Principle and purposes of the performance control

The performance control is a strategic and technical device of the cost optimisation at the same time. Its purposive application in long-range changes the control theory of the operation and maintenance costs on the one hand and it becomes a strategic method of the optimisation. On the other hand, its application in the practice at the plant level provides an efficient device in the cost planning and analysing activities, as well as in the accomplishment of the corrective actions. It is very important that the performance control type approach helps to avoid the unsubstantiated and damaging reduction of the expenditures and it expressly supports provident, controllable optimisation. The exclusive, independent application of the method is not recommended, it is expedient to use it jointly, complementary with the budget control based cost control method. The purposes of the performance control are as follows:

- Beside simple budgeting expressed in money, to provide the measurability of the operation and maintenance performance behind the planned and actual data.
- To create the motivation for the cost optimization at deeper level with more responsibility and from more aspects.
- To provide an analysis and drill down capability to expose the properties and causes of the cost changes and differences between the plans and facts.
- In the operation and maintenance activities the performance control is able to originate an internal market, thereby internal competition situation, which acts in an encouraging manner to improve the performance and accordingly to optimise the costs.
- The performance control provides a planning and evaluating device, by means of which benchmarking can be made on the data of several functional units, different activity periods, as well as on those of other power plants or service providers.

Development and planning of the performance control

The first basic element for operating the performance control is the division of the power plant’s operation and maintenance activities into responsibility units/cost centres. A primary point of view in developing the cost centres is that they should be separated and homogeneous from the aspect of their activities and provided services, in this manner some performance unit can be assigned to each of them. The cost centres provide their services either to another cost centres or to certain work processes, work orders. The aggregation of the activities of all cost centres and the results of all work processes should constitute the entire operation and maintenance function of the plant, and result all the O&M expenditures. (Also the areas of the power plant carrying out technical and administrative activities can be broken down to cost centres and performance control can be applied but our topic does not deal with this aspect.)

The cost centres must possess own resources in order to execute their own activities. These are the materials, outside services, human resources, own assets and internal services taken over from other cost centres, which are required for the operation and the maintenance performance.
The cost centres are independent responsibility units, each having a leader who controls the consumption of the resources to perform the specified activities. The cost centres have independent budget, and with the optimisation of the expenditures they are responsible for the most economical utilisation of the resources, and the service provision, in accordance with their function at the required location, time and quality. All cost centres are responsible for the resources and expenditures which can be influenced by themselves. The responsibility of the efficient accomplishment of operation and maintenance tasks is distributed in this manner under the management level. As far as possible, the cost centres should be operated over a long time, under constant conditions in order to develop the continuity of the accountability, performance and cost optimisation, as well as the internal market relations in the power plant.

Another basic element of the performance control is to determine the activity data of the cost centres. To all cost centres the character and measuring unit of the services to be provided by them must be determined. In the case of the operation costs centres this is generally the hours run, and in the case of the maintenance costs centres this is the maintenance hours according to their specialities. The cost centres must plan the quantity of their activities to be achieved expressed in this measuring unit, taking into consideration their capacity available and on the basis of the proposed technical tasks, targets and demands. The planning of the activity must be carried also with scheduling according to the time, by the months of the year.

The responsibility centres make own budget on the basis of quantitative and timely planning of the resource consumption required to providing the determined service quantity and performance. The budget broken down to the cost centre, containing the primary expenditures of the resources to be utilised (costs of materials, outside services, human resources, own assets) constitutes a part of the business plan at company level, with the determined cost elements and values. The summary, co-ordination and correction of the cost centres’ plans constitute apart of the business planning process. The planning of the expenditures must be carried also with scheduling according to the time, by the months of the year.

The ratio of the planned costs of resources required to the cost centre’s activity and the quantity of the planned activity constitutes the cost centre tariff (planned price). The service provided by the cost centre for other cost centres or work process will be accounted at this price on the basis of the quantity handed over. The costs will be booked down, out of the financial accounting, in the management accounting system. The tariff of the cost centres is the key element of the performance control, which is appropriate to accomplish the objectives above mentioned. The internal activity price is the measuring tool of the performance carried out by the responsibility centres of the operation and maintenance in the power plant and eventually provides motivation for the cost optimisation.

**Operating the performance control, measurement and analysis**

During the operation and maintenance activities of the power station, operating the performance control is built up in three main steps.

1. The first step is the transfer (allocation) of the cost centre’s services to other cost centres or ordered work processes. Beside their planned resource consumption, all cost centres require services of another cost centres, that is, the operation of the network of internal services. When every responsibility unit provides performance for another unit, its
calculated secondary costs are increasing. Thereby the total of the operational and maintenance costs of the power station will not increase farther but the charges of the accomplished internal services will be entered in the management accounting system at the planned tariff. Nevertheless, operating of such a certificatory system is required to the accountancy, which certifies authentically the data of handing over of the internal services. This means, first of all, the confirmation of the content, date, quantity and reception of the service provided. Should the service is not taken over by the receiving cost centre or the work order, so it cannot be entered in the account. In lack of accounting the unsubstantiated items will not be acknowledged in the activity of the cost centres, accordingly their actual performance will be lower than the planned. In this manner all provider cost centre are inspired to provide service in accordance with the demand on the one hand, and the receiving responsibility centres are interested in accepting the adequate accomplishments only, on the other hand. The internal market system developing in this way promotes ensuring the efficient and optimised performances. The function of hand-over, acceptance of performed activities and management accounting are expedient to built in the power plant’s operation and maintenance work management system, which generally should have an information technology support. In this manner the acknowledgement of the performed tasks, accounting and reporting can be carried out by means of computers.

2. The measuring and reporting of the planned and actual data of the cost centre’s activity is the second step of operating the performance control system. Its achievement the tariff value arising actually during the operational year must be calculated at the frequency required by the inspection. The tariff value is determined by the really incurred expenses due to the resources utilisation at the cost centre and the quantity of the accomplished services handed over actually by the responsibility centre. The calculation can be carried out yearly, half-yearly and quarter-yearly, with enhancing the frequency the efficiency of the intervention required can be improved. Of course, the appropriate amount of the work invested in order to obtain information also must be taken into consideration. From the collation of the planned and actual tariffs the appropriate information can be obtained on the responsibility unit’s performance, which facilitates to analyse the deeper correlation of the discrepancies. Beyond the data of the simple budget based control expressed in money, the activity of the cost centres as well as the reasons of the changes in the operation and maintenance costs can be evaluated in this manner.

3. Accordingly, in the third step of operating the performance control the analysis of the variances can be carried out by means of the performance data. The analysis must be carried out in relation to determining the character of the variance on the one hand, and in relation to determining the cause of the difference, on the other hand. It is expedient to examine separately the two factors of the tariff calculation: the incurred expenses and the quantity of the performed activity, as well as the correspondence of them must be analysed also aggregately.

The difference between the planned and actual cost centre’s tariff may arise from the change of the expenses on the one hand, which may have two general reasons. One of them is the deviation of the actual price of the resources required to the cost centre’s activity from the planned price. In this case the usage corresponds to the planned quantity, however, the cost of materials, services and labour are higher than they were determined earlier. The other change may be the deviation of the utilised quantity of the resources, when the cost centre utilised them at the planned price but in higher or even less quantity.
During the examination of both reasons the evaluation of the budgetary data is to be focused on the cost elements showing the difference.

In analyzing the performance the difference between the handed over and the planned accomplishment is the other essential factor. Both the total quantity and its development in the time can be examined. During the exploration of the reasons for the variances, the poor quality and the incorrect timing of providing the performance, as well as the inadequate accordance between the accomplishment and the costs incurred, furthermore their unsubstantiated changes may come to light by means of a deeper analysis of the data. In this manner such aspects of the operational and maintenance imperfections can be evaluated, which cannot be revealed in the simple budget control.

Following the analysis of the extent, character and reason of the differences, at the cost centres’ level or at the plant level the required correcting measures can also be taken in a broader range. This can contribute to optimisation of the operation and maintenance expenditures with improving the analysed activities. In the power plant’s operation divided into responsibility centres, application of the consultancy meeting system is expedient. In this system the management must establish a direct connection with the responsible personnel for the cost centres’ activities, and they must determine collectively the required interventions on the basis of evaluating the performance data and exploring the reasons.