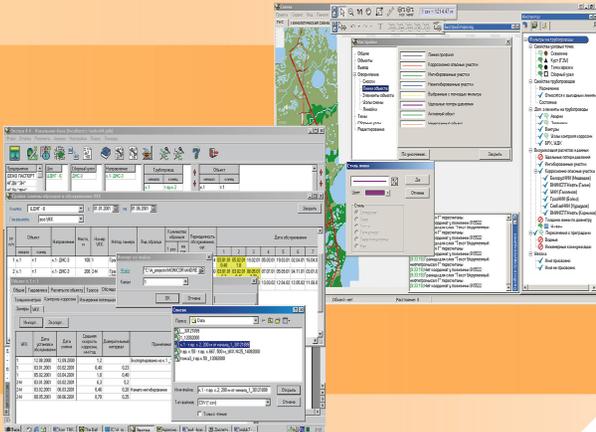


The "Extra 6.0" software product is the result of many years of working (since 1994) in co-operation with professionals of various scientific-research centers and oil-producing enterprises.

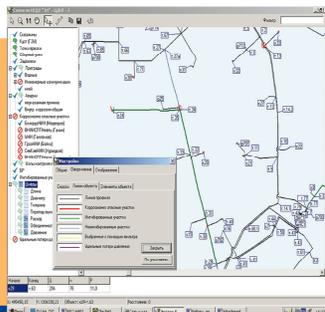


The program is intended for pipeline certification, complex analysis of pipeline's current state as well as for conducting corrosion, hydraulic and other calculations.

Using the "Extra" software helps to:

- Create an up-to-date system of accounting and analysis of pipelines;
- Create a descriptive model of hydrodynamics and corrosion activity of working media flows, both in numerical table form and in graphical form, on a pipeline system diagram;
- Find all the "bottle necks" that are vital for accident-free operation of the piping system;
- Elaborate and substantiate a plan of expeditious measures aimed at maintaining high in-service reliability of pipelines

The program is used as a basic information system for pipelines accounting and analysis at NK Rosneft, Surgutneftegaz, TNK-BP, Gazpromneft companies that produce over 60 % of Russian oil.



Our major customers are oil-and-gas production and transportation enterprises as well as companies producing corrosion inhibitors.

We provide the following services:

- Supply of corrosion monitoring equipment.
- Development of custom corrosion monitoring systems.
- Adaptation of the "Extra" software designed for pipeline maintenance services.
- Analysis of the corrosion state at oil fields; determination of key factors and causes of corrosion wear; economic analysis of various protection methods; elaboration of recommendations and implementation of measures to reduce pipeline and equipment internal surface corrosion.
- Corrosion monitoring of an enterprise using our equipment; development of an advanced approach to problem-solving.
- Corrosion inhibitor screening and testing of application technologies for certain oilfields (laboratory, bench and field tests based on our equipment):
  - Independent examination of corrosion inhibitors and bactericides for Customer's oilfields
  - Pilot testing of anti-corrosive protection techniques for wells and field pipelines
  - Examination of oilfields for the purpose of determining the SRB infection, preparing a map of biological infection and hydrogen sulfide concentration at oilfield objects, elaboration of measures on inhibition of sulfate reduction and increasing the wells injectability.

We are looking forward to seeing You among our customers.

Contacts:

450075, Ufa, Russian Federation, 144/3, Prospekt Oktyabrya  
 Phone: +7 347 2313854, E-mail: [atf@monikor.ru](mailto:atf@monikor.ru)  
<http://www.monikor.ru>  
 Middle East countries representative office:  
 REZAYAT PIPELINES COMPANY LTD.  
 Tel +966 (0) 3 882 57 00 ext 4027  
 fax +966 (0) 3 882 67 16 / 882 72 17  
 mob. +966 (0)50 681 90 75  
[Vladimir.mokshanov@rezayat.com.sa](mailto:Vladimir.mokshanov@rezayat.com.sa)



## Corrosion monitoring and oil field pipelines database software

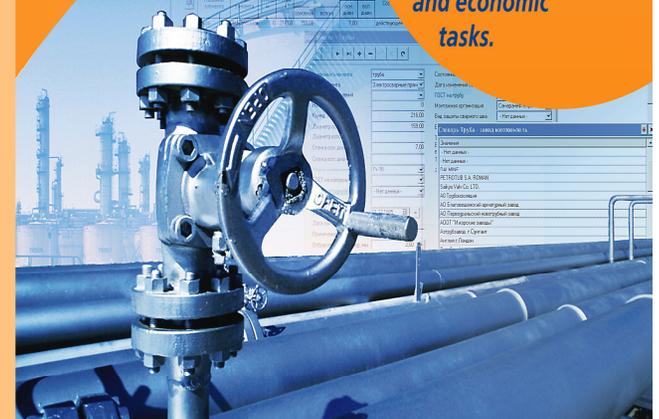
Do you want to know about the future of your pipeline?

**Monikor** equipment will help you determine the corrosion rate in it!

Do you want to know the cause of corrosion and to prevent it in the future?

The computer system **Extra 6.0** will cope with this and many other engineering and economic tasks.

Complex approach to reliability of field pipelines.



RUSSIAN FEDERATION, UFA

Institute for Power Resources Transportation (IPTER) along with the research and production company "Akrus-M" is staffed with skilled specialists, who have been in the corrosion protection business in and outside of Russia for more than three decades. We provide the following services:

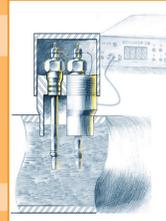
- **Design and Deliver Corrosion Monitoring Systems**
- **Adapt the "Extra" Networking Program to Pipeline Operator Requirements**
- **Review Utilities Corrosion Status in Oil Fields**
- **Identify Major Factors and Causes of Corrosive Wear**
- **Economically Analyze Various Options of Corrosion Protection**
- **Prepare Recommendations and Work to Control Pipeline/Equipment Internal Corrosion**
- **Provide Guidelines and Software Support for your Operations**
- **Select Corrosion Inhibitors and Develop Technologies for Applying These to Protect Downhole Equipment and Pipelines (Laboratory Tests, Bench Tests and Field Tests)**

## Our developments in the field of corrosion monitoring

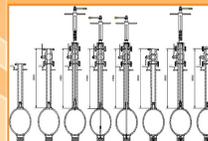
- Monicor-1 and Monicor-2 corrosion rate indicators
- Equipment for laboratory inhibitor testing:  
Pilot plant  
Special glass cells  
hermetic magnetic drive for circulating U-cell
- Biological media ( Postgait B) for counting sulphate reducing bacteris
- Corrosion control units:  
"Monicor-UKK-240",  
"Monicor-zond",  
"Monicor-UKK-ST-64",  
"Monicor-UKK-NO"



**"Monicor-2" corrosion rate indicator**  
is a microprocessor-based four-channel corrosion gauge (LPR). Monicor-2 can store over 15,000 measurements and perform a compensation of a working medium resistive component during the measurement

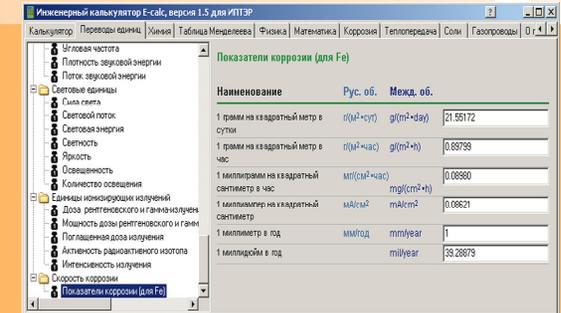


**"Monicor-UKK-240"**  
- LPR probes for reservoir pressure maintenance systems (under 240 atm.)



**"Monicor-UKK-NO" corrosion control device** is intended for installation and exposition of witness samples on the inner surface of a buried pipeline along its lower generatrix in order to detect the grooving corrosion and make an assessment of the working media corrosivity. Among the advantages of the Device is the fact that it is totally above-ground operated and witness samples are installed flush with the pipeline's lower generatrix on the fly without stopping transit. Being installed with "Monicor-UKK-NO", witness samples allow to estimate also the effectiveness of pipe pigging.

The "ExtraCalc" engineering calculator was elaborated in 2003. It allows to significantly facilitate the implementation of various engineering calculations, which are rather time-consuming. The calculator may be operated as an independent software product or as part of the "Extra" program complex.



- The calculator allows to do the following operations:**
- Periodic table: display chemical elements' characteristics in the table
  - Calculation of salt content in water with the conversion of mg/l to mEq/l and determination of an investigated water model.
  - Calculation of water scaling tendency (according to GD 39-0147870-026 and the Oddy-Tomson method).
  - Conversion of measurement units from one system of notation to another (the database can be updated via MS Excel).
  - Calculation of pipe strength.
  - Determination of corrosion inhibitor effectiveness parameters by means of a statistical analysis during testing according to State Standard
  - Determination of a CO<sub>2</sub>, H<sub>2</sub>S, O<sub>2</sub> concentration in water based on gas analysis data and vice versa (according to Henry's law)
  - Assessment of a predicted maximum penetration according to wall thickness measurement
  - Calculation of corrosion rate according to De Waard - Williams' method with consideration to the flow rate.
  - Calculation of heat transmission coefficient according to pipeline master data.
  - Statistical data approximation by linear, exponential and power functions and cubic equations. It can be used for calculating predictive values according to real data
  - Calculation of an equilibrium moisture in oil-gas pipelines, formation of hydrates and determination of a required amount of hydration inhibitor.