BMR Thermal, Inc.
COMBUSTION | HEAT RECOVERY | POLLUTION CONTROL

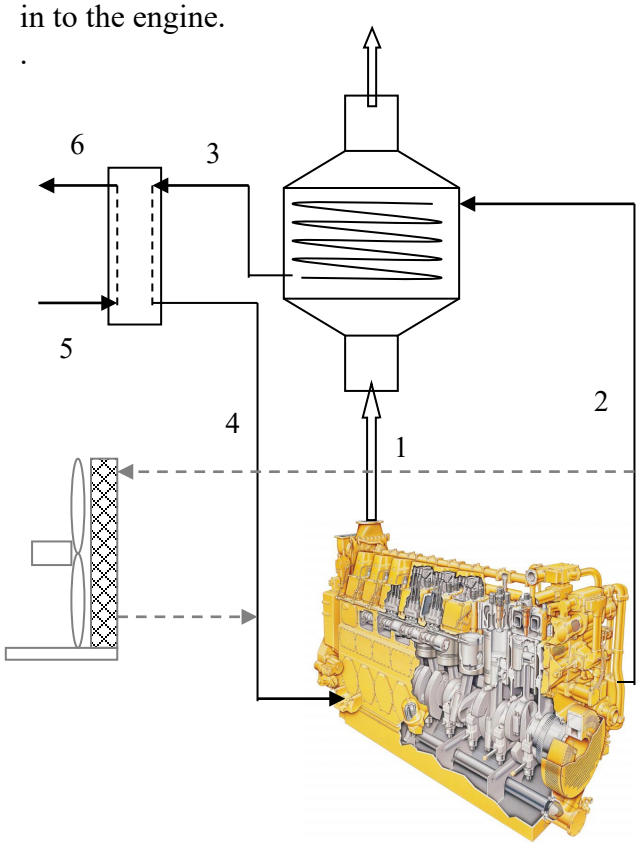
129 CHAPEL STREET
PORTSMOUTH, NH 03801
Phone: (603) 929-0769
E-Mail: mail@bmrthermal.com

BMR Thermal Inc. helps local Ice Rink recover waste heat used to generate domestic hot water.

Skating rinks typically use chilled glycol or brine solution under the ice surface to freeze the ice and keep it frozen. The circulating cold solution can be generated in a number of ways, very commonly with an engine driven centrifugal chiller.

For this application on the North Shore of Massachusetts, the chillers are driven by three Caterpillar natural gas fired engines. The engines emit high temperature combustion gasses from the exhaust. The engines must also be cooled with fluid circulating through the engine block. This hot fluid carries heat out of the engine to a radiator to dissipate the heat, then circulates back in to the engine.

.



Natural gas engine waste heat recovery.

Using a ***Condex***, Condensing Economizer, The hot engine cooling fluid(2) will be further heated by the engine exhaust gas(1). The hot liquid will then go to a dual wall plate and frame heat exchanger(3) where it will give up heat to incoming city water(5) which is then supplied to the adjacent High School(6) for cooking, showers and other domestic uses. After the installation additional electrical savings were realized when variable frequency drives were installed to reduce the speed of the radiator fans.

This is just one example of waste heat recovery from gas fired engines. The energy can be used in many different ways from space heating, electricity generation and even cooling and air conditioning.

Utilizing the waste heat from a necessary process can eliminates the need for fuel or electricity consumption to drive another process. Not only will this save money for the operator, but the emission of carbon and green house gases are reduced.

For more information please contact:

Condex – Represented by:
BMR Thermal Inc.
Joe Richter – (603) 929-0769
E-Mail – jrichter@bmrthermal.com