

# APPLICATION PROFILE

# REFINERY HOT AIR BLOWER

Lubricating Oil Systems

Challenge: **HOT AIR REGENERATION BLOWER IN A SUB-ARCTIC REFINING PROCESS**

Location: **ILLINOIS/RUSSIA**

A well-regarded fan manufacturer required a forced lube oil skid for uninterrupted, critical operation in a sub-arctic environment.

The system lubricates centrifugal fan bearings on a hot air regeneration blower for a refining process. Design expectations included a twenty-five year mission life.

Flodraulic's RHM Division was approached to design this system after competitors declined to quote due to the extreme conditions and strict guidelines set forth by the Russian government.

The Moscow, Russia installation location had no local shelter or environmental controls available. RHM designed the entire skid to withstand the elements of the environment, year round (-46 C). Cold weather materials, custom insulation and ATEX Class 1, Zone II explosive atmosphere-rated electric heating were utilized. The entire system was designed to meet Russian GOST-EAC certifications.

The system was enclosed with a custom-heated and insulated enclosure. The packaged modular design was to accommodate "drop-in" installation at the production site. The skid was subject to extensive non-destructive examination (NDE) including positive material identification (PMI) including radiographic testing (RT) of all welds, as well as, magnetic particle inspection (MPT) to verify all welds used in the construction of the entire system.



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**USA 800-545-5414** [info@flodraulicgroup.com](mailto:info@flodraulicgroup.com)  
**CAN 800-361-6209** [info@flodraulic.com](mailto:info@flodraulic.com)