

## IMPROVEMENTS TO DISPATCH OF MATERIAL FLOWS OF TECHNOLOGICAL UNITS

*Abstract* - The purpose of creating an Automated System for Calculating the Balance of Payments (ASCBP) is to improve quality and transparency, as well as reducing the time interval for the preparation of the material balance by automating the functions of calculating the material balance.

*Keywords* - General architecture; ASCBP; LAN; calculating; data based; system; automating; Interfaces.

### GENERAL ARCHITECTURE ASCBP

As the basic element for constructing ASCBP software PI Systems firm OSIsoft is used, as well as the IFP/MB-B, IFP/PS, IFP/MDI-M, IFP/PAM, IFP/UC software companies of the «IndoSoft-UKRAINE» company.

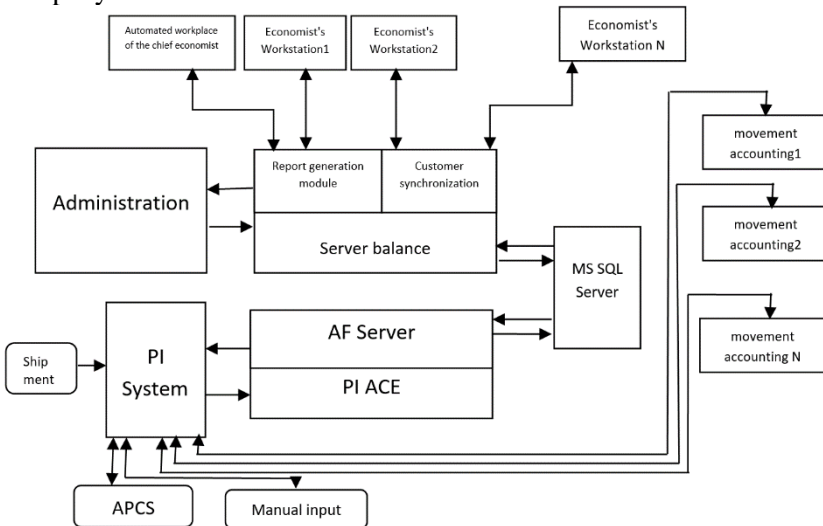


Fig. 1. General architecture ASCBP

The ASCBP system is designed as an open, distributed, multilevel integrated automated system with the ability to further expand and solve both managerial and production tasks in production processes.

## **ASCBP IS INTENDED FOR SOLVING THE FOLLOWING TASKS**

### **Automatic collection of data**

PI OCI interfaces to APCS provide real-time data collection from APCS through standard data interchange protocols. Real-time data transfer is carried out regardless of the type and structure of the APCS. Interfaces to the APCS and the OPC server are installed on the gateway computer at technological facilities, in close proximity to the APCS. In the event of a LAN failure, between the computer with the installed interface and the PI System, the interface continues to collect and buffer the data from the APCS and perform their automatic restoration when the network connection is restored.

### **System of data based management**

MS SQL Server Database contains four databases. The first database is formed for PI AF data. The second database stores the application expansion data for the calculation of the material balance. The third database stores the application expansion data for production records. The fourth PI Vision Database saves the settings and user profiles of the on-screen forms in the Microsoft SQL database.

### **Conclusion**

Due to the new ASCBP and the development of algorithms, the quality and transparency have been improved, as well as the time interval for the preparation of the material balance has been reduced.

### **References**

1. *Марченко Н.Б., Нечипорук В.В., Нечипорук О.П., Пена Ю.В.* Методи оцінювання точності інформаційно-вимірювальних систем діагностики. Монографія. – НАУ, 2014. <http://er.nau.edu.ua/handle/NAU/18536>
2. *Гинкул А.С., Тупота Е.В.* Сравнительный анализ существующих систем автоматического реферирования текста Міжнародна науково-технічна конференція «Інтелектуальні технології лінгвістичного аналізу». Тези доповідей. 25-26 жовтня 2011р. – К., НАУ, 2011. – С. 15. <http://er.nau.edu.ua/handle/NAU/18829>