

**WHAT IS EPCON?**

Epcon is a full-service organization, starting with front-end business development/marketing, sales and application engineering, through complete in-house engineering, design, and drafting — all highly automated. Manufacturing, fabricating, and assembly is completed at our 250,000-square-foot high-bay facility north of Houston, Texas. We also offer turnkey field installation. Epcon products are highly engineered and fabricated with high-quality materials. Products include thermal oxidizers, industrial ovens, furnaces, washlines, and specialty systems, all pertaining to industrial heat-processing equipment.

**HOW DID EPCON BEGIN?**

I started Epcon 40 years ago. I am a mechanical engineer with advanced degrees and have worked with industrial thermal processing equipment, specifically coil coating operations. I hold several patents for ovens, oxidizers, and combining the process of the two. Epcon's first project was a 55-gallon drum manufacturing plant in Houston at Mauser Group. I personally designed the entire system consisting of five paint-curing ovens, four dry-off ovens, and two three-stage washlines. There was one large thermal oxidizer to destroy the VOCs (volatile organic compounds) — the hydrocarbons coming out of the paint-curing ovens. Comprehensive heat recover was employed to recover all the heat from the oxidizer, which was put back into the five ovens, generating high-pressure hot water at 273°F for the two washlines. The final exhaust was used to heat the four burnerless dry-off ovens. This leading-edge design led to a patent for the entire system (Patent No. 4,242,084).

Epcon's next project was for Tuboscope, a division of National Oilwell, which consisted of two large car-bottom prebake (burnout) ovens with comprehensive heat recovery. This resulted in two patents (Patent Nos. 4,322,203 and 4,240,787). In addition to the burnout ovens, there were three conveyerized

ovens, one final bake oven, and one coupling oven. These two major projects were the foundation for Epcon's success and growth.

WHAT ARE SOME OF EPCON'S PROUDEST ACHIEVEMENTS?

We have done a lot of unique systems in terms of soil remediation. We recently built two unique thermal oxidizers for the government. These bulk oxidizers destroy the nerve gas from WWII stored in underground bunkers in Richmond, Kentucky. We tested those oxidizers here at Epcon. Another engineering project was for nuclear waste disposal.

Another achievement was the thermal deoiler we designed and manufactured for Ford Motor Company about 17 years ago for deoiling aluminum fins in air conditioning condensers. When they are formed, these thin metal pieces have lubricating oils that contain a lot of VOCs, and Ford used tetrachloroethane to remove them. The EPA banned tetrachloroethane because it was a carcinogen. At that time, Ford was making all the automobile air conditioners in one location. So Ford was looking for an alternate means of deoiling the fins before brazing. These are extremely thin fins that go into the condenser, and they are brazed; there's no other way to fuse them. Before brazing, they have to be completely oil- and dirt-free. So we developed this thermal deoiler.

I personally designed this system and built a prototype. And it worked perfectly and resulted in two patents (Patent Nos. 6,135,765 and 6,149,707). Ford was happy, and its operating costs went from \$20 million to \$108,000.

We designed a new cat cracker unit for Shell Oil Refinery. What they had was over 60 years old when we replaced it. And the stipulation was that it had to last at least another 60 years. We had Shell experts as part of the design team. And it was the largest single project in Epcon's history. And it was done right here in Houston. It is operating very successfully, and it's going to for another 60 years.

WHAT DOES EPCON OFFER?

Epcon not only designs and manufactures ovens and furnaces but also oxidizers and specialty systems. With in-house engineering, manufacturing, fabricating, and assembly, and

highly skilled and experienced labor under one roof, Epcon manufactures all types of heat-processing equipment — unlike other manufacturers of heat-processing equipment. That equipment includes industrial ovens, industrial furnaces, and thermal oxidizers of all types. Epcon has many differentiations and holds several patents. We have experienced engineers on staff at our manufacturing and assembly plant complete with modern machinery. Epcon's capabilities include the manufacture, assembly, testing prior to shipping, and installation at our customers' locations.

WHAT GOES INTO CREATING A THERMAL OXIDIZER?

After getting the RFQ, our experienced engineers analyze the application and see what technology would be best suited as a solution. Epcon is a leading manufacturer of regenerative thermal oxidizers, recuperative oxidizers, catalytic oxidizers, and direct fired thermal oxidizers. After analysis and preliminary engineering, we offer the technology to the customer. Just about all our jobs are on a fixed-firm price basis. Everything is integrated fully here. The team interacts with every activity — sales and applications, design, procurement and engineering, and after-sales service. The team coordinates and combines all these activities for a successful project. In 40 years, Epcon has manufactured over 4,000 systems, operating globally in just about all industrialized countries. The majority of the systems are in the U.S.

WHAT WORK HAS EPCON DONE WITH NASA AND AEROSPACE?

We manufactured two specialized pieces of heat-processing equipment for NASA. We made an oven for NASA to heat the ceramic tiles that went on the shuttle, one tile at a time. And we did a job for Lockheed Martin, which processed the gold foil that forms the shield around the lunar module on the moon's surface. We made the curing oven.

WHAT SETS EPCON APART?

We don't "sell" anything; we provide a solution of satisfaction. Customers come to us with a problem or something they need to control, so we take charge and fully engineer, design, build, and test before we ship. 🔥