

SYSTEM DESCRIPTION SAC VENTILATION SYSTEM CONTROL ROOM	Respons. dept GPMI	Date 040209	Reg. M DB 101
	Prepared Peter Mattsson		YAMAMA CEMENT

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Purpose of the system

The system is designed to keep the temperature and to supply the control room with fresh air.

General description of the system

Refer to P&ID 2046032. "GT10B2"

The system comprises an air inlet with air condition unit with filter for the fresh air and a fan located in the battery compartment withdrawing the air from the control room.

The AC-unit is designed with two separate cooling stages to improve the reliability.

Main components SAC

Air condition unit and battery room fan:

- SAC10AC005
SAC20AC005
Heat exchanger:
The purpose of the heat exchanger is to cool the fresh air that enters the control room.
- SAC10AC010
SAC20AC010
Heat exchanger:
The heat exchanger cools the cooling media in the refrigerating circuit.
- SAC10AN005
SAC20AN005
Heat exchanger fan:
The purpose of the heat exchanger fan is to support the control room with the cooled air.
- SAC10AN010
SAC20AN010
Compressor:
The purpose of the compressor is to make the cooling media circulate in the refrigerating circuit.
- SAC10AN015
SAC20AN015
Compressor:
The purpose of the compressor is to make the fresh air go through the heat exchanger in order to cool the refrigerating media.

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- SAC10AN025
SAC20AN025
Battery room fan:
The purpose of the battery room fan is to make the air in the control- / battery room circulate, in order to prevent gases from the batteries to gather.
- SAC10BS005
SAC20BS005
Silencer:
The silencer prevents noise breakout to the environment.
- SAC10CT005
SAC20CT005
Temperature sensor/thermostat:
The purpose of the temperature sensor/thermostat is to sense and regulate the temperature in the control room.

Function

Start up

The AC-unit and the fan manually started.

Continuous operation

The AC-unit and the battery room fan are always in operation. A thermostat regulates the AC-unit.

Turbine stop

N/A

Stand still

N/A

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Disturbances

Gas turbine trip

N/A

Generator breaker trip

N/A.

Loss of power supply

Loss of AC power supply stops the system.

System faults

N/A

Other faults

N/A.

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Technical specification

Dimensioning data

Cooling capacity:	22 kW
Design temperature:	Max. +25 °C Min. +18 °C
Design ambient temperature:	Max. inlet +55 °C Min. inlet -15 °C
Min flow of battery fan	102 m ³ /h

Emergency power supply

N/A

Installation

The AC-unit is placed on the wall/roof and the battery room fan is located in the floor of the control room.

Materials

AC-unit cover plates in Marine grade aluminium.

Component data

See the system lists

Testing and service

Testing during normal operation

Function test is possible during normal operation.

Accessibility during normal operation

Filters in the air inlet can be changed during normal operation.

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