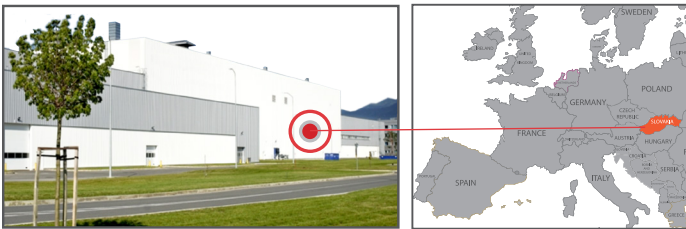


Automotive Manufacturer Drives Cost Reduction and Increases Profitability by Recycling Wastewater

An engine manufacturing plant in Slovakia needed to improve their operations. The company sought continuous improvement through operating efficiencies, cost reduction, and recycling and reuse of waste. The plant produces 300,000 gasoline engines annually with five manufacturing lines, consisting of four metal cutting lines and one assembly line. The plant sought to improve operating cost structures and reduce environmental impact through recycle and reuse of wastewater and mitigating CO₂ emissions.



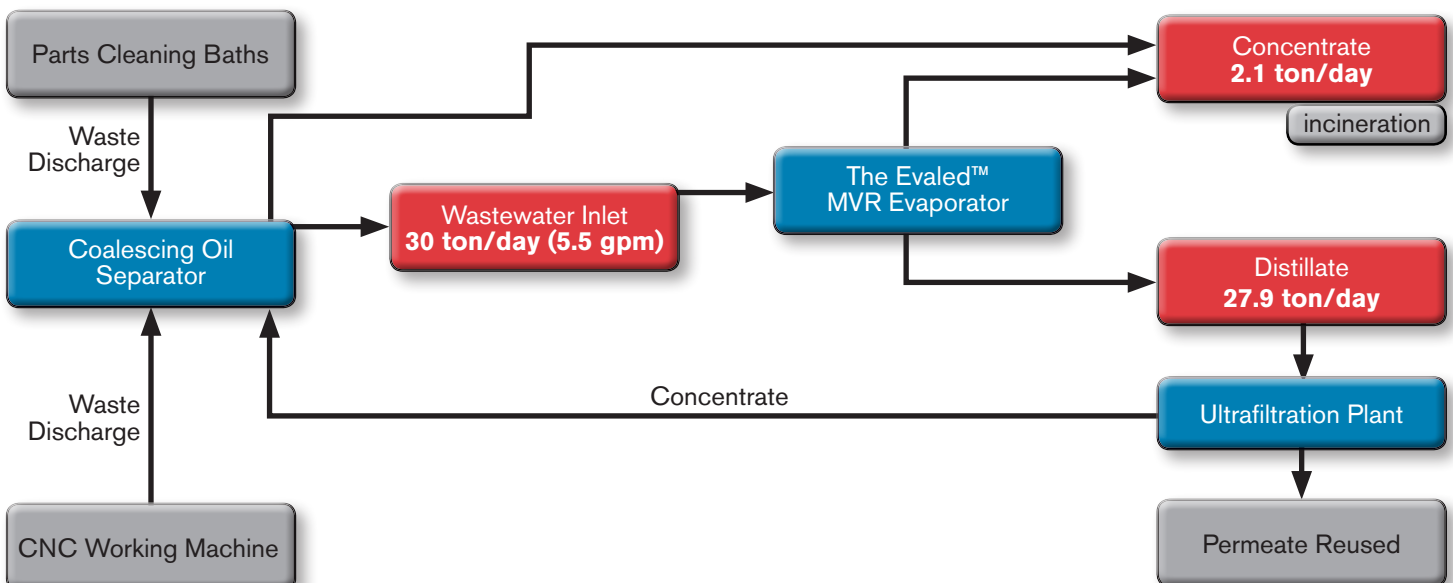
Project Summary

PAY BACK
▪ About 1.1 Years

WATER REUSED
▪ ~ 95%

CONCENTRATION FACTOR
▪ 20x

Plant Process Diagram



Plant Analysis

Parameters	Unit of Measure	Waste In	Distillate Out	Concentrate Out
COD	ppm	6000	<200	-
pH		5.8	9.7	
TS at 105° C	%	0.2-0.3	-	10
Oils	ppm	850	<30	
Conductivity	µ S/cm	1300	100	-
TSS	ppm	<450	0	8000-9000

Technology Type	Material	Footprint (ft ²)
MVR Forced Circulation TC 30000 AA	AISI 316 Stainless Steel	150.7

Results



* The Evaled™ MVR Evaporator model TC was used to meet environmental and cost reduction goals.

The Solution Achieved:

Pay-Back	About 1.1 Years
Water Reused	~ 95%
Concentration Factor	20x

- Disposal cost reduction by more than 15 times
- Recovery of concentrate oil reused as fuel (high calorific value) has reduced CO₂ footprint

ABOUT PRAB

PRAB is a leading industrial manufacturer of scrap metal conveyors, chip processing equipment, and fluid filtration systems. Each piece of equipment is engineered to help industrial manufacturers improve processes, reduce operating costs, and add value to scrap metal. PRAB designs and builds equipment to the specs of each application and supports installations from global manufacturing facilities. PRAB has served the Aerospace, Automotive, Industrial Manufacturing, Scrap Recycling, and Metal-forming industries for over 60 years. For more information on PRAB, visit prab.com.

For more information on PRAB Conveyors, Chip Processing Systems, and filtration solutions for recycle and reuse of process fluids, visit prab.com, call (800) 968-7722, or e-mail sales@prab.com.

* This case study is provided by Veolia Water Technologies of Italy. PRAB is an authorized North American distributor of the Evaled™ vacuum evaporation technology.



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