

## BOILERGUARD



***"Venema Boilerguard"  
a continuous on-line control  
of boiler feed water***

### Introduction

Venema automation at Groningen (Holland) engages in the automation of production processes in the most diverse industries. Thus for more than 50 years we have manufactured beetanalyzing systems throughout the world. Thanks to our knowhow and experience we are capable of realizing ever more advanced and accurate applications. For Venema innovation is a top priority. In the sugar beet industry this policy has even earned us the position of market leader.

Moreover, we do everything under our management. From design and production to installation and servicing. When you consult the specialist of Venema, you are assured of a perfect solution to your specific automation problem.

### Invitation.

If you are interested in other Venema products or if you have any question about automation subjects, please do not hesitate to call on us. We love to be challenged!

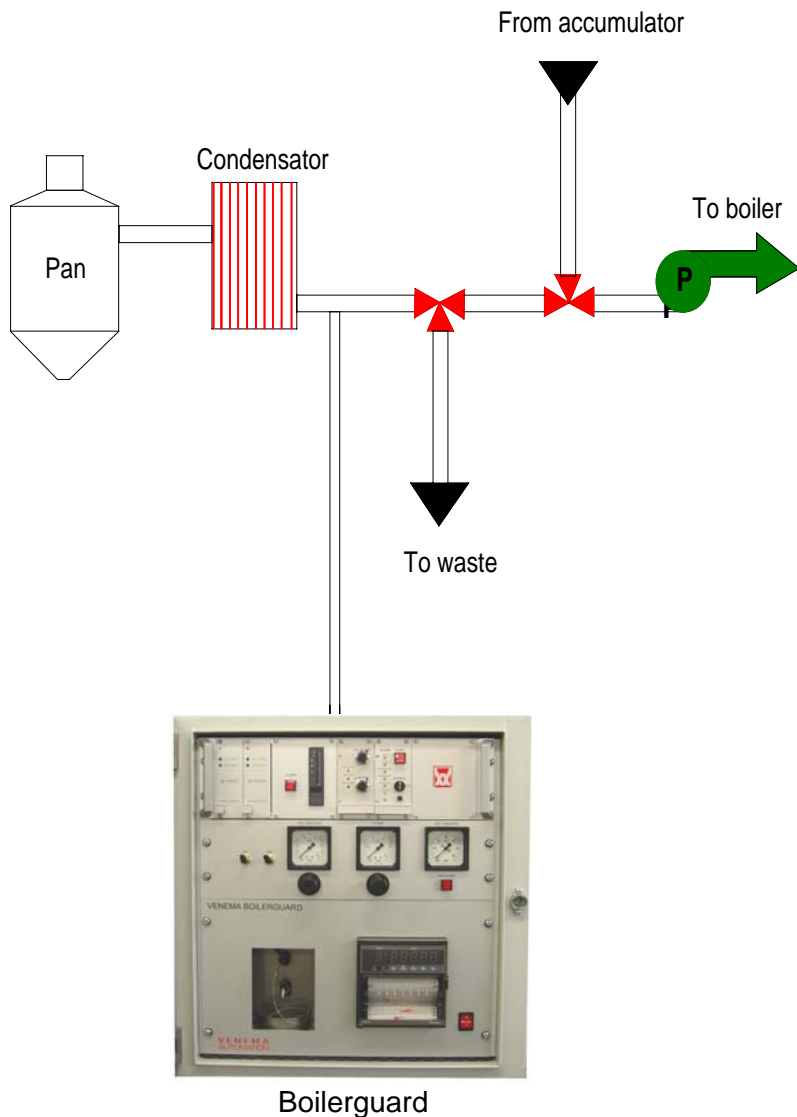


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**Boilers are fed with reprocessed water. This water can be contaminated with sugar, which will result in boiler destruction and disrupted production**

**This should be avoided at all costs !**

**Principle boiler feedwater control**



Boilerguard

How can this be avoided ?

**Not** by taking samples at regular intervals and analysing each sample for sugar-content. Feed water is continuously supplied to the boiler and no matter how often these samples are taken it will be too late, the harm will have been done to the boiler.

The only method is to measure **continuously** the boiler feed water before it enters into the boiler.

Therefore, **AUTOMATIC CONTINUOUS MEASUREMENT** of the boiler feed water is the answer!

This system with Alarm / Signal output is now available to protect your boiler and relieve you of worry.

We call it **VENEMA BOILERGUARD** developed and engineered by Venema to provide a reliable method of boiler protection.

It is a compact unit which can be easily installed in the existing boiler feed water system.

**Principle**

The method of detecting sugar in boiler-feed water is done by the measuring of potassium traces which are guaranteed present in the sugar-producing process up to crystallisation.

The analysing of potassium is continuously on-line by a Flamephotometer with immediate analysis-result. The principle of signalling is based upon the fact that the potassium content has a fixed relation to sugar content, for example, potassium content is 1% of sugar content.

**SPECIFIC FEATURES:**

- Continuous on-line measurement.
- Continuous registration (option).
- Immediate alarm.
- Proportional measuring / registration.
- No chemical-waste.
- No influences of:
  - Ammonia
  - Carbon dioxide
  - Sulphur dioxide
- Outputs for alarm and controls for valves, etc.

**The Venema BOILERGUARD consists of:**

- Condensate cooling-unit
- Measuring-unit
- Microprocessor control
- Alarm output (Contact / Voltage)
- 4-20 mA signal

**Options:**

- Line-recorder (option 1)
- Protocol printer (option 2)

**Technical Specifications:**

- Measuring range : 0-0,2 PPM Potassium
- : 0-20 PPM Sugar
- Accuracy : 0,5 PPM Sugar
- Ambient temp. : max. 40° C
- Humidity: max. 85% R
- Supplies:**
- Mains : 230V-50Hz, 300 VA
- Cooling water : max. 15°C
- Gas : Propane
- Output** : 230V. 6A (contact)
- : 4-20 mA (recorder)

- Dimensions** : width - 600 mm.
- : height - 610 mm.
- : depth - 420 mm.



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