?

Caputi: During the last few decades, we've seen the growth of innovation. Cementitious repair compounds and lining materials are improving, with modifications to incorporate curing mechanisms and improved corrosion resistance using polymers — incorporating epoxy and other polymers with cements for example.

field services team provides parameters and advocates for properties that chemists may not always consider. Many times, we may involve our preferred contractors to be a part of this stage and help with targeting properties and characteristics that would be beneficial in the field. In addition, surface forgiveness, surface acceptance, moisture tolerance and other properties are all taken into consideration.

Then the chemist goes to work figuring out the resin system, curing agents and the plethora of reinforcing agents, modifiers, additives and fillers that meet the properties requested. Once a version is completed, prototyping and testing begins. This includes mechanical strength testing and other property-specific testing. From there, revision continues until the balance of all properties is met. Third-party testing ensues, and compliance/regulatory reviews and authoring takes place until finally a batch ticket is completed, and a marketing campaign begins.

MSW: How has your product line evolved to meet the needs of utilities with aging infrastructure and limited budgets?

Caputi: This is where we believe Epoxytec excels. Epoxytec has been transitioning its core product line from thinner traditional coatings to innovative ultra-high-build applied FRP-grade coatings that are specifically designed to bridge aging infrastructure using high-build applied and bonded lining often times at 125-250 mils. These more sophisticated applied lining products, what Epoxytec calls its CPP Series, are also enhanced to be applied direct-to-concrete, which saves time and money.

MSW: What differentiates your products from the competition?

Caputi: Our observation is that many of our competitors formulate with a variety of industries in mind, attempting to design a coating to not only fit water and wastewater, but also other industries like oil and gas, marine, etc. Although convenient, oftentimes subtle properties needed for a product that may fare better on steel in another industry, for example, lack some of the subtle characteristics that allow it to perform, bond and survive long-term in the water and wastewater environment. At Epoxytec, our formulation and R&D team only focuses on water and wastewater, and therefore all the testing and design of product is based on these conditions. This allows us a competitive edge when requiring performance with specific tolerance and bonding capability that exists in humid and acidic environments.

Furthermore, it is common to see competitors with a single solution. Based on various conditions, Epoxytec would argue that there is a place for advanced-polymer cements, 100% solid coatings, and ultra-high build structural-grade applied lining systems depending on the needs, conditions and expectations of the customer. We offer each solution to fit the need.

Epoxytec acknowledges that each industry has its own unique needs and that's why our MCOR brand came to existence. Epoxytec created its MCOR brand to meet the more specialized needs of other industries, leaving Epoxytec to focus specifically on the needs

of the water and wastewater industry. By separating the two, it has allowed the R&D focus to stay specific to each brand's needs.

MSW: Can the average municipal utility use your products and do the work in-house?

Caputi: Yes. In fact, Epoxytec runs a comprehensive DIY train-

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Michael Caputi

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Epoxytec provides a variety of rehabilitative and lining solutions, focusing on applied, immersion rehab and lining products that protect against H₂S and seal against I&I.

no VOCs, and get started without requiring expensive equipment or complexity. A small crew with mixing drills, trowels and/or rollers can get started with basic manhole or lift station rehab and lining. If the crew wants higher output, for example, to carry over to plant structures, then they'd advance training to learn to spray ultra-high-build lining systems with our help and our spray vendor certification. It's a great program, and many municipalities have self-performed, typically sticking to easy-to-use, forgiving and 100% solids (no VOCs) manhole or lift station lining from our DIY program.



A before-and-after look at the results of lining a pipe with Epoxytec.

ing program to help municipalities self-perform. The program with Epoxytec is carefully designed, as we supply products that contain

and training.

MSW: What's on the horizon?

Caputi: Our structural, applied FRP lining portfolio, the CPP Series, currently consists of four versions: CPP trowel-grade for water and wastewater lining; CPP Sprayliner designed for large-wall wastewater interior lining; CPP Sprayliner MH for underground infrastructure lining, such as manholes, pipe and lift stations; and CPP Sprayliner 61, designed for potable water lining.

Epoxytec is looking to launch a fifth version that will be designed with novolac and polysulfide to have a semi-rigid, slightly flexible, high-chemical-resistance version in the lineup for extreme chemical resistance needs, still with high build in mind at 125–250 mils. Currently, there are similar solutions within our MCOR brand. ♦

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