



eurenac

Europäische Akademie für effiziente
Energieverwendung in Gebäuden e.V.

Torgauer Str. 116 • 04347 LEIPZIG

Prequalification Procedure

Certificate

The company

bau msr gmbh

**Heiterblickstrasse 42
04347 Leipzig, Germany**

has taken part in a prequalification procedure by **eurenac**

**concerning the erection/installation of heat output regulation systems on
an instationary basis (ELR)**

in building equipment.

The company has proved its qualification in accordance with the

eurenac guidelines.

This procedure was based on the **eurenac** requirements as set out below and the
recommendations and standards of **AMEV, VDI, DIN, VDE, VDMA, DVGW.**

The scope and the monitoring of this certificate have been laid down in the
monitoring contract of September 1, 2004.

The examiner:

Engelbert Krifft, 2nd Chairman **eurenac**

Leipzig, den 2. September 2004



Prequalification procedure for installers of heat output regulation systems in building equipment

State: 02/09/2004

The prequalification procedure for installers of **heat output regulation systems** by **eurenac**^(*) includes the proof of knowledge, abilities, tools, experience, training in:

1. **Status monitoring and recording** of the building equipment by means of checklists and analysis of the same.
2. **Realization** of the planned use of heat output regulators for plant optimization and energy efficiency increase.
3. Knowledge and application of **applicable norms, standards and regulations** (= AMEV / VDMA / DIN etc.)
4. Creating the **preconditions for commissioning the** output regulators
5. **Service commissioning** of output regulators
6. **In-depth knowledge** as regards function and parameters of output regulators and operation of the same
7. **Regular training/audits** at the company
8. Warranty
9. Liability insurance

Explanatory notes:

- Ref. 1 The status monitoring and recording is to ensure a proper technological implementation of the investment at site for the project concerned. For assessment purposes the installer has in-depth knowledge of plant engineering (thermodynamics, hydraulics /hydraulic adjustment etc.) control engineering (building automation, decentralized energy management, decentralized return temperature limitation, thermal output regulation etc.) and information technology (communication, bus systems, standards, internet etc.).
- Ref. 2 The installer creates the preconditions by using systems for the control of the energy flux density and reduction of energy consumption that are operated on a user-specific limit curve in an instationary manner. They incorporate the logic networking of two main areas of information, temperature sensors of supply and return, building sensor and outside temperature, use of the LONMARK functional profile of the circulating pumps (closed loop sensor and actor object), trend logging to integrate all influences arising from use, control, environment and substance of building, adjustment of maximum desired output to the instationary maximum output level, ongoing energy consumption management in accordance with EnEV2000, active use of 2nd mode of operation from the LONMARK functional profile of the circulating pumps etc.
- Ref. 3 In accordance with the recommendations and standards of GEFMA – AMEV – VDI – DIN and other accepted technical rules the system is provided by the installer, and the individual steps recorded.
- Ref. 4 The installer performs the necessary work at site independently to meet the requirements of the service.
- Ref. 5 It is the installer's task to ensure the parameterization and initial start-up of the output regulation at site by the service personnel of the system supplier as a warranty requirement for system operation.
- Ref. 6 The installer has qualified personnel as regards output regulators. Information on improvements can be taken into account and applied in practice by the staff concerned.
- Ref. 7 The company takes part in further training (workshops).
The company is audited yearly by a person appointed by **eurenac**
- Ref. 8 The entire system (hardware and software) is the basis for the realization of saving forecasts by certified energy managers. Hardware and software are inspected and accepted by the latter and then put into operation online via the web server to optimize the system. The installer of heat output regulation systems has to guarantee towards owner and energy manager the readiness for service of the entire system, the measuring devices, the connection to the internet and the operability of all built-in/individual components for at least 1½ of the amortization period.
- Ref. 9 The company has taken out an adequate liability insurance for material damage and personal injury.

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