



JSC “Engineering and Technology  
“UKRENERGOCHERMET”,  
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## **Main services of UKRENERGOCHERMET inspection center**

### **1. Nondestructive inspection.**

#### ***Objects of control:***

- mouldings, castings, forging, welded connections, pipelines, rolled steel used for manufacture of various types of technological equipment;
- major and auxiliary technological equipment and hardware from all branches of industry during its manufacture, mounting, maintenance and operation.

#### ***Types of inspection:***

- visual (VT);
- magneto-powder (MT);
- penetrant control (PT);
- ultrasonic (UT);
- vortex-current (ET);
- radiographic (RT).

Upon need specialized methods of control also can be used including:

- Electro-potential, for measuring the depth of surface cracks;
- Metal magnet memory method, for zone determination of concentrations for mechanical stress and exposure of potentially dangerous construction elements.

### **2. Mechanical testing**

#### ***Objects of testing:***

- samples of major metals and welded connections;
- small sized parts and construction elements (seals, fasteners etc.)
- nonmetal materials.

#### ***Types of testing:***

- static straining and collapsing;
- bending impact;

- various technological tests (welded connections – folding test, pipes – for flatterring etc.);
- measurement of hardness (at samples and on site using appliances of static or dynamic function).

*Tests temperature rate: from -60 °C up to 540 °C.*

### **3. Inspection of materials and equipment**

#### ***Types of inspection:***

- determination of chemical content of metals (by sampling or by express-method on site);
- metallographic inspections of macro and micro structures of steels, alloys, welded connections – made by sampling or directly at object surface (by replica technique or by microscope);
- finding the cause of destruction of technological equipment using above mentioned methods of testing and control and also fractography inspection of surfaces and design-analytic procedures;

### **4. Strength calculations**

Strength calculations may be needed at:

- modernization (reconstruction, repairs) of equipment in case of changing geometric parameters or replacement of constructive materials;
- necessity to speed up equipment technological parameters;
- proving working efficiency of technological equipment having operational damages which technically impossible to remove or economically unreasonable.

*Qualified Specialists performing above controls and tests certified according to **EN ISO 9712:2012***

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