

Application report

Oil (HC) traces in Condensate

Steam is used in a wide range of industries. A common application for steam is to drive the turbines in electric power plants.

The steam expands and cools down during its way through the turbines.

The steam then flows through a condenser and becomes water again. This water is called condensate.

Benefit

The scrupulous cleanliness of the condensate is important. It must be of the correct quality to avoid damage to the boiler and the turbines.

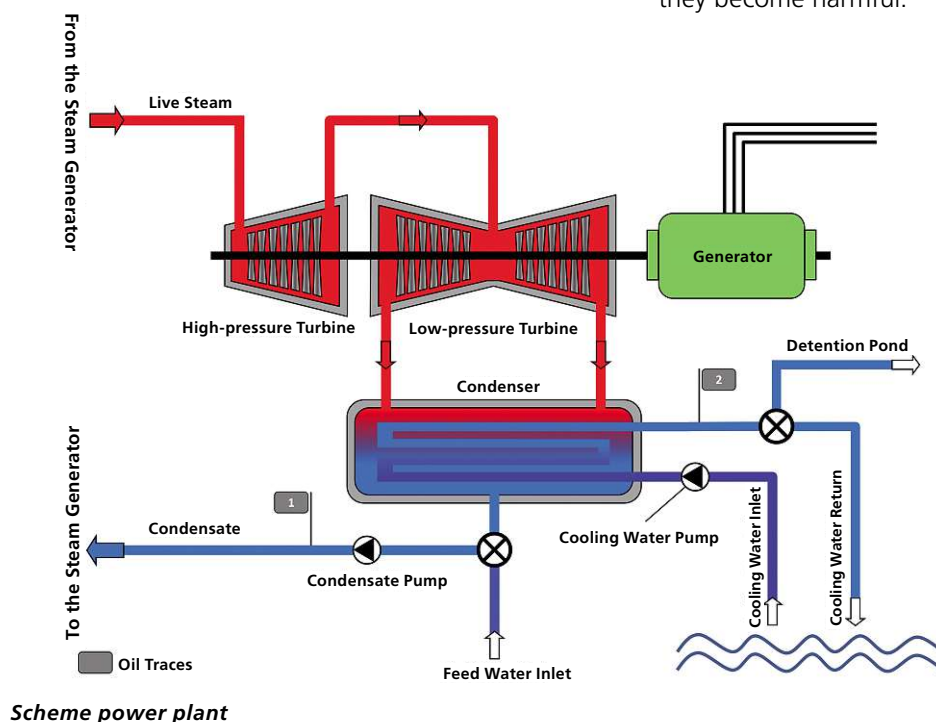
Any oil leak from the condensate pumps or from the turbines will damage the installation.

The OilGuard works as a watch dog. It monitors online whether oil traces are present in the condensate. Once an oil trace is detected, the OilGuard instantly will trigger a warning and will help to avoid harm to the expensive installation.



Typical Application

The condensate pumps force the condensate through a pipe back to the steam generator. The measuring point for oil traces is just behind the condensate pumps. The ability of the OilGuard to accurately detect low concentrations of hydrocarbons ensures, that leaks can be managed before they become harmful.



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Typical Installation



OilGuard 2 with sample cooler

As the water is very clean in this application, the closed measuring cell KPFL 30 is used.

Practical Measurement (Example):



The typical measuring range is from 0 .. 5 FLU (Fluorescent Units)

Product

SIGRIST Product and Configuration for this Application:

- OilGuard 2 230V
- Measuring cell KPFL 30
- Optional filter set «NPD»
- Optional HART
- Parameter Setting 0 .. 100 FLU



OilGuard 2 with closed flow cell (SS)



Closed flow Cell KPFL 30



Unique checking unit for recalibration or instant reading verification.

Advantage of the SIGRIST OilGuard

Benefits

- Very low zero drift; <1%/year, therefore recalibration is very seldom required
- Very simple recalibration with solid reference
- No special tools for maintenance required
- Extremely low maintenance
- No consumables and no chemicals needed

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