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SPECTOR control: More functions, greater transparency, enhanced safety

Boiler plants have to operate safely and reliably. Safely to protect both the operating personnel and installations. Reliably to ensure continuous production and to avoid downtimes. Only in this way — by giving the plant operator a clear overview — can the correct decisions be taken and the right measures be initiated to make sure that outages are reduced to a minimum.

As a follow-on to the successful SPECTOR*bus* system, SPECTOR *control* was developed to provide enhanced automation. This offers you a vista of possibilities that were previously not feasible with conventional technology. When SPECTOR*control* is used, individual bus evaluation devices — such as control units and level controllers — can be omitted, reducing costs.

Similarly, the expenditure for the second water level indicator (as per TRD 401) and the conductivity indicator (VdTÜV bulletin Water Level 100) is no longer required, since these already form part of the main screen.

SPECTOR*control* is a computer system with a touchscreen monitor showing the actual values for the components in the steam boiler and its environment in an easily understandable way. On the monitor, you can see at a glance how the water level in the boiler is changing and how high the conductivity or temperature

in the boiler water is at any given moment. To allow SPECTOR*control* to react automatically to changes in the actual values in relation to the set points, the process is controlled and regulated directly by the computer.

The set points, e.g. level, conductivity and intermittent blowdown, as well as the associated limits can easily be adjusted by the boiler attendant using the touchscreen. To optimize the process, SPECTOR control offers five control circuits, which can be configured as 2-position controllers (pump on/off), multi-pump controls with automatic switch-over, 3-position controllers (for electrical valves) or continuous-

action controllers (for pneumatic valves or speed control). For difficult installations with extremely strong load fluctuations, SPECTOR*control* provides an additional 3-component controller which considers not only the filling level but also the steam and water quantities.

Supplementary I/O modules are installed together with SPECTOR *control*. These offer the possibility of integrating up to 20 digital and 10 analog input/output signals. Like the SPECTOR*bus* components, the modules communicate with SPECTOR*control* via a CANbus. In this way, it is also possible to integrate these parameters into the operational-data acquisition scheme and to use SPECTOR*control* in visualizing them as alarm and status messages, 72h trend plots, maintenance intervals or flowrate logs.



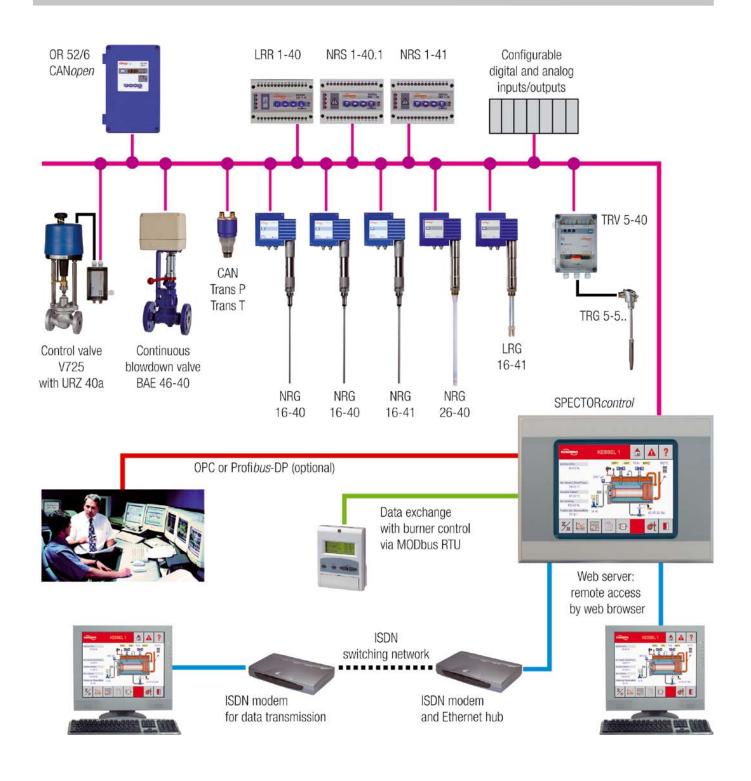
Through a MODbus connection, SPECTOR*control* is able to communicate with the automatic firing systems of leading manufacturers. All data are displayed on the monitor, and admissible parameters can be set. This represents one of the special strengths of the system: everything on just one user interface — the boiler attendant need not concern himself with different systems and is able to see both water data and burner data on a single device.

In addition, the unit offers a web server function and can be remote-controlled via Ethernet cable or modem using a browser under password pro-

tection, both by the technical management within a production facility and by an external servicing partner. Until now, this servicing partner had to depend solely on the information provided by the plant operator. Now he can use SPECTOR*control* from his office to call up the process data and obtain a clear picture of possible sources of error, or even to intervene directly in the system. In this way, he is well prepared when driving out to the plant, further reducing the downtime.

SPECTORbus System Architecture

SPECTORbus System Architecture



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