CONSERVATION OF RESOURCES

Tank Optimization Saves $3200 On A Single Hydraulic Reservoir Refill, Nearly 3/4 Ton of Weight

Technical Application Bulletin

CHALLENGE

An OEM developing a variety of equipment for the oil and gas industry sought to increase the efficiency of the hydraulic wet kits powering their massive snubbing unit rigs, which operate using a very large industrial reservoir.

APPROACH

While analyzing the customer's existing 600 gallon reservoir, Schroeder's Tank Optimization experts identified areas of high-velocity flow within the reservoir which caused disruption to the suction side of the tank. By upgrading the reservoir's filtration, altering its structure, and reducing oil volume, the customer could downsize the reservoir by nearly 30% and even remove one of the 8 tank filtration units while still meeting the operational demands of the equipment. Lower velocity, more consistent flow within the tank allowed for improved suction.

RESULTS

- Efficiency improvements and overall downsizing of the tank assembly through optimization:
  - 160 Gallon Volume Reduction
  - Tank Weight Savings: 256 lbs
  - Oil Weight Savings: 1155 lbs
  - Overall Weight Savings: 1411 lbs
- Initial oil cost savings of $3,200 on a single fill; cost benefits compound over equipment life
- Additional cost savings with one fewer filter to install and service in each reservoir
- Initial CO_2 reduction of 3780lbs; sustainability benefits compound over equipment life

CUSTOMER SEEKING IMPROVEMENTS THROUGH TANK OPTIMIZATION

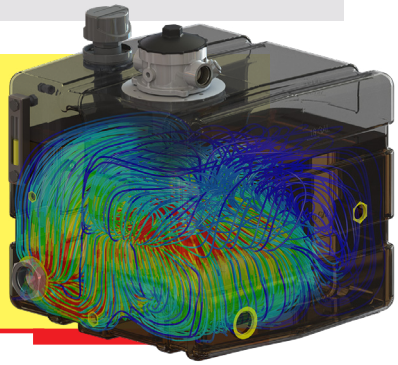
160 GAL
RESERVOIR VOLUME REDUCTION

1,411 LBS
WEIGHT REDUCTION PER TANK ASSEMBLY

$3,200
INITIAL OIL COST SAVINGS PER UNIT

3,780 LBS
INITIAL CO_2 REDUCTION

Tank Optimization: Uses cutting-edge simulations and CFD analyses to discover inefficiencies in existing tank assemblies and develop efficient solutions



HYDRAULIC LUBE FILTRATION