



www.pncontrol.ru

Automation of operational
control of production
equipment

Software and hardware complex PN Control



- OPERATIONAL CONTROL PLANNING
- COLLECTING REAL-TIME METRICS
- DIGITIZATION AND DATA STORAGE,
SYSTEMATIZATION AND ANALYSIS
- INTEGRATION WITH ANY ENTERPRISE MANAGEMENT
SYSTEM (SAP, 1C)

Problems in MRO



20-50 million rubles/year

Losses due to emergency downtime of one enterprise (output shortage + costs of damage control).



20-25 million rubles/year

Overspending of on-duty staff (30-40% inefficient use of time).



Other tasks:

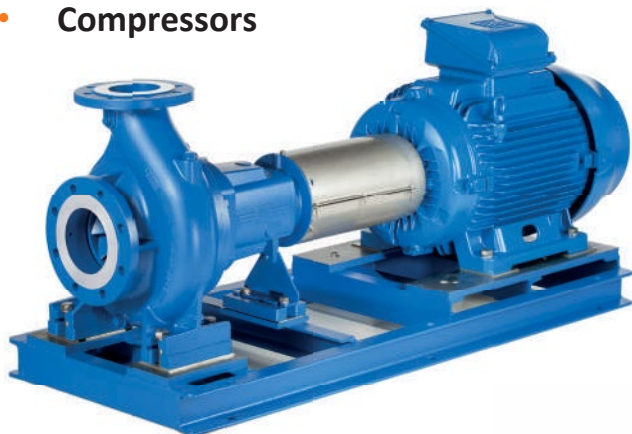
- Ability to predict accidents.
- Optimize inventory.
- Operation safety improvement.
- Digitalization strategy.



The main interested parties in solving problems in MRO are: **owner, director, chief specialist of the enterprise.**

Variants of control objects

- Pumping units
- Heat exchangers
- Hydroelectric power stations
- Pipelines fittings
- Gearboxes
- Compressors



Operational control

- Control without preparation, right during operation.
- The simplest measurements that detect deviations in the equipment operation.



Operational control is our specialty

Difficulties in operational control

- **Old-fashioned method**
Magazines, schedules, snap inspections, and other non-system control methods.
- **Subjectivity**
The staff evaluates deviations subjectively, which inevitably affects the quality and completeness of control
- **Difficulty in checking**
The staff knows that the fact of control is difficult to verify, so they often make formal records
- **Complex analysis**
If the database is not stored on an electronic medium, it is almost impossible to systematize numerous parameters

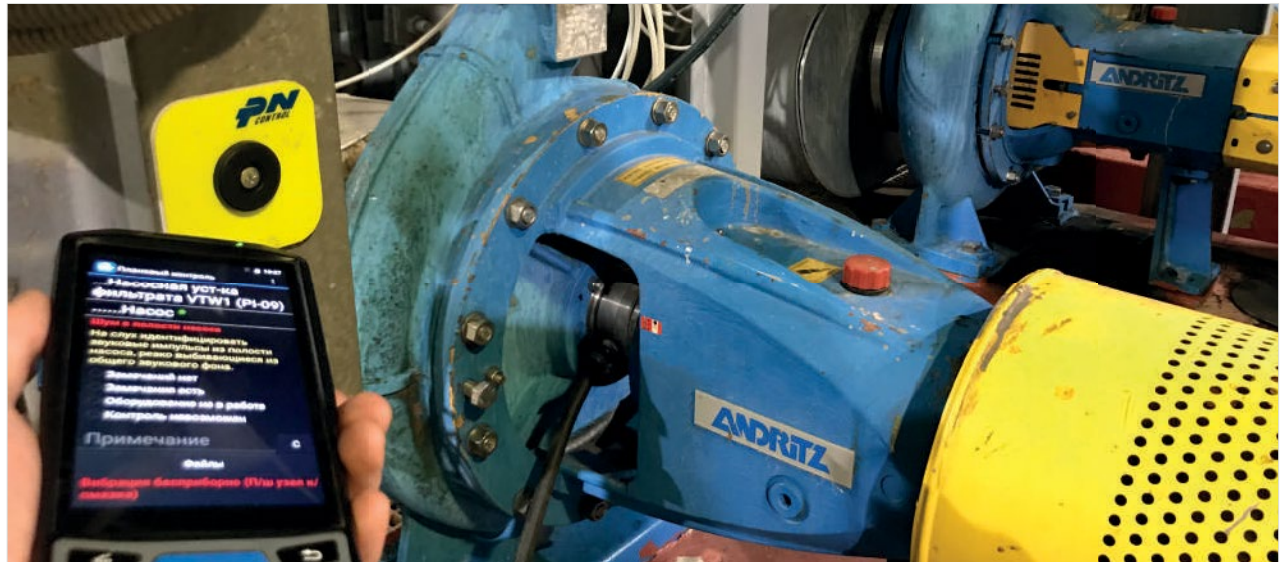
What is in practice?

The inspector's questions:

- What to control?
- When to control?
- Where is it even located?
- What it is necessary to do when monitoring?
- How to formalize the result?

PN CONTROL

RUSSIAN HARDWARE AND SOFTWARE COMPLEX FOR AUTOMATION OF OPERATIONAL CONTROL.



Solution

We automate the work of on-duty staff at production facilities during equipment round checks.



- Reducing staff errors
- Reducing the time of the round checks

- ✓ Router
- ✓ NFC tag
- ✓ Recording the fact and time of the round check
- ✓ Checklist
- ✓ Knowledge library
- ✓ Connecting sensors

Set of measures

- 1 **Control planning:**
time, route, equipment
- 2 **Organization of the process**
of collecting and recording data from production facilities
- 3 **Analysis**
of control results

Using NFC tags on the route



- Presence control
- Issuance of a maintenance requirement card

Implementation benefits

- Savings from reducing emergency downtime **by up to 25%**
- Reducing the cost of repairing out-of-order equipment **by up to 30%**
- Saving of service personnel by **30-40%** Optimization of the number of on-duty staff, improvement of the result of the work of service engineers



Competitive advantages

- ✓ Private **algorithms**
- ✓ High **speed** of implementation
- ✓ **Intuitive** interface
- ✓ Integration **with any ERP** system
- ✓ **100%** complete set
- ✓ Implementation cost **lower by 35%**

PN Control implementation process

1. Contract conclusion.
2. Worksite audit.
3. Install software
4. Configure software. Creation of object structures and control plans.
5. Using PN Control

www.pncontrol.ru

Implementation on a turnkey basis



Composition

