

Case Study



The Difference Is Clear

Steel Coating Mill Saves \$450K. With Fluid Purification Program

The Problem

A leading manufacturer of electro-galvanized and aluminized steel coil products, used as body panels in the automotive industry, was experiencing quality defect issues due to residual surface oil left on the parts after cleaning operation. In order to meet the surface finish specifications of the finished sheet, the mill requires all incoming steel coil stock to be pickled and oiled to prevent any surface corrosion during shipment. Due to this requirement, the mill was experiencing excess brush cleaner consumption and the downtime associated with dumping and recharging the cleaner central system. In addition, as the oil contamination levels increased, the mill would experience poor galvanized adhesion on the sheet due to the carry over into the high current caustic bath. To overcome the adhesion problems, additional electricity was required in order to maintain the sheet quality. The overall effect on the mill was an increase sheet rejection rate for surface finish defects, excessive cleaner usage, an increase in electrical usage and a reduction in the mill's production rate.

The SRS Solution

SRS proposed a comprehensive contamination control program at the mill. A SR 1040 fluid purification module was utilized on three phase separation to significantly reduce or eliminate the amount of mill oil being accumulated in the brush cleaner system. The carry over into the caustic cleaner system was reduced also. In addition, as part of the program SRS provides daily operational and technical oversight to the mill.

The Results

After only 72 hours of the SR 1040 Purification Module being operational, the brush cleaner system oil concentration level was reduced by more than 80%. The caustic cleaner system oil contamination level was reduced by 70%. The overall effect on the mill was a significant improvement in sheet appearance and thus a reduction in quality related rejects. The mill's production rate was increased by 3.2% during this period. Brush cleaner consumption was reduced by \$345,000 on a projected annual basis.

Annual Cost Savings: \$450,000.