Partial Pore Blocking in Microfiltration Recycling of a Semisynthetic Metalworking Fluid

Membrane pore blocking during microfiltration of semisynthetic metalworking fluids was a regular occurrence. How did blockages occur and could a mathematical model be developed to simulate pore blockage?

ISTC's Kishore Rajagopalan and colleagues from the University of Illinois discovered that partial blocking of pore spaces from microemulsion aggregation was a new fouling mechanism leading to total pore space blocking and causing a reduction in flux. The team was able to develop a model that simulated both total and partial pore space blockage.

Meet the Scientists

Kishore Rajagopalan

Publications

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