



Alfa Laval wash liquid cleaning module pays for itself in one year

Renault Cléon, near Rouen, France

Case story: Separation system

Renault Cléon, near Rouen, France specialises in engine and gearbox production. An Alfa Laval separation system, installed in October 2000 to clean wash liquids for engine components, removes 70 litres of tramp oil per day from the system by high speed centrifugal separation. This provides annual savings of more than 100,000 Euro for Renault on replacement and disposal of wash liquids, and ensures efficient component washing.

Renault Cléon employs about 4,800 people, covers an area of 135 ha, and is one of Renault's largest production plants. It is situated in the municipal district of Cléon, near the River Seine, with Rouen 20 km to the south.

Prior to October 2000...

In 2000 Renault Cléon was producing 3,000 aluminium cylinder heads per day. The central washing system for the components had a tank volume of 40 m³ and the wash liquid was filtered by a paper band filter. No other treatment was carried out.

The wash liquids were continuously contaminated by oil from the coolant used in the machining processes, which has an oil content of 12%. 18 litres of pure oil were entering the wash liquid per day and the overall level of contamination was 1.28% tramp oil per month.

Since Renault's limit before draining the tank was 1%, it was necessary to drain one-third of the volume of the system every month and remove the total volume of liquids every three months. The annual cost of disposal of waste liquids was Euro 52,800 and the annual cost of replacing with new wash liquids was Euro 48,000.

October 2000...

During 2000, Renault consulted system builder Ecofluide, Alfa Laval and service fluid supplier Quaker, and together they developed an effective solution. Renault's aim was to maintain the tramp oil content in the total wash liquid system at a maximum of 0.5% and not drain the tank during production.



Renault Cléon, near Rouen, currently produces 8,000 cylinder heads per day for Renault engines.

Michel Franco, Alfa Laval France: "The wash liquid installation was completely modified. Ecofluide installed a new 35 m³ tank connected to the system, and a working tank of 8 m³. The system was completed by an Alfa Laval separation system with a special step to split the emulsion formed by the tramp oil and the water in the wash liquid. Quaker supplied an additive for this purpose."

In the new system, the wash liquid is cleaned in a number of batches each day. "In the working tank, each batch is dosed with the demulsifying additive and moved by means of a pump," explains Michel Franco. "When the tramp oil reaches the top of the working tank, it is fed to the separator by a suction device. The remainder of the contents of the working tank are then passed through the separator."

Impressive results

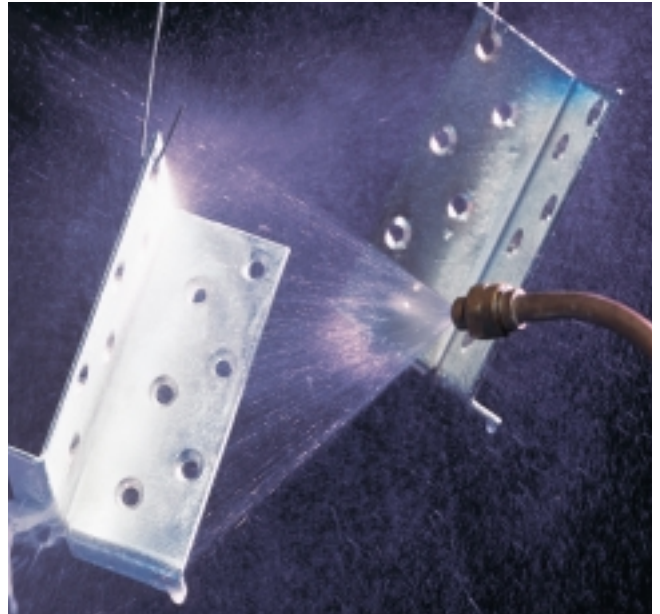
According to Renault, during 2001 the tramp oil content in the wash liquid system was maintained at 0.4% of maximum contamination. The separator removed 70 litres of tramp oil per day and the system was not drained throughout the year.

Today, Renault Cléon is producing 8,000 cylinder heads per day and the Alfa Laval separation system has been running for 26,000 hours, 24 hours per day, seven days per week.

Renault says the cleaning module paid for itself during the first year due to savings on wash liquid disposal and replacement costs. It has also eliminated problems relating to poor component cleaning, such as the need for costly manual cleaning. Breakdowns due to contaminants in wash liquid systems have also been reduced.

Renault has a maintenance contract with Alfa Laval France, including preventive maintenance, to keep the separator in efficient operating condition.

Altogether Renault Cléon has five Alfa Laval separation modules for cleaning wash liquids at various stages of the production chain.



Photos: Courtesy of Renault



EFU00018EN 0406

AlfaPure Z – clear thinking from Alfa Laval

Leading the field in separation technology, Alfa Laval presents AlfaPure Z, the next generation of centrifugal separation systems for cleaning and recycling coolants and wash liquids in metalworking operations.

One of the most impressive features of the AlfaPure Z is its user-friendliness. A touch control screen gives a clear overview and simple control of all functions. By efficiently removing oil, grease and solid particles, the AlfaPure Z greatly extends the life of water-based service fluids, helping to cut production costs and raise productivity. The system will normally pay for itself in less than one year.

A complete system with a high capacity to size ratio, the AlfaPure Z module requires less than 1.7 m² of floor space and can handle tanks with volumes of up to 150 m³.

How to contact Alfa Laval

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