| **1. Surname, name** |
| --- |
| Belousov Andrey |
| **2. Denomination** |
| Improving efficiency of thermal equipment use at petroleum primary processing |
| **3. Specialty** |
| 05.14.14. – Heat and nuclear power plants |
| **4. Employer** |
| JCC „LUKOIL - Odessa petrochemical enterprise" |
| **5. Dissertation research effected at** |
| Odessa State Academy of Civil Building and Architecture |
| **6. Scientific supervisor** |
| Polunin Mikhail, Ph.D.Eng.,.Prof. |
| **7. Opponents** |
| Andreyhuk Nikolay, Dr.Eng., Professor<br>Maliarenko Elena, Ph.D.Eng. |


Dissertation is devoted to the decline of power losses in the thermal processes of heat equipment of AVT unit and in generation heat systems during preparation of heat-exchangers for repair. Analysis of existent methods of preparation of surface of heat-exchangers allows developing SWSHW technology of preparation of heat-exchangers for repair.

The calculation-theoretical estimation of the variable mode of heat-exchangers with a floating head allows defining that decline of temperature of the heated stream (oils) on 18 "C results in multiplying the expense of fuel in a tubular stove on S24 t/year, at the annual processing of oil 792000 tons. The analysis of results of research of influencing of power expenses on raw energy material OIR of AVT unit allows to make conclusion, that efficiency of-work of setting of AVT reduce from 96.5 % to 92 %. Experimental researches of influencing of oil solvents (reactive and diesel fuel) on operating deposits on the surface of heat equipment allows to establish rational solvent for SWSHW technology of preparation of heat-exchangers for repair.

The comparative analysis of energy factors shows that using energy saving SWSHW technology (washing by hot water and oil solvent in reserved contour) extend of traditional steaming thoroughly method allows to reduce energy losses in AVT unit on 198.8 tc.f. (15 %) for one cycle of heat-exchangers repair. As a result an economic effect from using offered technology ior AVT unit equals 238400 UAH/year.



***Keywords:*** technological unit AVT, heat-exchanger, tubular stove, thermal processes, steaming thoroughly, hot water, oil solvents, reserved contour.