

## Accurate Forming Reduces Waste Oil by 99.9%

Accurate Forming in northern New Jersey has been a primary manufacturer of precision deep draw and progressive stamped parts for original equipment manufacturers in the automotive, medical, industrial, ordnance, marker tube and premium writing industries for over forty years.

This company normally generates 5-6 drums of spent oil from its deep drawing and stamping processes in a month. The spent oil contains very fine suspended metal solids (stainless steel, aluminum, brass, copper, and nickel). The total suspended solids level of the waste oil is with an average of 500 ppm.

The company previously paid about \$10 per gallon of oil for purchasing, mixing, and disposing. As a result, about \$3000 per month was spent on its lubricating oils, which made up a large portion of the consumable item costs in the company's production processes. In order to minimize production costs, this company started an oil recycling program. One key item in this program is an oil filtration system which is employed to remove the fine particulates from the spent oils. Based on its facility conditions, the company laid out several critical features of the oil filtration system that must be included:

- a. 1 micron pore size rating.
- b. Compact and portable.
- c. Self-cleaning capability.
- d. Operated with standard drum containers.
- e. Automatically controlled system.
- f. Easy and simple to operate.
- g. Low maintenance cost and long service life filter elements.

The company had evaluated several available filtration technologies, including FSI's PRS filtration system. The company concluded that only FSI's PRS system could meet all of the requirements listed above. After the evaluation, this company immediately purchased one PRS-1 (one gallon oil per minute capacity, as shown in Figure 1) filtration system used to recycle its spent oils.



Figure 1: PRS-1 Filtration System

The PRS systems are designed and built based on Filtration Solutions, Inc.'s patented CCDB (centrifugal force, cross flow, Dean vortex flow and back-wash) technology as shown in Figure 2. The CCDB technology is used to maintain a clean filter surface, resulting in dramatic improvements in filter service life and performance for high solid level applications.

Accurate Forming started to use the PRS-1 system in August 2003. The company hasn't sent out any waste oil for disposal since then (in two months). On a monthly basis, the PRS-1 system treats all spent oils (5-6 drums) pulled off from the drawing and stamping process lines. The treated oils are then reused for the drawing and stamping processes. It was estimated that the PRS-1 system can reduce the spent oil volume at least 80-fold to under no more than 7 gallons of concentrated waste oil per month.

A financial review of the system with Accurate Forming showed that the PRS-1 system paid for itself in less than two months. Additionally, Accurate Forming personnel are particularly pleased with the PRS system's ability to self-clean, the long filter element service life, and the trouble-free operation of the PRS system.

Rocky Carr, who operates the PRS system, says, " I like the superb performance, extremely low maintenance and operation feasibility of the system".

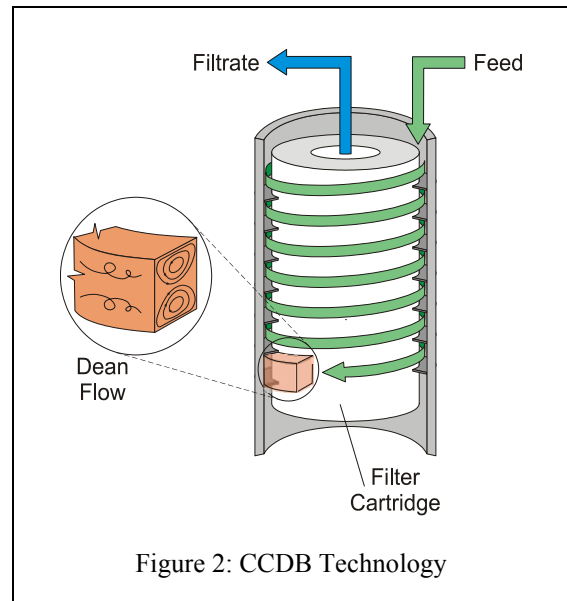


Figure 2: CCDB Technology