COLMAC COIL
Manufacturing Inc.

370 N. Lincoln • P.O. Box 571 • Colville, WA 99114-0571 • USA
Phone: (509)684-2595 • Fax: (509)684-8331
http://www.colmaccoil.com
mail@colmaccoil.com

CASE STUDY

PRODUCT: Modulair™ **COOLING SYSTEM**

APPLICATION: **30 MW CT LUBE OIL COOLING**

(QTY) X MODEL: (3) X MOD-DT-10-D-H-D

A large Midwest U. S. **electric power generation** company contacted **Colmac** to solve a critical **combustion turbine lube oil** cooling problem. The customer was experiencing **excessive lube oil temperatures** on it's **30 MW - GE Frame 6B** turbines during hot summer weather. It was determined that the existing single fan **API-661 fluid cooler** was approximately **50% undersized**, allowing the bearing oil to **overheat** and causing the system to **shutdown.** The subsequent addition of an external **water spray** system installed over the existing fluid cooler *did not* add sufficient cooling effect to reduce the lube oil temperature to required levels.

The **solution** was to **replace** the undersized **API-661** cooler with a properly sized, pre-engineered **Modulair cooler system**. The **Modulair** coolers deliver the needed **1.0 MW of cooling** to the 616 GPM of 50% Ethylene Glycol entering the coolers at 118F.

The **Modulair** coolers feature multiple **direct drive fans** for **low noise** and **low maintenance**. The fans are **controlled automatically** with a self-contained **fan cycling** control system designed to cycle fans on and off as load demand and ambient air temperatures vary. This feature **reduces** parasitic **fan power consumption** and allows **close control** of glycol temperatures during all weather conditions.

The **Modulair** coolers were provided **pre-assembled** from the factory with **prefabricated** manifold piping for single point field piping connections to the plate and frame bearing oil cooler, **simplifying installation** of the three coolers at the jobsite. The **Modulair Systems** coolers and piping manifold were ordered and supplied to meet the customer's demanding construction/replacement schedule and **successfully installed** in the Spring of 2001.