

CASE:

Pearl Gas to Liquid Facility, Qatar

Lube Oil Flushing

Ocean Team handled and purified more than 140,000 litres of oil to ISO 4406 17/15/12 (NAS Class 06) ensuring prolonged operation time on the client's facility.

The Liquid to Gas Facility

Established by Shell and Qatar Petroleum in 2006, the Pearl GTL Plant is the largest of its kind worldwide. It holds one of the largest instrumentation and control systems anywhere on the globe. GTL technology enables Qatar, in partnership with Shell, to open up new opportunities on markets, monetising its enormous natural gas resources through the creation of high quality, easy-to-export, liquid fuels.

The facility processes 1.6 billion cubic feet of wellhead gas per day to remove contaminants and refine natural gas liquids. It makes enough diesel to fill over 160,000 cars a day and enough synthetic oil each year to produce lubricants for more than 225 million cars.

Planned Maintenance

The Pearl GTL plant in Qatar entered planned maintenance in February 2015. The plant comprises two identical GTL 'trains', with a total capacity of 140,000 barrels per day of GTL products plus 120,000 barrels per day of natural gas, liquids, and ethane.

Each train of the Pearl GTL comprises of an ASU (Air Separator Unit), a FGP (Feed Gas Processing), a GTL (Gas to Liquids), & a LPU (Liquid Preparation Unit). Train 1, representing half the facility, begun a planned 'turnaround' maintenance program in March 2015, which continued for a period of 50 days.

The Scope for Ocean Team Qatar

Ocean Team Qatar (OTQ) was awarded the contract for lube oil flushing of 16 systems on Train 1 as part of the major turnaround. All the 16 systems were located in four different areas of Train 1, i.e. ASU, GTL, LPU, & FGP areas. OTQ deployed four teams, with equipment, to target four work fronts simultaneously. OTQ successfully completed the flushing of 16 systems in a span of just 20 days.



CASE:

Pearl Gas to Liquid Facility, Qatar

Lube Oil Flushing

Lube Oil Flushing

OTQ completed the lube oil flushing as per the Shell approved procedure and applied a Flushing Schedule to the satisfaction of the Client's Quality Inspection Team. Mesh screens were installed at various points in supply and return lines of the lube oil system to trap foreign matters and checked constantly for cleanliness & acceptability. Oil cleanliness level in accordance to ISO 4406 17/15/12 (NAS Class 06) was achieved.

Mechanical Cleaning of Lube Oil Reservoir

The cleaning was carried out on a 24/7 operation basis, considering uninterrupted flushing operation from Rig-Up to Rig-Down. The result of the cleanliness was documented with traceability to each system cleaned.

OTQ- The Preferred Oil Flushing Partner

The safety level, quality level, work flexibility and the commercial offer were the main reasons why OTQ was chosen

by Shell to perform all tasks related to lube oil replacement, cleaning and flushing of 16 systems during this turnaround. Through planning and continuous information exchange with the client provided a solid foundation for a successful completion of the project.

The twenty days, which it took for OTQ to complete this job on site from start to finish, was far less than the original schedule. This shortened period was due to delay of other contractor's activities during the shutdown. In order to compensate OTQ improved the flushing methodology by starting pre-filtering of new lube oil in the workshop before it was taken to site. This shortened the flushing time significantly on site.

On site OTQ had four small teams, each consisting of a few highly specialized and experienced lube oil technicians. These teams operated 24/7 and effectively reduced the flushing time by means of innovative work methods during the flushing.

