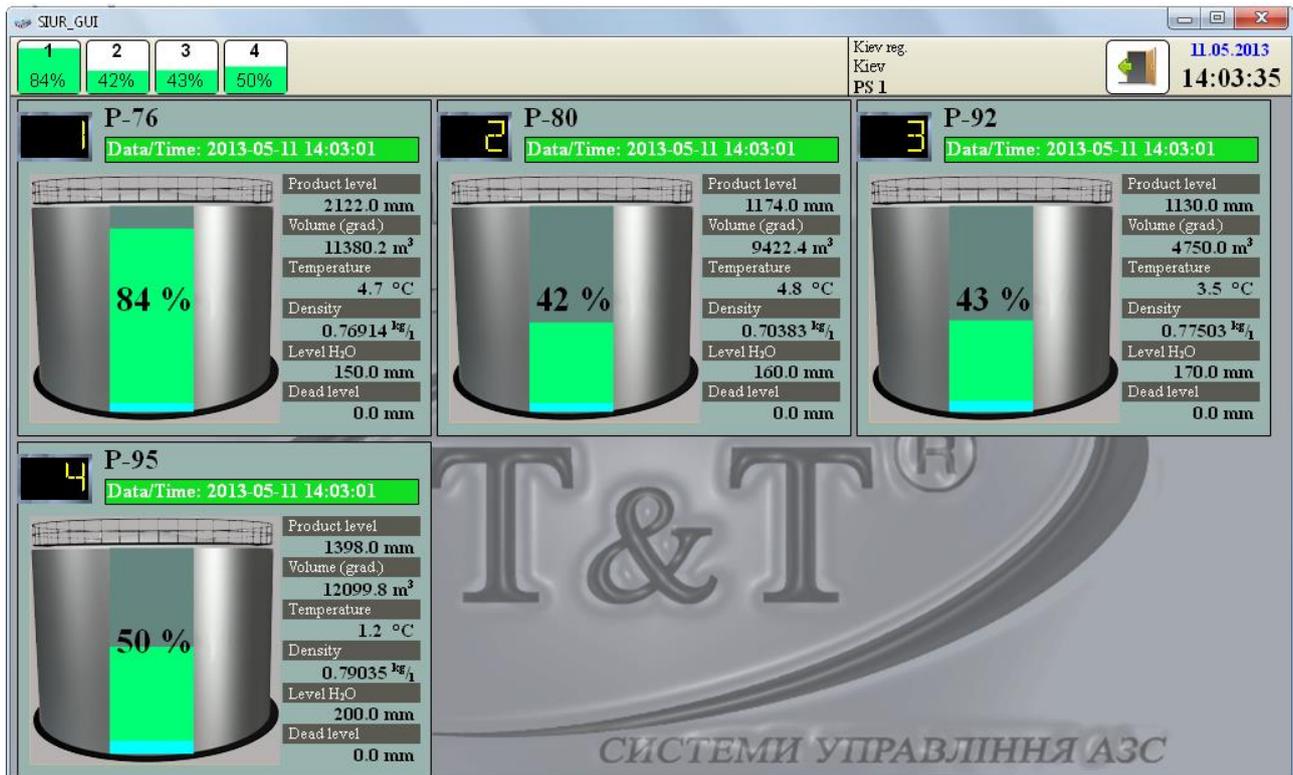


Tank monitoring system TMS SIUR

Graphical user interface



Operating Manual

Firmware version 1.1.1.1

Review date: 11 May 2013

TECHNOTRADE LTD

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REVISION HISTORY

REV.	DATE	BY	SECTION	DESCRIPTION
R01	11.05.2013	SA	All	First release of documentation

PURPOSE OF DOCUMENT

This Operating Manual is intended for studying of graphical user utility of tank monitoring system TMS SIUR operation.

Given Operation Manual describes functional possibilities of graphical user utility with firmware version 1.1.1.1.

Due to a reason that functional possibilities of the utility are constantly being extended and updated, changes are possible in final version of the utility, which are not described in given Operation Manual. Latest version of this Operation Manual can be downloaded from the tank monitoring system TMS-SIUR web-page: <http://www.technotrade.ua/tank-monitoring-system.html>.

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In case if you find any mistakes, omissions in this document or have any suggestions on improvements to this document, please feel free to e-mail them to our support mailbox: support_1a@technotrade.ua. We will be grateful to you for this valuable information.

All technical questions regarding the tank monitoring system TMS-SIUR are welcome to be asked on support mailbox: support_1a@technotrade.ua. Our support team will be glad to help you.

Also you can call to us or visit us on:

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APPOINTMENT

The GUI utility for tank monitoring system TMS SIUR (hereinafter - Utility) - software solution for PCs running on Windows or Linux. The utility is designed for the ability of visual control of the liquids in the managed tanks in graphical form. Utility works together with DBMS MySQL and can be run on any computer that has access to the Internet (except configuration «SIUR-local», because this configuration does not provide operation with Internet and that's why this Utility should be run on the computer on which was deployed configuration «SIUR-local»). The Utility allows to view data of all objects that save their data in the DBMS MySQL by Internet.

FUNCTIONAL POSSIBILITIES

Functional possibilities of GUI utility include:

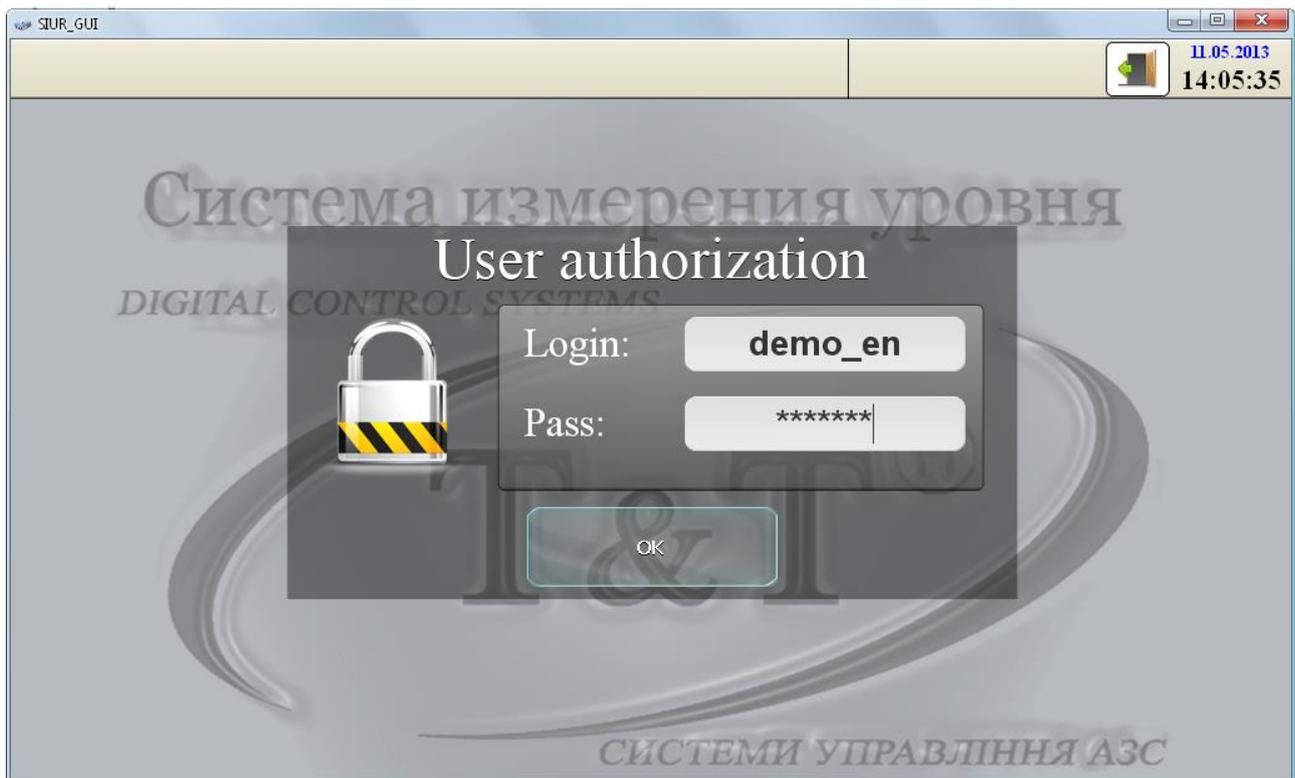
1. Graphical and digital display the current settings of level gauges;
2. Producing graphs of different content (incomings for the specified period, status of level gauge parameters for the specified period, etc.)

DESCRIPTION OF UTILITY OPERATION

Utility is installed on a PC running under Windows or Linux. The computer must have Internet connection.

Application launch and user authorization

After running the application occurs linking of Utility with DBMS MySQL (hereinafter - the DBMS). After the connection with DBMS, user is proposed to log in the system (picture 1). User inputs his login and password.

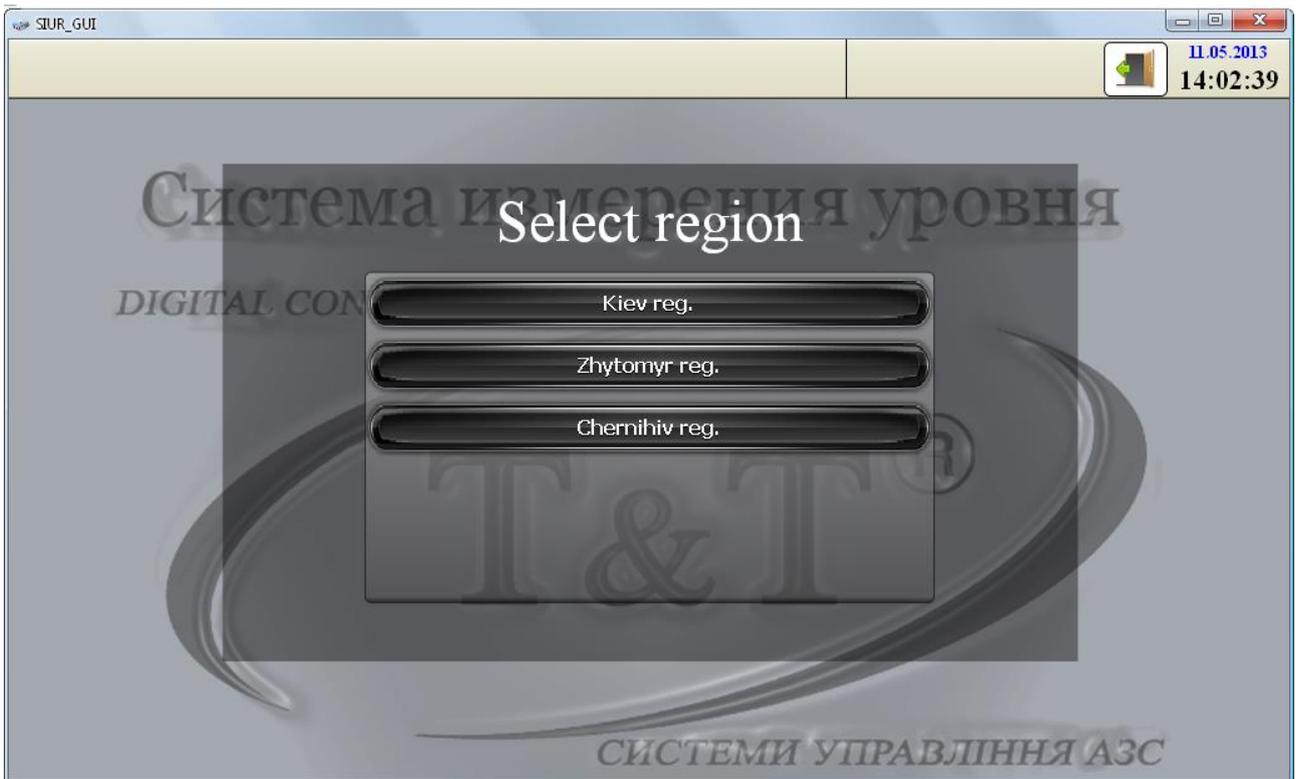


Picture 1

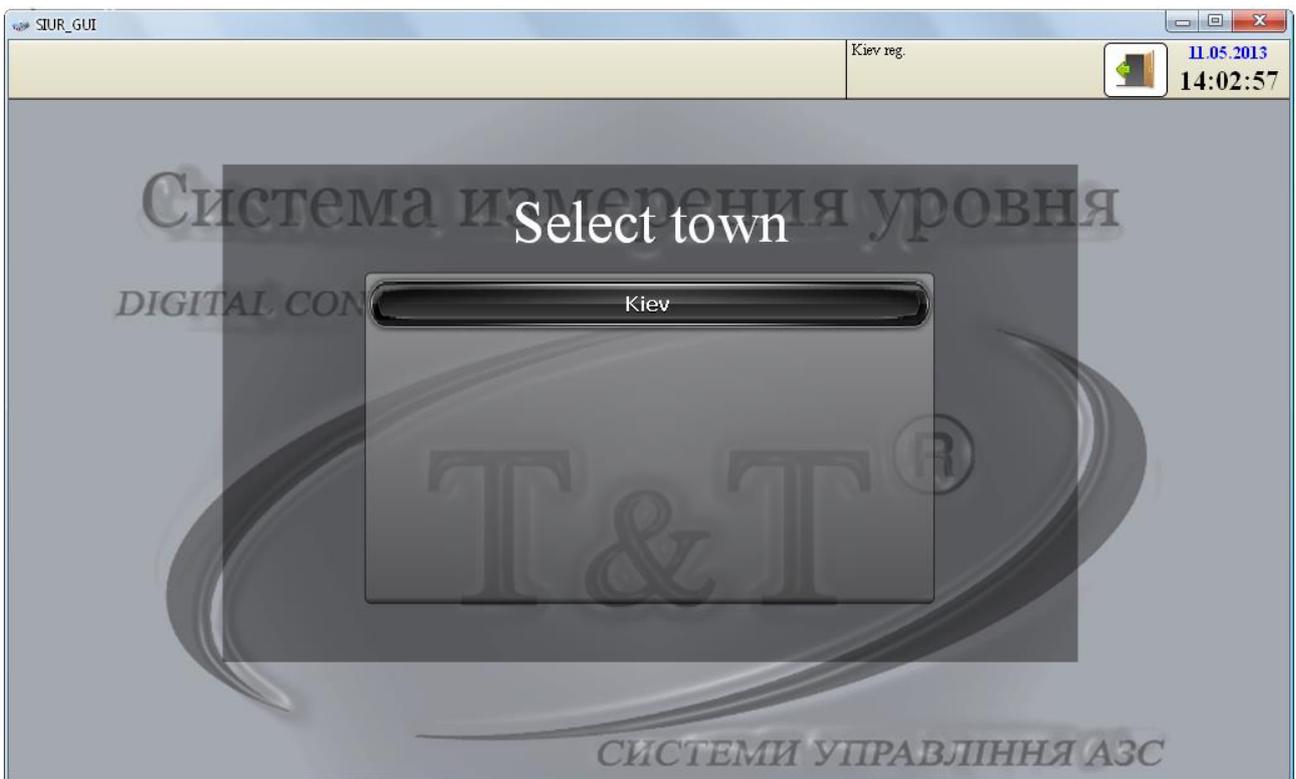
After entering the login and password to complete the authorization process user must click "OK". As a result, in a DBMS will be sent a request for authorization of a user with the entered username and password.

At successful user authorization in the DBMS - the Utility receives confirmation of successful authorization of the user and application will offer the user to select an object from the object list of the DBMS (picture 2). After selecting the object - on the top panel next to the button "Exit" will be displayed information about the selected object.

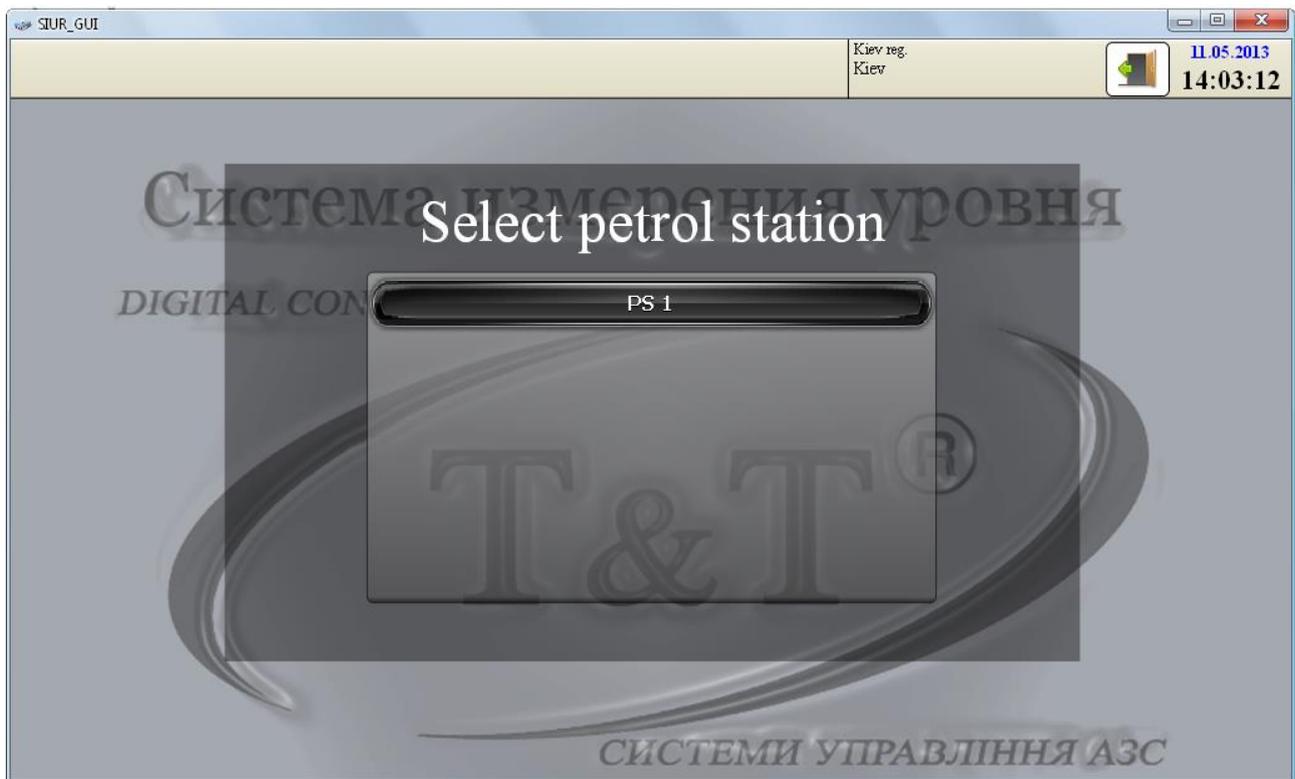
At reception from DBMS message about unsuccessful user authorization - error message will be displayed on the computer screen and further should be repeated the process of user authentication.



Picture 2



Picture 3



Picture 4

To finish application operation - click the button "Exit", which is located on the top panel next to the date and time display. The user will be asked to confirm the exit. After confirmation will stop all application services and it will be closed down.

Main menu

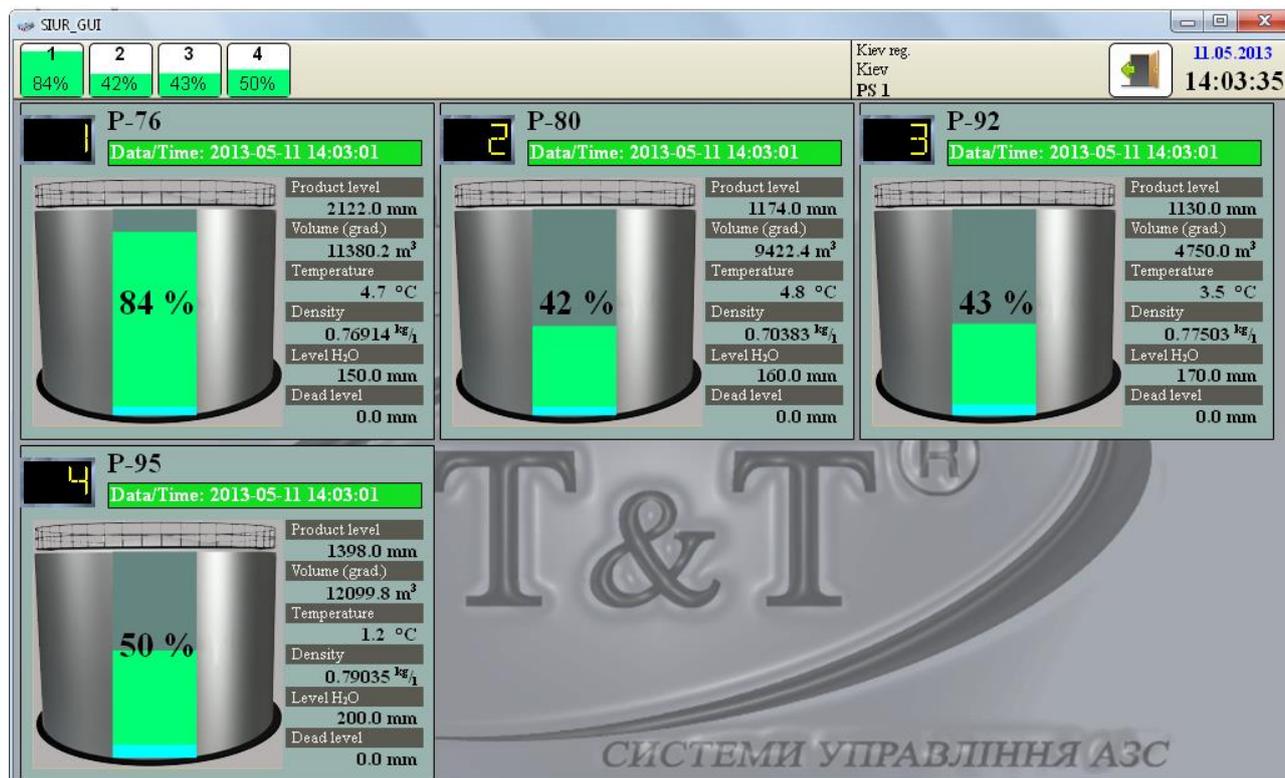
The main menu is a navigation panel, which provides the following features:

- view the current state of the parameters of level gauges on the selected object
- customization of the interface of Utility
- select object to view the parameters of level gauges
- user authorization
- finishing application operation

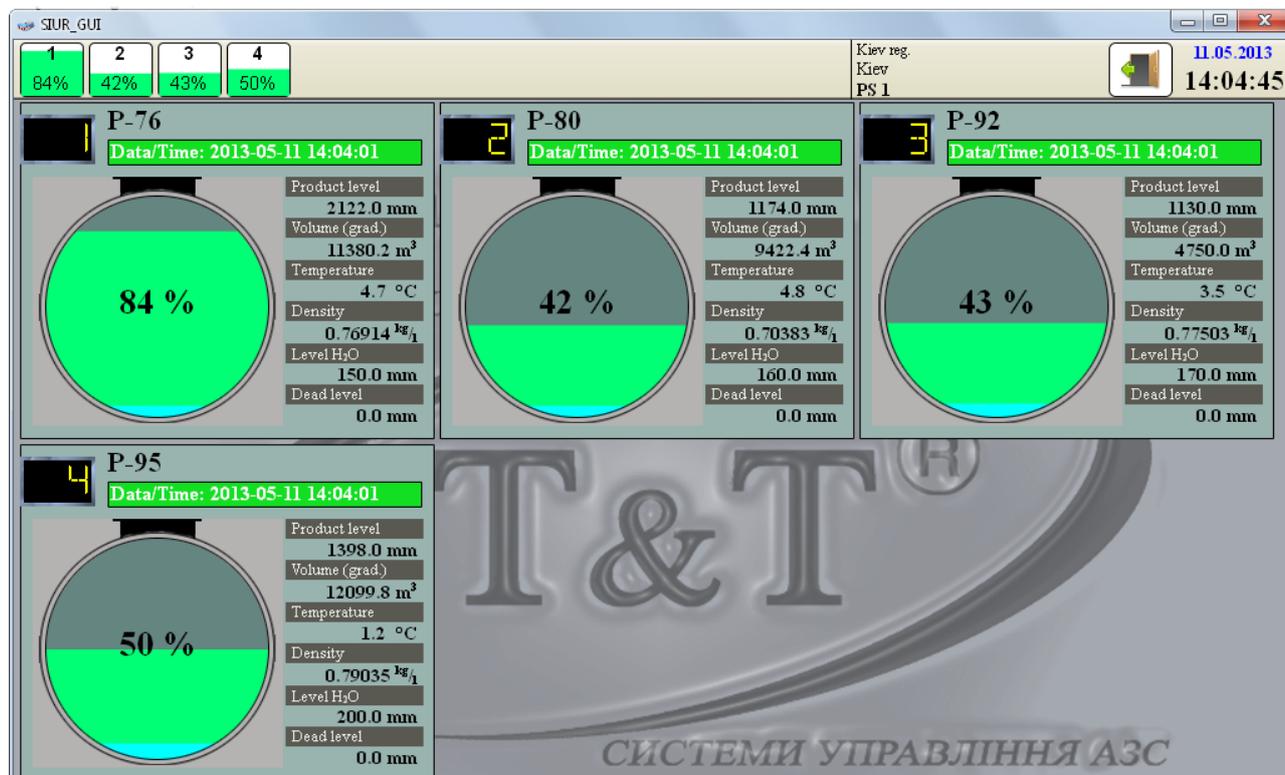


Picture 5

Parameter indication of level gauges



Picture 6



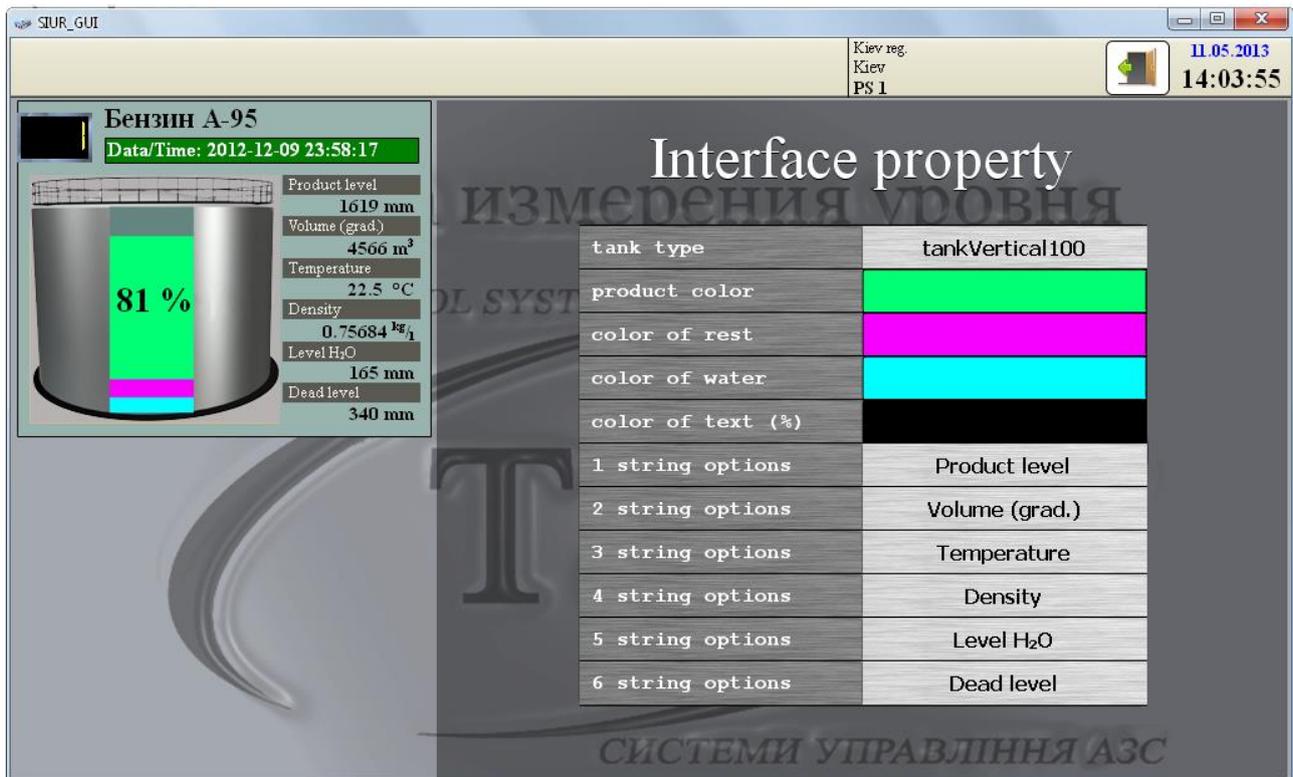
Picture 7

This page shows the user a current status of level gauges parameters of selected object. Information about the selected object is located on the top panel next to the button "Exit". Also on the top panel are placed miniature icons of all tanks of this object with a graphical display of the liquid level in the tank and digital display of tank number and percentage of the filling of tank.

On the main field of this page information fields with tanks parameters of the object are placed. Each field contains the number of the tank, name of product in the tank, graphical display of liquid level, dead remains and produced water in the tank, and also - digital display of six different parameters of the tank level gauge, defined by the user in the interface settings ("Product Level", "The volume of product" etc.).

Interface settings

In this page user has the opportunity to configure interface in accordance with his wishes.



Picture 8

For user possibility to notice immediately changes - on the left side of the main field test information field with parameters of level gauges is placed. For more clearness the simulation of level gauge is made: every second some of the level gauges parameters are changed, that has an effect of tank filling.

User may change appearance of tank, color range of liquid in tank, and also determine what digital options will be displayed on information field of a tank.