



## HOW LUBRICATION SERVICES TURNED A NEGLECTED REFINERY INTO A PRODUCTIVE REFINERY

You know the story – Company A purchases a refining facility from Company B, not realizing the extent of neglect the equipment had endured over time.

### Has it happened to you?

A leading refining and chemicals company purchased a facility that had not performed any lubrication maintenance or oil mist lubrication on plant equipment for almost 20 years (you read that right – 20 years). This is when we came in.

The company originally hired RelaDyne Reliability Services (RRS) to conduct routine, quarterly oil mist maintenance on its ten oil mist consoles, but quickly expanded our scope. After one of the first rounds of oil mist maintenance we performed, the customer came to us to discuss some additional reliability and lubrication issues they were experiencing throughout the plant and asked if we could put together a plan to bring the entire facility up to par. An overarching lubricant integrity program was put together, which allowed us to partner with our customer and thoroughly address reliability concerns facility-wide.

After exceeding expectations in this space, our relationship with the customer was further extended to include the installation and maintenance of three small oil mist systems in the flare gas recovery unit, the purchase of two API 614 lube oil systems, and the execution of a vibration program.

As the refiner's needs grew, so did the portfolio of services RelaDyne Reliability Services delivered. Ahead of a large turnaround, we were awarded the high velocity oil flushing (HVOF) service, the first conducted in 15 years at that plant. HVOF was completed on a small cooling water tower and two other major facility assets. Emergency filtration of a wash oil tank was executed with a portable filtration unit, as well as the first of many emergency water particulate removal (EWPR) procedures with our Mobile Reclamation Unit (MRU), with supplemental Vacuum Dehydration Unit (VDU) rental to maintain water ingress.

After spending a significant amount of time onsite performing a wide variety of services, RRS was asked to take over the oil analysis program and begin conducting field oil analysis, enabling immediate countermeasure activity to address any oil contamination issues. We established priority categories of Critical (red), Marginal (yellow), and Normal (green) to determine a baseline for needed services and help operators prioritize their work. With this new system in place, our RRS technicians could report results directly to the customer and recommend services to address any deficiencies, without missing a beat.

We are thankful to now have years of relationship with this customer, and have three dedicated members of our staff on the customer's site full-time performing nearly every service we offer in the RRS portfolio: HVOF, EWPR, reclamation equipment rental, LubriMist oil mist systems maintenance, vibration services, and the continued execution of their lubricant integrity program.

The benefits and improvements we've delivered can be summarized into five categories:

### EQUIPMENT

Lube routes have been designed using specialized software to maximize the efficiency of technician's time and maintenance tasks, and to help ensure the integrity of machinery bearings and rotating equipment.

### OIL SAMPLING

Prior to our on-site program, oil samples had to be sent away for off-site testing, and those costs add up. With on-site sampling and testing completed by our RRS technicians, our customer saves hundreds of dollars each year in processing and shipping fees.

### OIL ANALYSIS

When RRS first started took over management of our customer's oil analysis program, over 50% of the facility's systems were categorized as Critical (red) priority items. After incorporating our recommendations and services, the systems are now at an average 5% Critical (red) level.

An example of this in action: Our on-site RRS tech observed a 20,000 ppm result in one of the customer's compressors, discovered to be water in the lubricant. Such high contamination levels can affect viscosity, damage components of the



system, and reduce component life. More importantly, it could have caused component failure and led to an unplanned outage. Because of the urgency of this condition, we immediately deployed our Mobile Reclamation Unit (MRU) to clean the lubricant and remove the water and particulates. The self-powered, self-contained MRU unit was on-site within just 18 hours and performed services over the course of four days. Our quick action saved over \$1 million dollars for the customer in potential lost production.

### EMERGENCY WATER AND PARTICULATE REMOVAL

As demonstrated in the example above, RRS' water and particulate removal service has proven to be immensely valuable to our customer. Thanks to our services, the customer has been able to avoid thousands of gallons of lost oil, further damage to equipment, and over 60 days of downtime, saving countless man-hours and millions of dollars.

### INVENTORY

This customer purchased a custom, RRS-controlled storage unit to house owned and rented RRS hardware for facility use. Parts are restocked as needed, by RRS technician recommendation.

Through years of working side-by-side, Reladyne has become an extension of our customer's internal team, serving as a trusted consultant and providing on-site services that increase the reliability of our customer's equipment. The results of our work with this customer speak for themselves but are not unique. We deliver reliability improvements and overall operational savings to customers of every industry, across the nation and around the world.

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