Koch Engineering manufactures pollution control systems and mass transfer equipment for chemical plants, refineries, and related industries.

Since the installation of its first valve tray in 1952, Koch Engineering Company, Inc. has become a leading manufacturer of both air pollution control systems and mass transfer equipment. Today, this Wichita-based firm manufactures process equipment for chemical plants, refineries, and related industries worldwide.

With annual sales in the tens of millions and offices in the United States, Canada, Italy, and Germany, Koch Engineering is a major manufacturer in its own right. But few people know that Koch Engineering's parent company, Koch Industries, Inc., is one of the largest privately owned corporations in the world, with annual sales of over $12 billion. Other Koch Industries companies are involved in oil and gas (exploration, purchasing, marketing, refining, and transportation), coal, chemicals, cattle ranches, real estate, manufacturing, and research and development.

Koch Engineering manufactures five basic product lines: air pollution control systems, mist eliminators, distillation trays, tower packings and internals, and static mixing units.

Air Pollution Control

The New York City-based Air Pollution Control Product Group
markets equipment and complete systems for chemical and particulate removal in such diverse industries as pulp and paper, iron and steel, oil, chemical, and textile. Major products include:

- **Dry SO₂ scrubbing systems** for chemical and particulate removal in industrial coal-fired boilers. Koch Engineering is the only dry scrubbing manufacturer with all of the following: A USA-based dry scrubbing pilot plant (equipped with a coal-fired boiler), a spray drying semi-works (eight-foot diameter), and experience on an operating commercial-scale system.

- **Reverse Jet™ Scrubber.** The Reverse Jet, a major breakthrough in wet scrubbing technology, uses nozzles to produce a countercurrent mist of scrubbing fluid for chemical and particulate removal. It requires less maintenance and consumes less energy than conventional wet scrubbing systems. A pilot plant is available for evaluation testing at customer facilities.

- Other products include MultiVenturi Flexitray tray scrubbers, FlexiVenturi venturi scrubbers, and Koch static mixing towers for the oxidation of sodium sulfite to sodium sulfate in scrubber wastewater streams.

**MIST ELIMINATORS**

Basically, a mist eliminator removes entrained liquid droplets from vapor streams. Only Koch offers a complete line of fiber bed, mesh, and chevron mist eliminators.

- **Flexifiber** is a fiber bed mist eliminator capable of capturing submicron particles with efficiencies of up to 99.95%.

- **Fleximesh** is the efficient, economical knitted mesh mist eliminator for removing droplets down to 10 microns. The knitted wire mesh that goes into Fleximesh is also used for a wide variety
of other applications including insulating blanket mesh and knitted wire filters. Fleximesh and other mesh products are manufactured in New Jersey, Texas, California, Canada, and Italy.

Flexichevron mist eliminators are open zig-zag baffles used for the separation of droplets down to 40 microns where fouling conditions exist.

TRAY AND GRIDS

The first valve tray was produced by Koch Engineering in 1952. Since then, Koch has manufactured trays for over 12,000 installations to date.

Koch Flexitrays are valve-type trays demonstrating performance superior to other types of trays. Koch also manufactures sieve, bubble cap, tunnel, dualflow, chimney, disc-and-donut, and any other specialty design required to meet customer specifications.

Koch's Tray Product Group also markets Flexigrid, a grid-type structured packing that can increase capacity and resist fouling in certain applications such as refinery vacuum crude towers.

TOWER PACKING AND INTERNALS

No manufacturer of mass transfer equipment offers as many different structured and dumped tower packings as Koch does. Some of these products include:

- Flexipac, a structured-tower packing made from grooved, corrugated sheets. Flexipac has a higher capacity, lower pressure drop, and higher efficiency than pall rings or saddles. It outperforms dumped packings in distillation applications.

- Koch Sulzer Packing is a unique structured packing made from a woven-wire fabric. It's the most efficient packing available for
commercial-scale towers. Metal Koch Sulzer packing is ideal for high-efficiency distillation. There's also a plastic version for absorption and a ceramic version for corrosive services.

Other tower packings include Flexisaddles, Flexirings (pall rings), Koch K-pac, and Raschig rings. Koch also manufactures a wide variety of internals.

Vapor Recompression System. The Koch Sulzer vapor recompression system uses 80% less energy than conventional distillation systems. Koch provides the complete system including a high-efficiency distillation column, turboblowers, and reboilers.

STATIC MIXING

The Koch static mixing unit is a continuous, in-line motionless mixer. With no moving parts, the Koch static mixing unit takes less space, requires less maintenance, consumes less energy, and is more efficient than other mixing devices. The Static Mixing Product Group markets three unique mixer designs for numerous applications including high-viscosity mixing, high-low viscosity mixing, plug flow reactors, heat exchangers, low-viscosity liquid blending, gas mixing, dispersing immiscible liquids, and gas-liquid contacting.

The Koch static mixing unit is a simple, economical device for homogenizing polymer melt streams, and it has been well received in the plastics industry. Koch's two polymer mixers are the Melt Blender for extruders and the Mixing Head for injection molding machines. Koch also markets the Outputter, a screw conversion kit.

Koch manufactures most of these products at its central manufacturing facility in Wichita, Kansas (corporate headquarters). There are additional manufacturing plants, R & D laboratories, and
sales offices in New York, New Jersey, Texas, California, Massachusetts, Canada, Italy, and Germany.

A complete list of these facilities is attached.

Note: Koch Engineering Co., Inc. markets the Koch static mixing oxidation tower, Flexipac, Koch Sulzer packing, Vapor Recompression System, static mixing unit, Melt Blender, Mixing Head, and Outputter in the U.S.A., Canada, and Mexico as the exclusive licensee of Sulzer Bros., Winterthur, Switzerland. Koch markets the Reverse Jet™ worldwide as the exclusive licensee of the E.I. Dupont Co.
KOCH ENGINEERING PLANTS, SALES OFFICES, AND SUBSIDIARIES

(1= corporate headquarters; 2= Divmet Division headquarters;
3= administrative office; 4= sales office; 5= manufacturing facility;
6= manufacturing facility, Fleximesh only; 7= Koch International
office; 8= wholly owned subsidiary; 9= research and development
laboratories.)

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