

# CASE STUDY METAL FINISHING II

## ***ENCON THERMAL EVAPORATOR***



### **Application**

Composite waste stream made up of spent coolant, parts washing, vibratory and floor scrubber wastewater.

### **Background**

A highly respected manufacturer of complex hydraulic engine management and fuel system components in the mid-west generates multiple waste streams in their manufacturing process that require disposal. The wastewater was previously being sent to an evaporator system manufactured by an ENCON competitor. The volume of wastewater increased beyond what the old evaporator could handle and in 2006 they decided to purchase a larger evaporator.

### **Application Challenges**

Like most manufacturers in the metalworking industry, the client generates a number of different wastewater streams in the course of production. The diverse chemistries of these waste streams make it difficult to achieve satisfactory results with legacy wastewater treatment solutions such as chemical or filtration. Off-site hauling is often the easiest choice, but disposal costs tend to be high, especially when you consider 70-95% of what you are paying to dispose of is just water.

### **The Solution**

The client completed a rigorous analysis and comparison of the evaporator systems offered by ENCON Evaporators and the manufacturer of their original evaporator and chose ENCON to replace their previous system. The new ENCON Evaporator they selected utilized natural gas as the heat source and was able to process up to 72 gallons per hour, giving them ample capacity for anticipated future growth. By greatly reducing the water content of their waste stream, the

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client was able to dramatically lower the amount of waste requiring hauling. This system is still going strong 12 years later, processing 4,000-5,000 gallons per week, 24 hours a day, 6 days a week. In 2018, the client added a new facility and once again chose an ENCON Evaporator to handle the additional wastewater. This evaporator also utilizes natural gas as the heat source and has the capacity to process up to 96 gallons per hour.

### Conclusion

ENCON is proud to work with industry leaders like our client to minimize the hassle of responsible wastewater disposal, allowing them to focus on what they do best. ENCON Evaporator systems, with their low operating cost and minimal manpower requirements, take the headache out of handling different wastewater streams, while dramatically reducing disposal costs and volume.

### Evaporator Specifics

**ENCON Model:** N33Y-72

**Heat Source:** Natural Gas

**Evaporator Capacity:** 72 gallons per hour of evaporation

**Evaporator Materials of Construction:** 316L stainless steel tank and heat exchanger, 304 stainless steel lid and tank skin.

**Year of Installation:** 2006

**ENCON Model:** N33V4-96

**Heat Source:** Natural Gas

**Evaporator Capacity:** 96 gallons per hour of evaporation

**Evaporator Materials of Construction:** 316L stainless steel tank and heat exchanger, 304 stainless steel lid and tank skin.

**Year of Installation:** 2018



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